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Strategies of Successful Project Managers Leading Virtual Teams

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This is to certify that the doctoral study by

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Walden University
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Abstract

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MBA, Wesleyan College, 2010

BA, Mercer University, 2008

Doctoral Study Submitted in Partial Fulfillment

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Abstract

Some project managers lack strategies to effectively lead virtual project teams, which can result in a lack of clear project direction, collaboration and communication, and empowerment to solve problems within the team. Grounded in transformational leadership theory, the purpose of this qualitative multiple-case study was to explore strategies project managers use to lead virtual teams effectively. The participants were three project managers in. the United States who worked exclusively with virtual teams and had a minimum of one year of experience leading a virtual project team. Data were collected using semi-structured interviews and analyzed using thematic analysis. Three themes emerged: management discipline, problem-solving, and cultural awareness. A key recommendation is for project leaders to establish transparency and trust within the project team. The implications for positive social change include the potential for more flexible schedules and a better work-life balance for employees, resulting in happier, more productive employees.

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Dedication

I dedicate this work to my family who were my encouragement throughout this process. To my father, Bill Harris, who I wish were here to celebrate this accomplishment with me. My mother, Brenda Goolsby, supported me in every way imaginable through this process. To my husband, Michael, who was my number one champion. My best friend, Margaret Essoun, for always having supportive words. And lastly to Michaela and Mickenzie – the two of you are truly my inspiration.

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Section 1: Foundation of the Study

Globally, business organizations continue to broadly embrace virtual project teams to coordinate their operations, and a rapid surge in usage has surpassed virtual team theories, models, and analysis. Virtual project teams are a rising alternative to the need for fast-paced, cost-effective, and effective solutions to real-world organizational challenges in today's competitive environment. A virtual working environment is beneficial to organizations by overcoming time and geographical barriers to combine the experience and expertise of personnel and nonemployees (Dulebohn & Hoch, 2017). Organizations are now making significant investments in their digital workplace to increase efficiency and productivity (Barnowska & Kozaryn, 2018). A team is a cohesive group of interdependent individuals who collaborate for a shared objective on projects, have complementary abilities (e.g., in technological sophistication, problem-solving capabilities, and intellectual capacity), and share an interdependently responsible approach to success and practice (Eberly et al., 2017).

Background of the Problem

Organizations' exponential growth in virtual team use and the underlying complexities of virtual teams illustrate the need for theory and analysis to educate entities in the design, structure, and management of virtual project teams. A virtual team is composed of a community of professionals who work continuously and cohesively over diverse timelines, locations, cultures, and organizations to accomplish mutual objectives (Eberly et al., 2017).

There are several kinds of virtual teams, but their crucial distinguishing element is that project team members are, in one way or another, barred from meeting face to face (Serrat, 2017). Such a virtual working environment also leverages the rapid advances in communication technologies (Marlow et al., 2017). The leading advantage of virtual teams is that they provide organizations with greater diversity and skill from various roles, settings, and entities. Additionally, any physical and regional constraints are eliminated. Considering the steady growth in technology development, leading to more versatility for workers, the use of virtual project teams can only be expected to continue to grow.

Problem Statement

Virtual project teams are becoming more prevalent in today's world due to technological advances and project collaboration tools that support a remote work environment (Marlow et al., 2017). With this technology platform change, the need for the virtual project manager has emerged. In 2017, 3.9 million people in the United States reported doing either all or some of their work from home (Wright, 2017), and many of them were project managers. The general business problem was that poor leadership of virtual teams can be detrimental to the success of the team and the project. The specific business problem was that some project managers lack strategies to effectively lead virtual project teams, which can result in a lack of clear project direction, collaboration and communication, and empowerment to solve problems within the team.

Purpose of the Study

The purpose of this qualitative case study was to explore effective leadership strategies currently employed by successful project managers when leading virtual teams. The target population of this study comprised three project managers employed at three different companies. The project managers had at least 1 year of experience successfully leading projects that have members of their team that are exclusively virtual. Additionally, the companies the project managers work for had to have their headquarters located in the United States. The implications for positive social change include the potential to allow employees to have flexible schedules with more of a work-life balance, leading to happier, more productive employees (see Olaisen & Revang, 2017). Additionally, the results of the study can be used to decrease the number of employees that will need to commute or travel to different work sites, and with this decreased need to travel, both airline pollution and vehicle pollution will be reduced, thereby contributing to a cleaner environment (see Olaisen & Revang, 2017).

Nature of the Study

There are three methodologies that a researcher can apply when completing a study: qualitative, quantitative, or a mixed-methods approach (Creswell & Miller, 2000). In this study, I employed the qualitative approach. The qualitative method was most appropriate for this research because qualitative studies are used to gain insight and understanding to answer a question (see Mohajan, 2018). The quantitative and mixed-method approaches were not appropriate for this study because I was not testing a method or theory or examining the relationship between two variables; instead, this study was

specifically designed to explore and identify leadership strategies used by project managers leading virtual teams. Quantitative techniques do not accurately capture complex human behaviors; conversely, qualitative methods are used in research to study human behavior and behavior changes (Mohajan, 2018).

I used a case study design in this study because case studies are used to explore situations in which not a lot is known (see Williams, 2011). In this case, there was little extant research focused on project managers leading a virtual team. Conducting this study required participants to describe their experiences with success surrounding leading virtual teams; therefore, a grounded theory design was not appropriate because the interview questions and other data collected using this design are geared toward building theory (see Fletcher, 2017). Similarly, phenomenology was not appropriate for this study because I did not focus on the participants' experiences (see Fletcher, 2017).

I combined a mini-ethnography with the case study design because these two approaches most accurately matched the needs of this study. A case study is descriptive, and it consequently allowed me to gain an understanding of leadership practices without influencing the behavior of the participants. Additionally, an ethnographic approach was employed because it afforded the opportunity for an in-depth study of the culture and everyday behavior of the participants (see Fusch et al., 2017). Once the case study is complete, the researcher shares lessons learned and patterns found to assist others that may be facing a similar problem (Williams, 2011). In this study, I shared lessons learned regarding effective leadership strategies currently employed by successful project managers when leading virtual teams.

Research Question

The research question for this study was: What leadership strategies do project managers use to lead virtual teams successfully?

Interview Questions

I used the following interview questions to collect information to address the primary research question:

1. What are some leadership strategies you use to lead virtual teams successfully?

2. What key barriers have you faced when leading a virtual team that are different from leading traditional teams?

3. What strategies do you use as a virtual leader to overcome these key barriers?

4. How do you ensure there is clear direction and scope of the project?

5. What do you do to encourage problem solving within your virtual teams?

6. What leadership strategies do you use to address risk factors that could affect the success of your virtual team?

7. What else can you share that may apply to the study that may not have been included in this interview?

Conceptual Framework

I used transformational leadership theory as the conceptual framework for this study. Transformational leadership theory was formed in 1985 by Bass (1990) to differentiate between task-oriented leadership through transactional leadership and

transformational leadership. Bass identified four characteristics transformational leaders

possess: charisma, inspiration, intellectual stimulation, and consideration. Additionally,

Bass pointed out that transformational leadership enhances employee efficiency by

eliminating the completion of self-interested activities and, instead, contributing to the

purpose and goal of the company.

Bass (1990) stated transformational leadership could and should be taught,

finding that once leaders were taught transformational leadership skills, their employees'

absenteeism and productivity improved. Transformational leaders develop their

employees appropriately because they are aware of developmental needs. Additionally,

transformational leaders anticipate and adjust to changes in the company and promote job

self-efficacy (Eberly et al., 2017). Job self-efficacy is important for virtual workers

because they are expected to be able to work independently from others because they

often do not have immediate access to coworkers. Transformational leaders also promote

their employees aligning their values with those of the organization as well as provide

development opportunities to properly equip their employees to solve problems and hone

their job-related skills (Eberly et al., 2017). Due to the many benefits of leaders engaging

in transformational leadership strategies, I used the transformational leadership theory as

the framework to explore the relationships between project managers and their team

members as well as the strategies project managers use to implement projects

successfully in a virtual team.

Operational Definitions

I used the following terms to guide this study:

Computer-mediated communication (CMC): Human-to-human communication that takes place over a computer, such as a desktop, mobile phone, or similar device (Hardaker, 2010).

Job embeddedness: The phenomena in which the composition of the overall network to which an individual belongs influences the inner/outer performance of the task and its outcome (Dawley, 2014).

Assumptions, Limitations, and Delimitations

The assumptions presented are applicable to the strategies used by project managers leading virtual teams. Additionally, limitations and delimitations can prohibit some aspect of a study, so I share the limitations and delimitations specific to this study in the following subsections.

Assumptions

Assumptions are the researcher's initial beliefs about their research (Hancock & Algozzine, 2017). I made several assumptions in this study regarding virtual project managers. The first assumption was that participants would willingly and honestly participate in virtual interviews for the purpose of collecting data. I also assumed that the data gathered accurately reflected the participants' experiences with leading virtual teams. Additionally, I assumed that an exploratory case study was the best approach for collecting more information regarding the leadership strategies of virtual managers, thereby contributing to positive social change. Lastly, I assumed that the insights provided regarding the leadership strategies will be useful to other managers that lead virtual teams and can be used to enhance an organization's competitive advantages.

Limitations

A researcher shares the limitations to identify the potential weaknesses in a study. By not properly addressing the limitations and delimitations of a study, the results cannot be generalizable to other populations. As long as limitations and delimitations are explicitly stated in either the study limitations section or the discussion, the researcher is aware and can avoid possible pitfalls (Theofanidis & Fountouki, 2019).

Potential study limitations in any given study may include underlying theory assumptions, causal relationships, measurement errors, study environment, population or sample, data collection/analysis, outcome interpretations, and corresponding conclusions (Theofanidis & Fountouki, 2019). Additionally, when researchers are limited in the scope of their research, this can also present a limitation. The first limitation of this study included the fact the sample size may not necessarily represent the entire population of project managers. The findings from the study may not reach statistical generalization due to the sample size in relation to the overall population of project managers. However, I compared the results of the study to previously developed theories to maintain reliability and validity. Additionally, it is possible that some participants were not truthful in their answers about their leadership style.

Because research assumptions and prejudices are so prevalent and implicit in the content of every analysis, the research issue itself does not exist without them (Theofanidis & Fountouki, 2019). Therefore, it is not reasonable to rule out a study because of limitations.

Delimitations

The boundaries that the researchers decide to set as the parameters or limits of their work so that the study's goals and objectives do not become difficult to achieve are referred to as delimitations (Theofanidis & Fountouki, 2019). Delimitations are mostly concerned with the theoretical context, goals, and research questions. The delimitations of this qualitative study, as with other qualitative studies, included the fact that there were a small number of participants relative to the population. This discrepancy is due to the amount of time and effort required for data collection and analysis in a qualitative study (Fletcher, 2017). The research population for this study on virtual project managers included three project managers with at least 1 year of experience successfully leading projects that have members of their team that are exclusively virtual and who worked for companies with headquarters located in the United States.

Significance of the Study

Virtual project teams can be advantageous to corporations, so they are becoming more prevalent in today's business world across different industries and countries (Marlow et al., 2017). Therefore, it is essential to understand what factors allow leaders to be successful in the role of leading virtual project teams. To stay competitive, companies must actively search out new, innovative, and cost-effective strategies; however, many companies still have ongoing projects. Additionally, project managers are responsible for implementing strategic initiatives; therefore, projects are still prioritized even though a lot of employees are no longer working in an office setting due to the COVID-19 pandemic (Blaskovics, 2020). Project managers are still expected to

implement successful projects even in a virtual setting; therefore, they must learn to combine both strategic and technical information to be successful in their roles. I conducted this study to find out how this can be best accomplished.

Contribution to Business Practice and Implications for Social Change

Virtual teams allow companies to create a competitive advantage through hiring the best person for the job based on expertise, and not merely location; reduce the expense of travel and relocation costs; and bring together members from different organizational units to efficiently contribute to an outcome. Previous researchers explored virtual team strategy (Ford et al., 2017), project success (Carvalho et al., 2015; Wang et al., 2017), and the impact of transformational leadership on team performance (Dinh et al., 2014; Zhang et al., 2015); however, there was little extant research on the impact of transformational leadership style in project managers that lead virtual teams. Therefore, there was a need for further research on virtual team leadership and the strategies that make virtual project managers effective.

This study of the leadership strategies of successful virtual project managers provides value to businesses in that by increasing the leadership effectiveness of project managers, costs and employee turnover can be decreased. Clear direction and scope of the project are essential to the success of a project (El-Sofany et al., 2014). Eberly et al. (2017) found that leaders displaying transformational leadership characteristics had employees that were less likely to leave a company. Additionally, these transformational leaders promote job embeddedness, which, in turn, reduced the amount of employee turnover (Eberly et al., 2017). Therefore, not only does successful project management

increase competitive advantage and profitability, but it also decreases turnover and the associated costs.

A Review of the Professional and Academic Literature

This subsection begins with a discussion of the emergence and relevance of transformational leadership theory, which was used as the conceptual framework for this study. I then explore the literature on features of virtual project teams as well as their advantages and disadvantages. The proper role for project management in achieving project success through effective leadership is also highlighted. The review of the literature includes empirical evidence from a wide range of academic and professional sources to highlight how transformational leaders can improve virtual team performance. Alternative leadership strategies are also analyzed as are criticisms of transformational leadership in the management of virtual teams. Finally, challenges to the management of virtual project teams are addressed before I conclude the section with a summary.

I included 60 sources in the literature, 55 of which are peer-reviewed sources; therefore, 92% of the articles used in the literature review are from peer-reviewed sources. Of the 60 sources included in the literature review, 38 were published within 5 years from the anticipated approval of this study by the chief academic officer at Walden University.

Transformational Leadership Theory

Leadership is a dynamic relationship that is determined by how leaders interact with their followers (Li & Yuan, 2017). There are many leadership theories, and they

seek to explain the nature of the relationship that leaders have with their followers. Transformational leadership, however, elevates employee performance by eliminating the completion of tasks for self-interest and instead focuses employees on contributing to the organization's purpose and mission (Chun et al., 2016). Transformational leaders are charismatic, and having charisma allows leaders to meet the emotional and intellectual needs of their employees and have the power and influence necessary to inspire their employees to work better (Alrowwad et al., 2020). When they are mindful of developmental needs, transformational leaders grow their workers accordingly. They can anticipate and adjust to changes in the company and empower their employees to do the same.

The transformational leadership theory is a hallmark in research and leadership discourse. The theory, since its introduction, has proven to be successful; however, researchers have posed pertinent questions over its structure and material validity. The first major criticism takes an ethical approach, citing the potential for transformational leaders to misuse their influence (Li & Yuan, 2017). Transformational leaders inspire their followers by intense feelings irrespective of their final impact on followers without necessarily caring about ethical and moral principles.

Transformational leaders may strongly influence their followers, who reciprocate by giving them confidence and respect (Organ, 1996). This relationship may produce leaders who are not only dominant but also arrogant and deceptive. Furthermore, Bass (1990) argued that transformational leadership does not consider conflicting interests or forces and power to help avoid the tyranny and repression of a majority. Without moral

responsibility, transformational leadership is more likely to be used for less-than-optimal social purposes.

While there are some criticisms of transformational leadership theory, Burns (1978) noted that transformational leaders spark interest among their followers, enabling them to gain a new perspective on their work. These leaders also inspire their followers to achieve their maximum potential, be aware of organizational goals and objectives, and look beyond personal interests to those that benefit the group. Various researchers and philosophers, such as Burns, Bass, and Avolio, have explored the empirical and conceptual evolution of transformational leadership.

Before 1978, mainstream literature on leadership theories focused on leadership at lower levels of an organization. However, this changed when Burns (1978) published *Leadership*, a book in which the idea that scholars were ignoring transformational leadership at the time was introduced. Burns defined transformational leadership as the interaction between leaders and followers that allows both parties to achieve high motivation and morale levels. Burns posited that transformational leadership is an essential component of growth within an organization. Burns's notions on the theory were based on the fact that leadership should be aligned with a collective purpose, and effective leaders should be determined by the impact of their actions on social change. Burns suggested that the process of leadership involves an interplay of power and conflict, and the role of followers and leaders should be united conceptually. Though Burns is credited for introducing the transformational leadership paradigm, the concept lacked enough coherence to be termed as a theory. Bass and Burns's subsequent work

changed this concept to formulate what is now popularly known as transformational leadership theory (Stewart, 2006).

Transactional leadership theory was the primary leadership style used until Bass (1990) differentiated between transactional leadership and transformational leadership theories. Bass described transactional leadership as a leader outlining the tasks that the employee must perform and the compensation they will earn as a result, pointing out this type of leadership is ineffective and mediocre. Transformational leadership was a popular trend in the 1980s and 1970s after the theory was introduced in 1978. Burns later expanded on the initial work in 2003. Burns's (1978) initial view of transformational leadership was based on the premise that this type of leadership occurs when people engage in a way that leaders inspire followers to raise their level of performance through motivation. In 1985, Bass carried forward Burns's work by explaining transformational leadership's psychological mechanisms (Khanin, 2007). Bass supported Burns's ideas that transformational leadership could be measured and impacted followers' morale and performance, noting that the extent of a leader's transformational leadership could be measured by evaluating their influence on followers. According to Bass (1990), transformational leaders inspire trust, respect, loyalty, and admiration from their followers, making them work harder to surpass expectations. Bass was essential to the theory's evolution because he bridged the gap between transformational and transactional leaders by showing that transformational leaders were not a replacement for transactional leaders. Instead, the concept that led to their evolution was based on a transactional leader.

Avolio et al. (1991) came up with distinct qualities displayed by transformational leaders. These qualities are now popularly known as the 4 Is of transformational leadership: individualized consideration, idealized influence, inspirational motivation, and intellectual stimulation. In the quality of individualized consideration, leaders are supposed to address every employee's needs instead of treating followers like they have the same needs. The quality of intellectual stimulation requires leaders to help their followers formulate new solutions to old problems. The solutions that followers come up with should be supported by facts and logic rather than unsupported opinions. The quality of inspirational leadership requires leaders to possess influence that inspires motivation and respect among their followers. As a way of setting an example, inspirational leaders should be hardworking and optimistic even in times of a crisis. The quality of idealized influence requires leaders to build confidence and trust in organizational goals and objectives, which is important because it inspires followers to emulate their leaders when they see them achieve the desired results.

According to Stewart (2006), transformational leadership should inspire changes in the social system. Ideally, this type of leadership leads to invaluable changes in followers to transform them into leaders. Transformational leaders inspire change among employees through various mechanisms, including inspiring employees by being their role models, connecting followers' sense of identity with organizational goals, challenging followers to own the consequences of their actions, and knowing their weaknesses and strengths to align them with tasks that optimize their performance (Khanin, 2007).

The transformational leadership theory is among the most researched theories of leadership. What differentiates this theory from other leadership theories is that it sought to improve performance by inspiring followers to transform their work (Stewart, 2006). The theory traces back to 1978 when Burns formulated a rough concept of the theory. Since its formulation, other scholars have continued the study and use of this theory, including Burns. According to Khanin (2007), these theories have evolved from focusing on situations, behaviors, and traits to a change-oriented approach.

Related and Contrasting Theories

Over the years, other theorists have explored the concept of leadership. Early theorists introduced trait-based leadership theories, such as the great man theory and its developments (Organ, 1996), and later theorists favored contingency theories (Vroom & Jago, 2007). Other early theorists suggested that born leaders have physical and personality traits that separate them from nonleaders (Dinh et al., 2014). Theorists disagreeing with the trait hypotheses dismissed the premises of inherited or learned leadership in what was known as the traits-based theory of leadership, among other prior behavioral leadership theories (Bastola, 2020).

Trait-Based Leadership Theories

Historically, communities and societies have selected their leaders based on their attributes rather than what they can achieve once in leadership. This was the basis for developing trait-based leadership perspectives, which, according to Bastola (2020), is a belief that some individuals are born with leadership attributes that may lack in others. Specific characteristics connected to leadership were identified, and historically, anyone

wishing to become a leader had to meet specific thresholds that were generally accepted by society.

The trait-based leadership perspectives have been controversial among scholars and practitioners because leadership theories seem to be developed by the day. Initially, leaders had to have specific characteristics that made them appear different from those under their command. The trait-based theory, whose relevance and research began in the early to mid-20th century, has had its fair share of support from some scholars while others are of different views (Zaccaro, 2007). For example, it is common knowledge that leaders in the modern world need a background education to assist in running affairs, either affecting society or organizations they are running. According to some scholars, leadership traits are developed over time and are not in-born, like it is in the trait-based leadership theories (Derue et al., 2011).

Understanding the trait-based leadership theory is essential when assessing the feasibility or lack of the approach in modern times. Allport is associated with the pioneering and understanding of the trait-based personality theory (Derue et al., 2011). From Allport's perspective, traits are essential and integral units of personality and develop personal tendencies to describe an individual (Derue et al., 2011). Allport's work involved breaking down the 4,000 personality traits described in the English dictionary and first asserted by trait theorist, Raymond Cattel (Bastola, 2020). However, to simplify the theory for a better understanding, Raymond broke down the 4,000 initial listings to 171 by grouping those with common characteristics. According to Eysenck, personality

traits are governed by three aspects: introversion/extroversion, neuroticism/emotional stability, and psychotic.

Today, the five-factor perspective is the most widely used approach in explaining the trait-based leadership perspective. The five-factor theory of personality was conceived after realizing the shallowness of Eysenck's three-dimensional approach and the broad perspectives argued by Cattel and Allport. The five categories idealized by different scholars and explained by Bastola (2020) include:

- Extroversion: Extroversion is an individual's sociability, which helps them to communicate with others around them. Leaders need to be outgoing and friendly in creating a positive perception about themselves to the rest of the employees. To create a better working environment, extroverts furnish their communication skills, which are critical in understanding employee challenges and reacting to them effectively.

- Agreeableness: Agreeableness refers to the leader's friendly nature within the work environment. Agreeable leaders tend to offer a listening ear and consider the opinions of others in the decision-making process. Emotional expressiveness, such as empathy towards the junior employees, is also an aspect of agreeableness that helps build stronger relationships between the leader and the employees.

- Conscientiousness: The conscientiousness dimension of the trait leadership perspectives is based on order and impulse in the leader. As a leader, one must always remain alert to whatever is taking place around them and observe

order. This way, employees under their jurisdiction are expected to follow the lead, which is critical in realizing organizational goals and objectives.

- Openness: This construct of the trait perspective in leadership revolves around the leader being broadminded and intelligent when dealing with situations that come their way. Such individuals take time to analyze and assess a scenario's possible outcomes; hence, their practical sense of imagination. Such leaders can control negative situations while maximizing the positive.

- Neuroticism: Neurotic individuals tend to be highly emotional and susceptible to irritability, making it difficult for them to reason with those around them. This character trait could be challenging to work with because employees could barely keep up with the mood swings.

On the one hand, an individual's leadership characteristics may not always be consistent with the expectations of those around them (Zaccaro, 2007). Some individuals tend to be good leaders only under certain circumstances, making it difficult to determine their suitability in other situations. The impression that one may give to their subordinates in the first instance may vary, creating confusion among the junior employees, further making it difficult for them to work together. A leader's effectiveness is gauged based on their ability to handle issues under different circumstances, which the trait-based perspectives barely acknowledge. The different dimensions are solely focused on the leader while paying less attention to the junior employees (Derue et al., 2011). Leadership theories are progressive, and institutions need to adapt to the changing dynamics and existing market and organizational needs. Though the trait-based

perspective was feasible during the 20th century, it was unsuitable for the current study as it did not address the characteristics leaders need to inspire and truly lead their employees, and other theories that are more appropriate for this study have gradually developed.

Contingency Leadership Theory

Leadership effectiveness in the workplace is subject to numerous factors. The scope of a project, timelines, size of the working team, and available resources, among other factors, affect the effectiveness of a leader. The contingency theories of leadership improve trait-based theories by emphasizing the interplay between behavior, traits, and situational factors to measure a leader's effectiveness (Derue et al., 2011). The theory puts to perspective task-motivated and relationship-motivated leadership styles as they relate to the situation. The situation helps construct task structures, leader-member relations, and positions of power. Leader-member relations deals with the levels of confidence, trust, and loyalty a leader draws from a group (Bratton, 2020). The task structure investigates the task's clarity and the availability of the means of accomplishing the task. At the same time, positions of power are a measure of extending rewards and punishments. According to the contingency theory, a leader can be perfect in one situation and fail because their success is contingent on whether their leadership styles match their situation. The contingency theory describes a good leader as examining every situation, determining the leadership approach to apply, and adapting. A good leader should adapt to situations and delegate duties where appropriate (Derue et al., 2011).

Fiedler's leadership theory is a classical illustration of the contingency leadership theory. During the early 1950s, Fiedler became the first theorist to define personality and behavior, explaining how they intersect during different leadership situations (Bratton, 2020). Fiedler believed that leadership styles were constant while situations varied. He divides leaders into low preferred coworker (LPC) and highly preferred coworker (HPC). LPC leaders prioritize work over relationships and tend to be task-oriented (Bratton, 2020). Their focus is on how the task of meeting organizational objectives will be completed.

On the other hand, HPC-type leaders believe healthy and productive relationships determine an organization's success. HPC types of leaders are excellent at conflict resolution, and decision-making through their style is often lengthy and bureaucratic. Fiedler uses relationships, power, and task structure to determine the favorability of a situation. A leader's position is most favorable when trust-based relationships exist as well as clear task structures, and enough power to execute (Wu et al., 2020). According to Fiedler, an LPC leader is best suited for favorable situations- where there are good relationships, a straightforward task structure, and power to execute- while an HPC leader is best for unfavorable situations (Bratton, 2020). Unfavorable situations arise when leaders and their teams are distant, with an unclear task structure and inefficient power models (Wu et al., 2020).

The situational leadership model also backs the contingency theory of leadership. Under this approach, leadership is best exerted by adapting styles to fit members and their abilities. The model suggests that leaders should analyze a situation then apply the

best method to complete tasks. Also called the Hersey-Blanchard model, the situational model leans on team members' maturity, experience, confidence, and willingness to accomplish tasks (Bratton, 2020). Under the model, the leadership ladder slopes from telling, selling, participating to delegating. Telling refers to giving specific instructions to guide tasks, while selling refers to the balance between giving instructions and being persuasive. The participating style allows leaders to interact and share ideas with the team. At the same time, a delegating level is an approach that allows a team member to lead subgroups or be individually responsible for a task (Wu et al., 2020).

The path-goal model and the decision-making models also support the contingency theory of leadership. The path-goal model was first developed in 1970 by Martin Evans and later polished by Robert House in the following year (Uslu, 2019). The model seeks to identify paths or linkages between team members and their objectives. Under the model, a leader should follow specific behavior patterns that will help him create viable relationships, provide guidance, support, and provide resources. Under goal-oriented leadership is directive leadership, supportive, participative, and achievement-oriented leadership. The normative decision-making model examines the ability of a leader to construct a decision. An autocratic leader makes decisions alone and imposes them on others, while a consultative leader makes decision-making a team affair to ensure group consensus (Arshi & Burns, 2018).

However, the contingency model of leadership has faced much criticism despite having worthy observations. Fiedler's work was questioned for posting significant empirical variations. Empirical research shows weak relationships between laboratory

studies and field research. Additionally, Hersey and Blanchard have not proven that using their model good provides good results (Bratton, 2020). Other studies show mixed results and suggest the model only works for a specific type of employee. Lack of accurate measures and a generally inconsistent research design has produced not-so-credible inferences (Uslu, 2019).

Transactional Leadership Theory

Transactional leadership also termed managerial administration, centers on group performance, design, and supervision. It is a management technique where administrators encourage compliance of their subordinates via both penalties and rewards. Leaders utilizing the transactional method never look into changing the future but focus on keeping things the same. Transactional management is effective in the event of emergencies and crises and when projects need to be handled in a specific way. It operates at basic needs satisfaction within Maslow's hierarchy, where leaders utilize the theory focus on the minor hierarchy levels. Transactional leaders use an exchange model and reward people for a positive outcome or good work (Odumeru & Ogbonna, 2013).

Conversely, individuals with this leadership technique also punish workers for adverse outcomes or shoddy work until the issue is rectified. One way that this theory focuses on minor level requirements is through stressing specific work performance. Leaders who embrace transactional leadership are efficient in getting work completed by controlling every portion individually (Alrowwad et al., 2020).

Transactional leaders tend to focus on the processes instead of forward-thinking ideas. The leaders are concerned with contingent positive brace or contingent

reinforcement. Contingent positive reinforcement, such as appreciation, is provided once a set of objectives is fulfilled early or on time or to ensure that workers operate at an appropriate speed at varying periods throughout their performance. Contingent negative reinforcements, such as discontinuation or punishments, are used when the quantity or quality of production falls below the goal results or when standards and responsibilities are not met at all. In managing contingent negative reinforcements, there are passive and active routes. When leaders are passive, they wait for problems to arise before fixing the issues. On the other hand, active leaders consistently look at each of their subordinates' tasks and make adjustments and corrections throughout the process (Nsom et al., 2019).

Some of a transactional leader's qualities are that the individual uses punishments and rewards to obtain acquiescence from subordinates. They are often extraneous motivators that trigger minor acquiescence from their employees. Not only do transactional leaders endure the culture, structure, and goals of the present company, these managers tend to be action-oriented and directive (Odumeru & Ogbonna, 2013). Transactional managers are often willing to negotiate to achieve objectives and work within a company's existing systems. They consider thinking within a box while solving problems. Habits significantly linked with transactional leadership are maintaining the status quo and developing the criteria for rewarding workers. There are two aspects in transactional administration: administration by rejection and contingent compensation (Odumeru & Ogbonna, 2013). Management-by-exception initiates corrective activities to enhance performance and intervenes when workers fail to meet acceptable or required performance levels and maintain the status quo. Contingent reward recognizes good

results or performance and provides rewards for effort. Authority is often granted to a manager to train, correct, and evaluate their juniors when tasks require to be enhanced. They will reward performance if the desired result is achieved (Alrowwad et al., 2020).

Transactional leadership theory measures have proven to be less effective, and in most instances, it tends to demotivate workers (Nsom et al., 2019). Therefore, transactional leadership might not be the most appropriate leadership model to use to study strategies of successful project managers. Since the transactional management model is dependent on penalties and rewards, it may not offer a lot in terms of motivating the project team outside of avoiding punishment. It also does not motivate individuals to work beyond their basics. As a result, according to transactional leadership theory, followers will have minor aspirations, which would only help them escape punishments, and they may become complacent as a result. Thus, the leader and the subordinate agree as to what the subordinate can do when the agreed rate of output is achieved. Leadership achievement under the transactional theory depends on the contentment the employee and leader have in adhering to the conformity of outputs or achievement-based evaluations. Hence, the required causal series where management form arbitrarily impacts workers' impulse that translates into enhancing organizational and operator production fails to be applicable within transactional leadership (Brahim et al., 2015).

Credentialism Theory

As more workers continue demanding postsecondary credentials for primary entry-level positions, some researchers are concerned about whether those credentials are required within the current labor market (Muja et al., 2019). Credentialism is a social

phenomenon that refers to relying on formal qualifications conferred by professional organizations, educational institutions, and various associations as the primary method for determining an individual's competence to perform a variety of occupational tasks or making authoritative reports as professionals in a particular field (Bills & Brown, 2011). It represents a meritocratic notion that individuals' positions in the workplace should be filled by individuals who have earned their qualifications through institutional processes, such as education and training in approved learning institutions or the satisfactory completion of formal exams, resulting in awarding certificates, diplomas, or degrees.

The credentialism concept began as part of the professional critique and during the de-schooling movement service between the 1960s and 1970s (Sukarieh & Tannock, 2020). Radical critics argued the premise that most, if not all, of the skills needed to perform a job competently by most professionals could be learned through real life interactions and with little effort in formal schooling compared to what was initially required to achieve the necessary qualifications. From this argument, formal learning's disguised objective is to impart a specific set of values, ideological orientation, and disciplinary paradigm to individuals seeking credentials to operate in prestigious fields like education, law, and medicine. The credential method built-in various occupational areas are a segment of workers' collective mobility plans to attain professional status, which brings significant symbolic and material reward (Etmanski et al., 2017). Therefore, credentialism theory is closely linked to social closure strategies that allow social associations to maximize awards by limiting access to opportunities and resources for a limited number of elites. Individuals who embrace it consider it an inevitable

concomitant of vindicated labor division required to maintain optimal productivity rates and performance (van de Werfhorst, 2011)

Credentialism is perceived as the over-reliance bias on credentials despite one's qualifications. Employers use credentials to provide more qualified workers with improved employment. Well-trained employees find more lucrative assignments, not because they are more productive or professional, but because they are more educated. Educational credentials have become the employment currency, and learners are expected to achieve a sufficient education level to obtain or hold respectable positions (Muja et al., 2019). Credentialism is linked to the notion that the learning institutions develop a mindset that equates credentials to one's professional qualifications; for example, an individual who has a fake Doctor of Medicine could be employed compared to an individual who has been practicing medicine for years (Bills & Brown, 2011). A credential is a credence that individuals are equal to the total abbreviations they have after their name. Today, a debate exists on what qualifications are required to efficiently and professionally carry out a task. Some people who have credentials might not be competent to perform a particular task. In contrast, some people who lack credentials might be highly qualified to perform the same task. However, only individuals who either educational or professional have credentials tend to be hired in such a situation (Araki, 2020).

With the increased mobility of staff and professionals and the rise of globalization, the question of the acceptance of qualifications from foreign countries has become a concern (van de Werfhorst, 2011). Conversely, skilled firms and various

occupational groups are concerned that the influx of such certified people can weaken their management of over-qualified labor supply. Governments are under pressure to alleviate the perceived or real scarcity of professional service providers in professions such as law and medicine to recognize these foreign credentials (Araki, 2020). The relative advantages within the labor market are the main reasons many people continue pursuing advanced education levels. But they fail to note that the returns of post-secondary education are declining (Etmanski et al., 2017). With time higher levels of education will no longer guarantee an individual a decent job. On the contrary, the educational expansion will serve to enhance the underemployment rates of graduates.

Though the credentialism system has helped enhance the level of educated individuals within our society, it has also significantly damaged the employment system. It is a set of procedures and a theory linked with the reproduction systems of social inequality and the intergenerational perpetuation of status and class distinctions. Additionally, there needs to be some consideration for how citizenship, gender, race, and class influence both opportunities and occupational processes within communities. Credentialism has resulted in many unemployed people who are highly qualified but lack the required credentials. For firms that hire people based on their credentials and not their qualifications, it is right to assume that this negatively affects an organization's productivity. Having numerous credentials or certifications is not a guarantee that an individual grasped the important concepts of a certain field or subject. Certification programs differ in terms of the rigor of their tests and how closely exams fit tasks conducted in a particular profession (Albert, 2017).

Human Capital Theory

Human capital theory traces its origin to the theory of macroeconomic development. During the 1950s, management, physical capital, labor, and land were major production factors. The major premise behind the human capital theory is that individuals learning capabilities are of proportional value with various resources involved with the production of services and goods. The argument insinuates that students who spend in their schooling and knowledge will enhance their skills and knowledge (Etmanski et al., 2017). They will therefore be more successful than less experienced individuals. This is the result of their significant earnings, investing in human capital. Learning institutions raise productivity and earnings mainly by giving individuals a way of analyzing problems, skills, and knowledge (Marginson, 2019). The human resource theory fuels the notion that workers' skills and knowledge can be enhanced via further investing in training or education. Training is the most significant contribution to worker development theory. Investing in training or education enhances productivity, but it is the form of training that one receives which determines who is in charge of paying for the training, the organization, or the employee. Human capital is perceived as an invaluable asset in which organizations invest. Companies fail to have enough incentives to invest in their employees' learning, for trained employees can decide to quit working for them and opt to work for other firms, which require the acquired skills (van de Werfhorst, 2011).

Early applicants of human capital theory believed in the association between learning levels and social, economic returns (Tan, 2014). However, modern growth within literature suggests that the quality of learning and when academic investments are

made is vital during individual capital development. Individual capital is perceived as a composite of a workforce or individual's experience, life experiences, and skills (Marginson, 2019). Vast levels of humanistic capital are required to generate high earnings, benefiting the society and the experienced individual. A human capital theory strength is that it assists researchers and policymakers to assess the association between training and education as inputs and social and economic benefits as yields. The empirical analysis in the human capital theory structure indicates that enhanced levels of education are linked with lower crime rates, gross domestic product increase, higher individual wages, better health outcomes, and higher civic participation rates (Demircioglu, 2020). With this, policymakers can evaluate the corresponding effectiveness of public investments in projects that inspire more learning.

The human capital theory is less efficient because it assumes that learning enhances productivity within working places, thus resulting in increased personal wages. However, the theory gives a minimal shrewdness into the procedure via which training and education are transcribed to greater earnings. Within statistical patterns, training and education account for a significant variance within personal wages that insinuate that human capital theory leaves a vast percentage of wage variability unexplained (Jaskiewicz et al., 2017). Additionally, higher human capital theory applications perceive learning as a moderately homogenous input. The applicability tends to indicate that greater academic quality and accomplishment rates will generate higher wages and productivity across the board. Such an academic approach is questionable, for personal capital development differs for groups and individuals. Individuals study uniquely, and

worthy learning within one setting might show inefficient within another (Marginson, 2019). The investment needed to attain the aspired result within city learning institution are necessarily different from those within the suburban district. This is due to the unique characters of their pupils' population. Hence, it is compelling for policymakers to acknowledge the human capital investment dependency context, ensuring effective policy interventions and efficient resource allocation at the state and national levels (Tan, 2014).

Another limitation that makes the individual capital approach unreliable is that the theory is among the major determinants of poverty. This theory explains the pattern of personal lifetime earnings and people's decisions to invest within human capital. People varying rates of investments in training and education are interpreted in terms of their future gains from their investments. Investments in training and education involve fees in foregone earnings and direct payments during the investment period. Thus, those who are compensated by higher lifetime incomes will opt to invest (Pastorino, 2013). Individuals who presume to have minimal labor market opportunities and work less within the labor maker, for example, minorities or women, are unlikely to invest in themselves. As a result, underrepresented groups and women might have minimal earnings and are likely to live in poverty. Additionally, the theory explains people's lifetime earnings pattern (Demircioglu, 2020). The general pattern of people's earnings begins low when they are young, but grow with age, even though earning does fall when a person is about to retire. The individual capital argument insinuates that wages begin low when individuals are younger, making them more likely to invest in themselves, and will forego incomes as they invest. Younger individuals are likely to make human capital investments compared

to older individuals because they have a greater work-life to profit from their foregone

wages and investments. Earnings then rapidly grow with age as these individuals acquire

new skills (Pastorino, 2013).

Leading Teams

An inter-organizational team typically involves personnel from multiple

organizations, such as product creation teams, who are brought together to execute a

given mandate. A study by Hu et al. (2017) explored the impact of tasks and relationship

conflicts on group performance and the mediating effect of shared leadership on inter-

organizational groups. The study concluded that there is an adverse correlation to team

creativity when there is conflict within the team.

Teams are established for the purpose of collecting individuals' expertise and

skills to achieve an outcome. Effective collaboration of any team depends on team

members freely sharing the knowledge they have with other team members. This is

consistent with the findings by Hu et al. (2017), which established the correlation

between group conflicts and the team members' ability to express their creativity. As

much as it is common for team members to refrain from sharing knowledge, this behavior

can often cause teams to fail. Team members may not share the knowledge they have

with each other for several reasons, including the feeling that they will lose ownership of

that knowledge or process or lose their power over it (Alsharo et al., 2017). Several

factors contribute to knowledge sharing, including the quality, accuracy, reliability, and

timeliness of the knowledge provided. Additionally, knowledge should be actionable in

that it can be adaptable and easily applied to tasks. There must be both trust and

knowledge quality in the team dynamic for team members to be open to the idea of sharing knowledge (Ford et al., 2017).

Ford et al. (2017) pinpointed trust as one of the critical drivers of success within a team. Members of the team, as well as their leader, must have trust in one another. Leaders of virtual teams need to be able to foster an environment of trust for the team to work effectively. According to Ford et al. (2017), "In contrast to organizational trust, which is founded on knowledge of others' past behavior, institutional trust develops through a system of shared beliefs and cultural values—the organization's mission and values" (p.4). Institutional trust is based on the culture and core values of an organization. This kind of trust allows team members to be more tolerant and forgiving in difficult situations when a colleague accidentally lets the team down (Ford et al., 2017). An example might be sending out incorrect data or reporting poor results for a customer. The impacts of trust are significant because they have a direct impact on how individuals relate to one another within the organization (Zaman et al., 2019).

Building trust can be challenging in virtual teams where there is no face-to-face interaction or physically observable behaviors. Trust is essential for a virtual team to work, but it is also difficult to establish in remote environments. Virtual team members and their leaders must learn to compensate for lack of trust. Relationship building, which is typically done in person, promotes team bonding and trust (Larson & DeChurch, 2020). Therefore, the virtual leader must be able to find substitutes for face-to-face meetings and team building exercises. Ford et al. (2017) found the best way to compensate for lack of trust was for team members to share knowledge, and virtual teams

respond best to institution-based trust. In other words, virtual team members seem to be more trusting of their team members' skills and knowledge. Liao (2017) suggested that face-to-face virtual meetings are set up early on in the working relationship to build trust between the leader and the team member. Additionally, leaders cannot adopt an out of sight out of mind with their virtual team members if they want to gain trust. Instead, the team members must feel valued. Including virtual team members on organizational announcements and supporting different work environments like time zones, languages, and cultures may also lead to team members trusting their leader (Ford et al., 2017). Additionally, including the employees in team meetings, creating informal social opportunities, and sharing information about the business and what it is doing are ways to build trust (Liao, 2017).

The relationship between the leader and the team member can contribute to or detract from how effective a team will be. If an employee does not trust their leader or the organization they work for, it can prevent them from being motivated to act as a member of that team. The same applies to leaders themselves. Leaders must trust in their teams just as much as the teams must be able to trust their leaders (Koeslag-Kreunen et al., 2018), especially in a virtual team setting.

Virtual Teams

Virtual teams are increasing in number and prominence as they are becoming a lot more commonplace, and companies are expecting their managers to lead virtual teams effectively (Ford et al., 2017). Not only will virtual teams continue to exist, but the make-up of the teams will also become more and more diverse (Hoch & Dulebohn, 2017).

Because there are so many advantages to virtual teams, more companies are interested in implementing them. Research concerned with project leadership at the team level indicates that virtual team leaders create, shape, and track team performance (Hoch & Dulebohn, 2017). In the case of participants working in the same virtual team, collaborative structures can be formed, and team mentality can take shape because they work in tasks that convey certain levels of interdependence and shared responsibility to achieve a shared objective. Although some researchers have argued that virtual teams are less likely to accomplish a team dynamic than their face-to-face counterparts, other scholars have stressed the importance of developing relationships and enhancing social-emotional ties between virtual team members (Wu et al., 2020).

The approach used by leaders to manage virtual teams does not differ much from that of managing face-to-face teams (Olaisen & Revang, 2017). The main difference is that virtual leaders must perform specific tasks to keep groups motivated as there may be difficulties with group cohesion especially for tasks that require team cooperation. They must also apply different leadership styles to suit the project or program requirements. This is particularly true when the industry requires a knowledge-based management approach instead of a culture-based one. Virtual leaders can improve performance through feedback and recognition programs (Ford et al., 2017).

Although the cycle of integration for modern technologies is not yet well known, research by Elam and Brands (2019) analyzed how an inter-agency virtual team has integrated the use of collaborative technology and succeeded in achieving the demanding goals of a highly creative product over a span of 10 months as studied by

(Majchrzak et al., 2000). Such a virtual team's analysis is particularly beneficial for our awareness of the integration process because virtual teams have mixed structures rather than traditional organizational units.

Research by Owens & Khazanchi (2018) evaluated the role of virtual teams in an environment of constant technological change and the enabling capacity of information technology to foster group communication and harmonization of group roles. The study concludes that although communication and group interaction allowed group members to use technology to assess individual capabilities, there is a need for further researcher into other social and behavioral issues faced by virtual teams in a virtual working environment.

In terms of technology, communication and coordination are two areas that have been studied in relation to virtual teams. Technology has caused a fundamental shift in the way teams' function, resulting in substantial implications for leaders (Larson & DeChurch, 2020). Teams now have the ability to connect with each other due to technological advances in communication platforms. In particular, virtual teams communicate through various channels, such as instant messaging and video conferencing.

According to Fang and Wang (2017), technology trust is a new element in virtual team development. They suggested technology optimism, or trust in technical systems, is critical for the success of virtual teams. Additionally, they note that previous research did not consider CMC. They found a significant positive correlation between CMC job satisfaction and relational trust. Within virtual teams, the use of CMC can improve team

effectiveness. If used properly, the virtual leader can use methods and tactics to solve problems (Ewing et al., 2019).

The benefits of virtual teams include being able to achieve goals together without an in-person face-to-face meeting (Olaisen & Revang, 2017). If team members live in different geographical locations, the frequency of travel and expenses associated with travel decrease with virtual teams. Virtual teams are made possible by facilitating technological platforms and knowledge sharing (Morrison-Smith & Ruiz, 2020). Success in a virtual team can only be achieved by selecting the appropriate technology necessary for virtual team members to perform. To realize the benefits of a team, the leader also needs to have effective communication, provide performance feedback, and pick up on the need for information (Ford et al., 2017). In virtual project teams, tasks, and activities, the importance of virtual communication is especially emphasized regarding the attitude displayed by team members to promote a beneficial connection in geographically separated working environments.

Virtual teams are not easy to manage as they are associated with many challenges. In addition to the bottlenecks identified by Ford et al. (2017), significant challenges have been identified by Morrison-Smith & Ruiz (2020). They noted that in addition to temporal and perceived distance, which is time-based and cognitive, virtual teams are influenced by physical factors such as geographic distance. These variables, including belief, motivation, and conflicts, are closely coupled with social and emotional elements.

While the project manager needs to have technical competencies and hard skills, these alone are not sufficient to lead a virtual team (El-Sofany et al., 2014). Some of the

most prominent problems that occurred during projects included lack of clear objectives,

technical issues, time differences, and different public holidays (El-Sofany et al., 2014).

The versatility offered by virtual project teams will help achieve improved work-life

balance for staff and feasibly enhance their job satisfaction. In a virtual workplace, it is

essential for workers, and the employer is typically able to collaborate with experts from

all over the world. By harnessing the benefits of a virtual project team, the employer can

gather a wide range of experts in varying subject matters from many regions of the world

into a virtual team through advanced communication technologies. This feat may be

impractical in conventional face-to-face teams.

All the advantages mentioned earlier are achievable through the proper

management of virtual teams. Admittedly, the efficacy of leadership plays a key role in

virtual team performance. Liao (2017) posited that not only should virtual teams have a

vertical leader, but they will also have a leader that emerges from the team. This leader is

an informal leader, and while virtual team members should already be self-directed, the

emergent leader could have just as much influence on the team. When leaders employed

leader-member exchange leadership type, employees were more likely to quit than when

the manager used a transformational leadership style (Eberly et al., 2017).

Project Management

The project manager's role is to initiate, plan, organize, execute, control, and

support different "activities towards the production of pre-defined benefits" (Badewi,

2016, p. 764). A project manager can contribute to a project's success through

collaboration with stakeholders to deliver an acceptable level of service for the project,

have active cooperation, and clarify interdependency of roles, responsibilities, and accountabilities before starting the project. Proper structure of a plan can significantly influence the success of a project. Project managers should limit unnecessary complexity in their plans. In addition, Castro et al. (2021) suggested that stakeholders should have a clear understanding of what they want to accomplish from the beginning whereas Badewi (2016) stated that stakeholders are willing to be flexible in projects but they are not willing to compromise their goals or objectives for unclear objectives or an unclear plan.

Even though several companies are implementing project management practices, understanding the success of project management has been a challenge. Project management is critical to attaining project goals that grow and develop enterprises while also encouraging innovation (Wang et al., 2017). Additionally, effective project management should contribute to the growth of the project manager and the growth of the organization (Wang et al., 2017).

Project managers have traditionally based their success on cost, time, and scope of a project. However, recently project managers are moving towards including customer satisfaction and strategic objectives as additional measures to the project's success (Castro et al., 2021). Badewi (2016) found that a focus on customer satisfaction and strategic objectives and the traditional measurement factors comes from being experienced as a project manager. Additionally, more experienced project managers focus on developing teamwork rather than on the tasks. Therefore, inexperienced project managers, while concentrating on merely the cost, time, and scope of a project, often

have customers or sponsors unsatisfied with the project results. Badewi's project benefits management model can be used to combat this phenomenon.

Badewi (2016) suggested that project benefits management is comprised of four components: customer benefits, financial benefits, organizational benefits, and intangible benefits. By including the four components of a benefit management system. Badewi found that project managers can maximize the gains for all stakeholders involved. Project managers can incorporate and account for all business activities that contribute to the success of a project by integrating these important concepts. For example, the project manager can account for both customer satisfaction and organizational growth using tangible and intangible benefits.

Project management relies on communication for success. Effective communication has the ability to enhance the relationship between the relationship between a project manager and stakeholders (Castro et al., 2021). Project managers should emphasize the role of communication in project management. Ineffective communication may lead to confusion, delays, and poor implementation of a project. Proper communication contributes to establishing relationships and trust between stakeholders and project managers (Castro et al., 2021). Additionally, it is important for project managers to understand the goals of a stakeholder. For example, if a stakeholder wants to see an improvement in revenue or production, success may be measured based on cost. However, another stakeholder may measure success based on growth opportunities. Project managers ensure all parties involved have common goals so there

is no confusion as to where the project is heading from the beginning (Badewi, 2016; Castro et al., 2015; Wang et al., 2017).

Carvalho et al. (2015) proposed both internal and external factors that can influence project management. They acknowledged the project manager is a critical success factor in a project. The project manager serves to provide direction goals and motivational support to resolve problems that may arise for the project team. Badewi (2016) found that efficiency was a short-term measure of project success, while effectiveness was a long-term measure of success. Achieving success for a project takes time and money. Regardless of the measures of success for a project, it is important for project managers to present the results in a way that aligns with stakeholder expectations. Badewi found that the decisions on the measures of success can vary depending on other factors such as project budget, timing, size, and the scope. A lack of agreement on the measures of success may lead to issues during implementation. Badewi found that many stakeholders also hold unrealistic expectations about how long a project will take to complete.

Internal measures such as cost, time, and scope and external measures influence the success of a project. External measures should include an expected return on investment. Including the return on investment from the project allows stakeholders to see both the project's financial and non-financial benefits. The nonfinancial benefits may include tangible and intangible. However, including all benefits gives stakeholders a complete picture of the project's impact and may increase customer satisfaction. Additionally, identifying all of the benefits informs the project sponsor if a project is

worth the investment and can promote an organization's sustainable growth (Meredith & Zwikael, 2020).

Three indicators measure the sustainable growth of an organization. They include improvement in management skills, environmentally friendly behavior, and efficient resource management. Project management improves sustainable organizational growth by increasing efficiency and the reputation of the company. Wang et al. (2017) supported this argument with the suggestion of using an ethical approach to improve customer satisfaction, trust, and loyalty, thereby resulting in project management sustainability. However, Castro et al. (2021) supported the point that project managers need to be agile to effectively manage projects. Stakeholders may not be able to attach value to intangible benefits, but they can attach value quickly to tangible benefits (Meredith & Zwikael, 2020). Therefore, project managers must incorporate all of a project's possible advantages in order for stakeholders and sponsors to determine whether the project's investment is worth the return on investment.

Meredith and Zwikaal (2020) suggested that organizational growth would also increase project management sustainability. The project manager can contribute to sustainable growth by developing and leading a learning organization. This development is based on the ability to adapt to change and improving skills (Meredith & Zwikaal, 2020). The objective of a learning organization is to make improvements in operations, decision-making, and processes (Meredith & Zwikaal, 2020). By making improvements through project management practices the organization develops stronger relationships

with customers as well as reduce the cost of services they provide. Therefore, project management can positively impact the three indicators for sustainable growth.

Carvalho et al. (2015) suggested that there are five major reasons why organizations choose not to implement project management. They include: project management is a time consuming task, the use of project management is not proven to be effective, the organization believes they have limited capability to implement project management, the use of project management is outside of the organization's culture, and a lack of resources to implement. Project management is a higher cost choice, but it will also provide returns on investment. Therefore, it is important for organizations to evaluate the cost and benefits of implementing project management to determine if it is worth the time and effort.

Implications of Transformational Leadership and Virtual Project Management

While there are some criticisms of transformational leadership theory, research indicated it is the best conceptual framework for this research while attempting to find the most successful characteristics of virtual project managers. Bass (1990) discussed the benefits of transformational leadership. These benefits include being an effective leader, having higher evaluations from superiors and employees, making an impactful contribution to the organization, creating a positive corporate image which in turn attracts better talent, and creating better training and development opportunities. Physically distant teams are more likely to succeed through self-regulation than when leaders dictate success patterns. The findings of the study by provided some insight into how managers can intervene in inter-organizational team conflict situations.

Morrison-Smith and Ruiz (2020) provided a more in-depth insight into the key factors and challenges that impact collaboration on virtual teams. The literature review also dealt with geographical, temporal, and perceived distance as the main issues constituting distance factors and their associated challenges, including reduced motivation and awareness and the difficulty of building trust. As noted by Espinosa and Carmel (2004), the problems of synchronization over time zones in the production of global applications have not been fully discussed by existing research. The same study proceeds to offer that when team members do not work at once, collaboration costs are minimized. This notion is contested by Imtiaz and Ikram (2017), who found that due to the additional difficulties of splitting work over geographical locations, time distances considerably increase the expense and effort of teamwork.

Owens and Khazanchi (2018) offered more in-depth perspectives for virtual team leaders concerning how technological tools can be used to build group trust. The study identified psychological implications that they use to conclude that human actions can theoretically occur in the virtual working environment in the present world. Technological communication methods can be incorporated into virtual team leadership and used to impact trust while working with diverse groups. The research also described relevant observations on how people function and work together in a team enabled by telecommunication resources (Owens & Khazanchi, 2018). These results can establish guidance and suggestions for the use of technology by virtual project teams to improve work practice. An inter-organizational team consisting of participants from various organizations and geographical locations is commonly regarded as a vital way to promote

organizational creativity. A study by Gu et al. (2018) introduces a multilevel model to evaluate linkages between shared leadership and innovation for interorganizational teams at the team level as well as individual level. The study collected data from over 50 diverse interorganizational teams and found that mutual leadership is positively connected to innovation in teams and individual creativity through the exchange of knowledge.

Project team leaders should remain focused on ensuring that followers achieve their full potential, are encouraged to manage tasks and choices themselves, and respond to group sharing and a culture of service to others. Virtual teams and task performance are directly related (Han et al., 2020). The effectiveness of the communication channels between team members is the most important factor affecting virtual teams' task performance (Fleischmann et al., 2020; Han et al., 2020). This is particularly true for completing tasks such as generating ideas that require creative thinking. Virtual teams are often more effective in decision-making situations as they can be successful in solving complex problems that require a common ground (Morrison-Smith & Ruiz, 2020).

Transformational project team leaders must not only recognize their role in team outcomes and objectives, but they must also find ways to encourage their team members to be individually constructive while providing structure and direction. Virtual project teams under transformational leaders are helping organizations, and their reaction time to rapid shifts in the contemporary competitive environment, enabling businesses to draw on knowledge spread around untapped markets and geographical areas.

Most of the researchers present transformational leaders as individuals who encourage their employees to align their values with those of the organization while providing development opportunities to properly equip their employees to solve problems and hone their job-related skills (Eberly et al., 2017). Zhang et al. (2015) argued transformational leadership characteristics should also be displayed in upper-level management, not just middle management leaders. Eberly et al. (2017) found that employees were less likely to leave a company even if they experienced extreme situations personally or professionally if they had leaders who display transformational leadership characteristics. Eberly et al. argued that leaders using inspirational motivation, idealized influence, individualized consideration, and intellectual stimulation could promote job embeddedness, which reduced employee turnover.

Hill and Bartol (2016) recognized a significant multilevel effect of motivating team leadership, in which each member of the team has a positive and in-depth evaluation of his or her subjective role in a virtual project team under high empowerment conditions, as well as their contribution to team performance. The researchers also showed that the effect of leadership empowerment at the team level on the integrated virtual cooperation of project team members and indirectly on project outcomes increases at higher team dispersion levels. Zhang et al. proposed the idea that successful group transformational leadership consisted of identifying and being able to articulate a vision (Khan, 2017), providing employees with an appropriate model (Eberly et al., 2017), fostering the acceptance of group goals (Gu et al., 2018), and leading with high but realistic expectations.

Transition

In this section, the empirical evidence of scholarly sources was presented to support the importance of virtual project teams in today's global business environment and how transformational leaders can improve virtual team performance. Additionally, gaps in the literature were identified for successful leadership characteristics project managers can use when leading teams virtually. However, a review of literature the supported transformational leadership actions such as understanding their position in team outcomes and objectives and developing ways to enable team members to be independently constructive while giving structure and direction. Such actions lead to being a competent leader, receiving higher ratings from superiors and employees, making a significant contribution to the organization, establishing a great corporate image that attracts better talent, and providing better training and development opportunities are just a few of the advantages.

Section 2: The Project

In Section 2, I discuss the role of the researcher, participants, research method and design, population and sampling, ethical research, data collection instruments, data collection techniques, data organization techniques, data analysis, reliability, and validity.

Purpose of the Study

The purpose of this qualitative case study was to explore effective leadership strategies currently employed by successful project managers when leading virtual teams. The target population of this study comprised three project managers employed with three different companies. The project managers all had at least 1 year of experience successfully leading projects with virtual teams. Additionally, the companies the project managers work for had to have their headquarters located in the United States. The implications for positive social change include the potential to allow employees to have flexible schedules with more of a work-life balance, leading to happier, more productive employees (see Olaisen & Revang, 2017). Additionally, the results of the study can be used to decrease the number of employees that will need to commute or travel to different work sites, and with the reduction of travel, both airline pollution and vehicle pollution will be reduced, thereby contributing to a cleaner environment (see Olaisen & Revang, 2017).

Role of the Researcher

My role as the researcher was to conduct a qualitative study using the research instrument to obtain data from virtual project managers. I took care to adhere to all Walden University requirements and guidelines while conducting the study to ensure the

reliability and the integrity of the information gathered. I have been a project manager for over 7 years, so it was important that I recognized when my own assumptions were guiding any aspects of the study to eliminate any bias. I conducted a valid, reliable, high-quality study by removing any personal biases that may have arisen. Morse (2015) explained research bias and the impact it can have on the study. One way bias can occur is if researcher only sees what is anticipated. To combat this, it is recommended that the researcher enter a study with a neutral stance. Research bias may also come into play during the interview questions because the questions themselves may be biased. To ensure I was not simply confirming my bias I did not ask interview questions that were leading (see Hagues, 2019). Additionally, to prevent forming my own conclusions, I asked interview participants to expound upon the answers they provided that were not clear. I was sure to remain ethical while conducting the study by maintaining the participants' confidentiality (and continuing to maintain it even after the study was completed).

The researcher needs to assume "full personal responsibility for each phase of the study" (Neuman, 2014, p. 74). My role as the researcher in this study was to create a tone so that participants were comfortable with sharing their experiences during the interview process and comparing their experiences with those in the field (see Chenail, 2014). I investigated my relationship with the topic, project managers who were the participants, and the research topic, the project manager's leadership style in virtual teams.

Research involving human subjects should meet the risk-benefit criteria and requirements for participant selection and should be based on risk-benefit considerations

(Khanlou & Peter, 2005). *The Belmont Report* guidelines seek to summarize ethical concepts that researchers should follow while conducting the research (Zucker, 2007). According to Zucker (2007), these guidelines set the baseline to ensure that ethical research is conducted with human subjects. I adhered to the principles of *The Belmont Report* throughout this study and respected all persons included in the study.

Participants

Ensuring that the proper participants are included in the study is integral to successful research (Kenno et al., 2017). The target population of this research consisted of three project managers that are members of the site I targeted for my study. To be included as a participant in this study, project managers had to have at least 1 year of experience effectively managing projects with a virtual team. To ensure that participants had proven, in-depth expertise, the ability to contribute implicit information, the ability to cocreate knowledge with the researcher, and a thorough and nuanced understanding of the central research issue (Kristensen & Ravn, 2015), participants had to have a project management professional (PMP) certification.

I recruited participants through the study site. Participants received a letter containing the purpose of the research, the selection process, data collection procedures, and data collection questions. Based on the advice of Yin (2014), interview times were set based on the participant's availability. I conducted the interviews via Zoom. To collect the information needed to address the research question, I asked open-ended interview questions that had already been defined.

Research Method and Design

The research method and design provided the rationale for the selection of the qualitative method for the study. I also discuss the miniethnography case study design employed in the study.

Research Method

Based on the nature of the research question(s), researchers must choose an appropriate research method and design. Researchers have the option to choose between a qualitative, quantitative, or a mixed-method approach (Creswell & Miller, 2000). When employing a quantitative approach, the researcher uses numerical data to explore the relationship between two variables or to test a theory or hypothesis (Yousefi Nooraie et al., 2020). Because I did not evaluate a method or theory or examine the relationship between two variables, neither the quantitative nor mixed-method approaches were appropriate for this study. Participants' abilities to articulate their inner ideas in detail is limited by the nature of quantitative data collection procedures, like surveys and questionnaires (Yousefi Nooraie et al., 2020). Qualitative methodologies are used in research to investigate human behavior and change (Mohajan, 2018). In this study, the human behavior I investigated was the identification of leadership strategies used by project managers who lead virtual teams.

Morse (2015) emphasized that qualitative research includes not only the researcher's and participants' knowledge but also the perspectives of those the participants know. As a result, the knowledge obtained from a qualitative study encompasses more than just what the participants have to say. Because qualitative studies

are used to gain insight and understanding to address a question (Mohajan, 2018), I

determined that the qualitative approach was most suitable for this study. In this case, a

qualitative analysis helped me gain insight into effective leadership strategies for virtual

project managers.

Research Design

Ethnography, focus groups, narrative inquiry, and case studies are the four main

qualitative research designs (Marshall & Rossman, 2016). Focus groups bring together a

small group of study participants from the target community to answer open-ended

questions about their ideas (Herren et al., 2020). When compared to individual

interviews, focus group participants provide less detailed comments (Chun et al., 2016).

Because I needed thorough responses from the research participants, I did not use focus

groups. Secondary materials, such as stories, memoirs, and notebooks, are used to create

meaning in a narrative inquiry (Yin, 2018). According to Herren et al. (2020), the

narrative inquiry design creates validity difficulties. Because I did not acquire data from

indirect sources, I did not employ narrative inquiry in this study.

Herren et al. (2020) explained that the miniethnography design is optimal for

studying cultures and that the design's success is mostly dependent on participants'

openness. A miniethnographic case study most accurately matched the needs of this study

because a case study is descriptive and it allowed me to gain an understanding of

leadership practices without influencing the behavior of the participants. A case study

design can give insight into what happens in the real world (Yin, 2014). Leading project

teams in a virtual world adds new dynamics to project teams, impacting leaders' abilities

to efficiently lead the team. Researchers use a phenomenological design to explore a phenomenon of the lived experiences of participants (Fletcher, 2017). Because I did not concentrate on the participants' interactions, phenomenology was not suitable for this research. It was, however, important to understand the culture of project teams in a virtual environment; therefore, I used the ethnographic design to conduct an in-depth study of culture and behavior of the participants (see Fusch et al., 2017). Because understanding the culture and successful leadership practices of the participants were the primary aims of this study, I employed the miniethnographic case study design.

Conducting qualitative research can assist in identifying and developing successful leadership strategies; however, it is important for the validity of the study that data saturation be achieved. When there is enough information to reproduce the sample, there is no additional new information, and when more coding is no longer possible, a researcher has reached data saturation (Fusch & Ness, 2015). One way to achieve data saturation is to ask all participants the same interview questions and code the responses. If new information becomes available during the interview process, further interviews should be conducted (Fusch & Ness, 2015). As I interviewed participants, I started to get similar responses, and at that point, no additional information was obtained and data saturation was achieved.

Population and Sampling

The selection of participants in this study was based on their prior experience managing projects in a virtual environment and their success in those projects over time. To successfully study the leadership characteristics of virtual project managers, it was

important that specific inclusion criteria were set; therefore, the following qualifications were required for participation in this study: (a) working with an exclusively virtual team, (b) has PMP credentials, and (c) had a minimum of 1 year leading a virtual project team. This study contributed new information on organizational support and project management abilities to the project management knowledge base; therefore, it was important that participants had experience with successfully leading projects with an exclusively virtual team. Additionally, it was important that participants have project management qualifications that demonstrate in-depth experience and a comprehensive understanding of the core research topic; therefore, I sought participants with a PMP. To ensure their validity for the research at hand, all these criteria had to be met for a potential subject to be included as a participant of this study.

I sent research invitations to participate in the study to members of my study site. In the invitation, I requested that project managers that met the criteria email me with their interest in participating in the study. After they completed the survey and I checked if their virtual project was a success, participants were contacted. I then scheduled individual Zoom interviews according to the participants' availability because the interview approach should be chosen according to the participants' demands (see Chenail, 2014). I continued to interview participants until the results showed data saturation to ensure a proper sample size had been reached (see Kyngäs et al., 2020). To confirm the findings and triangulate the data, I also reviewed company documents provided by the participants as well as relevant extant literature and my journal notes from the participant interview sessions. The results of the study allowed me to better

understand leadership and project success in virtual projects. By communicating the real-life experiences of successful virtual project managers, this qualitative study contributed theory and knowledge to the field of project management and leadership (see Thamhain & Wilemon, 1977).

I identified participants by contacting members of the study site. Instead of using convenience sampling, the research question of this study supported the use of purposeful sampling to identify possible participants (see Yin, 2014). This sampling strategy ensured participants were able to address both the overarching research question and the interview questions.

Ethical Research

According to Vanclay et al. (2013), three key branches form the most common ethical problems in science: privacy/confidentiality, informed consent, and relationships between the researcher and participants. Researchers have an individual and collective duty to ensure that they conduct their studies ethically (Vanclay et al., 2013). In this study, I maintained each individual's privacy and confidentiality by protecting all the data obtained. I will follow the Walden University protocol that specifies that data remain stored for 5 years in a locked drawer, after which I will delete the data to protect the confidentiality of the participants.

I obtained authorizations to conduct this study in advance from the Walden University Institutional Review Board (IRB) and participants and abided by the standards indicated on the study site's website, including providing participants with a letter of introduction, proof of IRB approval, and a privacy statement. Before data collection

began, participants were asked to accept and agree to the informed consent form. The informed consent form guaranteed the participant's privacy and notified them that they might discontinue their involvement at any time (see Holland et al., 2010). An open environment is crucial for the researcher to maintain so that respondents who cannot disclose information while being questioned can opt out of the study. Furthermore, ethical principles demand that the researcher is responsible for negotiating participation at the start of a research project and remaining sensitive to the aspects of participation that have been agreed upon (Bednall, 2006). In all written notes, data, and the results of this study, I only referred to participants and their personal information by numeric codes rather than their names to ensure participant confidentiality. All consent forms and manuscript notes are stored in a locked file cabinet in the office of my home to meet privacy requirements.

Informed consent assumes that participants have adequate knowledge in advance to make an informed decision as to whether to participate (Vanclay et al., 2013). Participants received an informed consent form with the approval of the Walden University IRB, and IRB approval number 05-09-22-0560220 prior to participating in semistructured interviews. Additionally, and each participant provided formal consent by responding "I Consent" via email. To ensure interview participants did not feel forced to participate in the study I made it clear that they can withdraw at any time by notifying me by email that they no longer wish to participate. This information was also be shared via the informed consent form. Participation rewards were not granted, and participants were

made aware of this from the outset. Incentives can reduce the accuracy of outcomes and create conflicts of interest (Nosek et al., 2012).

In this study, three virtual project managers' leadership strategies were studied. For each interview, common themes and sub-themes found were categorized, and a thematic analysis was completed to guide the results of the study by developing themes based on the data received. To ensure the results were both ethical and accurately interpreted, qualitative methodologies and a thorough evaluation of interview transcripts and handwritten notes were conducted.

This study will interest practitioners because the function of the project manager is very similar to that of a qualitative researcher. A good project manager interviews topic experts to understand needs, synthesize data to identify project drivers, and analyze data to improve (Caelli et al., 2003). Researchers of all levels of experience can apply this method of qualitative research, as this method of data collection, analysis, and presentation is precise to generate confidence.

Data Collection Instruments

The literature review in qualitative research offers the knowledge needed for a researcher to plan the data collection process (Kyngäs et al., 2020). Qualitative research instruments were used to collect and arrange data. This study used a short qualification survey, instructions for the interview, the formal video interview via Zoom, notes and artifacts collected, and audio transcription equipment. Participants completed a short qualification survey to indicate that they have the virtual project experience required, and

to collect contact and demographic data. The first data collection tool used were interviews and literature, documentation, and transcripts were reviewed.

Interviews

Interviews were conducted via Zoom with applicants who meet the criteria, using semistructured interview questions outlined above. I asked open-ended questions and used prompts to keep the discussion focused on the overarching research question (Petty et al., 2012; Yin, 2014). The purpose of the interview questions were to address the problem statement. Using a semistructured interview technique allowed participants to talk about their own experiences, which allowed them to better comprehend the topic. The interview protocol addressed both the interview method and the interview questions in order to prevent bias and lend credibility to the study.

I conducted a miniethnographic case study to learn about the effective leadership characteristics of project managers leading virtual teams, and interviews were the primary data collection instrument. Notes for each of the interviews were written in a single notebook. Participants were recognized and linked by number and not name in the notes.

Member Checking and Transcript Review

Qualitative researchers reduce data transcription and interpretation errors by transcribing data as soon as possible (Marshall & Rossman, 2016). Therefore, interviews were transcribed immediately after each interview. I provided an opportunity for each participant to review the transcripts and used member checking to improve the reliability and provided a chance for validation (Harvey, 2015). By sharing interpretations of the findings from the interviews with the participants, I was able to check for accuracy and

alignment with experiences of each participant. Member checking improves accuracy of

the information data provided in the study, minimizes erroneous data, and strengthens the

reliability and validity of the study (Birt et al., 2016). Additionally, researchers can use

member checking to confirm the themes and understandings that were collected during

the interview (Morse, 2015).

Data Collection Technique

To investigate the overarching research question, I used open-ended questions in

interviews as the primary data collection tool. Semi structured interviews have various

advantages, including the ability to collect in-depth data by allowing participants to voice

their opinions in face-to-face interviews with continual interaction with the interviewer

(Yin, 2018). Participants' misrepresentation of information, on the other hand, is a

common drawback of semi structured interviews (Kristensen & Ravn, 2015). Another

downside of interviews is the possibility that the interviewer will sway the participants'

responses (Chenail, 2014). Once the participant agreed on an interview date and time, I

sent a copy of the interview questions via a confirmation email prior to the interview to

counteract this. This allowed participants review the questions again and ask any

clarifying questions they had. This also provided participants with the opportunity to

react without being influenced by the researcher (Fielding, 2010).

In addition to collecting interview responses and artifacts, I observed participants'

body language and voice pitch to guarantee that no meaning was lost, as this is also a

potential drawback of the interview data gathering technique (Ryan et al., 2009). Another

disadvantage of using interviews as a data collection method is grappling with the

unpredictability of participants' willingness to engage wholeheartedly in qualitative research interviews. Aveling et al. (2015) advised researchers to be aware of participants using double speak to avoid revealing uncomfortable details. Additionally, I explained the research question, as it is important that participants understand the research objective (Kristensen & Ravn, 2015), to be more forthcoming with their interview answers.

I used a qualitative approach for data collection to explore the strategies in depth. The participants were initially screened with the questions outlined in the research invitation. Prior to the interview, I required that participants read the consent form and consent electronically. The consent also indicated their interest in participating in the study. Once the interest and availability were confirmed, I conducted interviews via Zoom. A qualitative researcher is essential to his effectiveness in connecting with others (Ryan et al., 2009). In the beginning, an interviewer must build confidence by inquiring about the interests and personal background of the candidate. To make the candidate feel comfortable, I made sure to interact with each participant both before and during the semistructured interview. The semistructure of the interview provided adaptability and enabled the interviewer to ask clarifying questions and explore any additional topics in real time (Ryan et al., 2009).

Three certified project managers were interviewed over four sessions until the responses became redundant and data saturation was reached. I used handwritten notes and audio recordings to collect data for this investigation, thereby allowing me to concentrate better on participant information and any follow up questions that may arise. Additionally, I was careful to activate security features of the Zoom video call so that no

person could enter the video call if they were not invited. All audio recordings were then

be transcribed using natural language translation software on my computer. NVivo 12

was used to check the audio and import transcripts after they were modified manually to

ensure they were transcribed accurately. Interviews, classification surveys, and

handwritten notes were numbered to prevent personal names from being used. This

number identified every participant; however, the number does not represent the

sequence in which they were questioned. To account for member checking, a summary of

the key topics from each interview were documented and sent to the interviewee after the

interview to ensure the accuracy of the analysis. This allowed for any questions or

revisions, and increased not only the credibility, but also the rigor of the study (Morse,

2015).

Data Organization Technique

Organization of the data collected is imperative to the research study. Therefore, I

organized the data by labeling any interviews, coding, and artifacts with the title of the

artifact, the date of the artifact, and the identifier from which the interview or artifact was

obtained. Categories emerged from themes during interviews as well as previous

literature reviews and research conducted. Participant numbers were used as the identifier

to signify the identities of the participants as I was documenting the interviews with

them. Aldridge (2014) suggested using pseudonyms to protect the identity of participants

and the data they share with the researcher. I was also careful not to include any

identifying information in my findings, or any project artifacts obtained. I will keep the

information in a place that is only accessible to only me for 5 years, at which point I will

delete all information as suggested by Yin (2014), by shredding the documents using a

secure document shredding company. This will ensure the confidentiality of the

information used and the protection of privacy for all participants.

<div align="center">**Data Analysis**</div>

Using the conceptual framework previously established, the data were examined

and split into categories based on themes. Data can be analyzed and categorized using

several different approaches. The data in this study was examined using Yin's (2014)

five-step approach. The data were compiled, disassembled, reassembled, interpreted and

concluded based on themes that emerged from the data after each interview transcript

was read several times to achieve immersion in the data.

Compiling

During data analysis, refined codes, categories, and themes from the interview

transcripts were organized and stored. From the interviews and notes, I looked for

themes, patterns, and concepts. NVivo was used to compile and arrange the data

acquired, as well as to establish themes and file naming capabilities (Phillips & Lu,

2018). Additionally, I used reflective journaling, indexing, and research logs. After the

information was compiled, I disassembled the data.

Disassembly

Data collection and analysis occurred simultaneously, with one participant's

interview, transcription, and data analysis completed before the next participant's

interview, transcription, and data analysis (Marshall & Rossman, 2016). The information

was then divided into sections, and then I used the coding method to identify themes and

categorize them. As a result of analyzing the data, I identified concepts, themes, phrases, and terms, and then categorized them according to the literature review.

Reassembly

After disassembling, I used the NVivo software to organize and analyze the data. The NVivo software assisted with the identification of emergent themes and identified groupings within these themes.

Interpreting

After reassembling the data, I reviewed the themes that emerged to gain a deeper understanding of the effective leadership strategies currently employed by successful project managers when leading virtual teams. I completed my study's data analysis after completing the data interpretation.

Concluding

After I completed the interpretation of the data, the final step of data analysis was to develop conclusions. After I completed the interpretation of the data, the final step of data analysis was to develop conclusions. Each participant was given the opportunity to review transcripts to ensure reliability and provide validation. I was careful to avoid researcher bias by ensuring that I did not include personal thoughts or assumptions that could potentially influence results. I used the NVivo tool to identify themes in the data and develop themes and subthemes for data analysis. The analysis and conclusions reflect themes identified from the interviews and the literature review based on the conceptual framework. For this study, I used transformational leadership theory. Connecting the

themes with the literature allowed me to better understand the strategies project managers employ when leading virtual project teams and answer the research question.

Reliability and Validity

Morse (2015) explored the components of qualitative inquiry to create rigor around studies. The components of rigor include validity, reliability, and generalizability. Morse proposed that by taking specific steps, researchers ensure their studies have validity by creating dependability, credibility, transferability, and confirmability. It is recognized that not all of studies will have all four components. However, researchers should aim to have at least two of them in any research. The accuracy, credibility, dependability, and confirmability of the research are all questioned without accurate and legitimate data, and the work is difficult to be accepted by other researchers.

Dependability

To assure consistency, reliability, and dependability in the research, I used member checking to decrease the chance of interview replies being misunderstood. Additionally, I used interview protocols to ensure there was a consistent interview technique. Morse (2015) suggested conducting an unstructured or semi-structured interview. The researcher's questions for the participant are preselected in the semistructured interview, and all participants are asked the same question in the same order. However, the unstructured interview changes as the researcher learns more about the subject matter. Therefore, questions could change as more people are interviewed, to ensure all participants are able to share their experiences leading a virtual project team.

According to Morse, research rigor necessitates the use of an audit or decision trail to document the researcher's judgments and interpretations.

Credibility

The credibility criterion is based on the examination of the specific research question, as well as the construction and arrangement of the inquiry within the study boundaries. Among the techniques that researchers can use to ensure the credibility of the study are member checking and transcript review (Creswell & Miller, 2000). After I completed member checking, I uploaded the interview transcripts. With the assistance of the NVivo software, I analyzed the data to produce themes via descriptive and interpretive coding. Selecting data, comparing and contrasting interview transcriptions and artifacts for commonalities, and using the literature to support or qualify these emergent clusters allowed me to explore the subject in-depth and search for common patterns or themes in leadership conduct that support effective virtual project results.

To ensure the credibility of the data, participants were screened to ensure they had appropriate expertise in virtual project management. The vocabulary used in the interview questions is language used by the project management community. Using open-ended questions during interviews, participants in the study can express their ideas (Ryan et al., 2009), and their experiences leading a virtual project team. The theme framework seeks to balance presenting thorough information about the event and to ensure that conclusions can be drawn (Timmermans & Tavory, 2012). Analysis integrity requires both an inductive and a logical approach to the facts. According to Timmermans and Tavory (2012), the inductive approach finds novel ways of organizing evidence to reach

new conclusions, while the analytical method examines the logical consequences of such findings.

Transferability

Transferability is similar to establishing the generalizability of study findings (Marshall & Rossman, 2016). The findings' applicability to various situations demonstrates the research outcomes' transferability. Future research will benefit from demonstrating the relevance of research findings to business concerns, such as understanding the leadership characteristics of virtual project managers. To ensure transferability, the findings were linked to past studies on leadership characteristics, project management, virtual working, and transformational leadership. Additionally, the research was documented and detailed in such a way that future researchers will be able to replicate the study. These steps ensure the study is transferable to all project managers that lead virtual teams, as participants' experiences of success were shared, further ensuring the validity of the study.

Data Saturation

Research that has been deemed reliable, and can be replicated, does not guarantee the validity of the study. Qualitative studies commonly lack the sample size of quantitative studies, which could lead to an issue of validity. However, if the researcher does not know much about a topic, convenience samples, volunteer samples, or quota samples will be sufficient (Morse, 2015). When the interview yields no fresh information or novel ideas, the researcher has reached data saturation (Fusch & Ness, 2015). One way to achieve data saturation is to ask all participants the same interview questions, and code

the responses. In this study, three certified project manager participants were interviewed during four sessions until the responses about the leadership characteristics of virtual project managers became redundant. Data saturation was achieved.

Transition and Summary

Section 2 included explanations and arguments for adopting the mini-ethnographic case study design as the qualitative research method. Additionally, the researcher's role, participants, population and sampling, ethical research, data collection instruments, data collection methodologies, data organization strategies, data analysis, and how reliability and validity are applicable to the study were addressed in Section 2.

Section 3 was guided by the research and data collection methods developed in Section 2. I presented the research findings that may improve leadership strategies employed by virtual project managers, and the contribution to social change. Increasing the success rate of the virtual project was the primary purpose of this qualitative investigation. The qualitative study comprises sections on project leadership and the project management discipline, virtual project success through problem solving, and the culture of virtual project teams. Additionally, I presented recommendations for actions and suggestions for future areas of research.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative case study was to explore leadership strategies of certified PMPs currently employed as project managers leading virtual teams in professional organizations. Depending upon the scope of the project, project managers interact with various external and internal teams as well as people in multiple leadership positions (Castro et al., 2021). Virtual teams are composed of people with skills and knowledge necessary to execute the project deliverable through the successful implementation, development, and completion of the project (Fleischmann et al., 2020). Virtual teams are usually made up of experts who work collaboratively to achieve common goals (Wang et al., 2017). Virtual teams, specifically virtual project teams, can fail when there is no effective leadership to manage the time, scope, cost, or other aspects of the project (Hu et al., 2017). Therefore, effective leadership strategies are necessary for successful outcomes. The analysis of data resulted in barriers that prohibited and strategies that fostered successful outcomes. The three themes that emerged from the data analysis were management discipline, problem solving, and cultural awareness.

Presentation of the Findings

I conducted a qualitative research case study to gain in-depth knowledge of a complex issue that is vastly becoming a common occurrence in technological society and global organizations. The multifaceted explorations of three project managers leading virtual teams in a real-life setting was designed to answer one overarching research question: What leadership strategies do project managers use to lead virtual teams

successfully? Utilizing semistructured interviews as the major instrument and the review of company documents, literature, and my journal notes for triangulation of the data, I analyzed and formulated the data to present the findings. The three certified project manager participants were interviewed during four sessions until their responses became redundant and data saturation was achieved. After the interviews were transcribed, the literature, company documents, and my journal notes were analyzed to supplement the data from the interviews. Relevant literature, both current and ossified, were reexamined and used to support the participant interview responses and justify the themes. Company documents that were referenced or mentioned by interview participants during the interview sessions were collected and reviewed to triangulate the data. Documents identified that were found in most projects were project plans, schedules, budgets, guidelines, and timelines. Additionally, I reviewed and organized my journal notes to gain a better perspective and understanding of the information from the participants.

The three themes of management discipline, problem solving, and cultural awareness emerged from the triangulation of the three data sources. Seventeen subthemes, some of which may align with multiple themes, were developed from a total of seven interview questions. The Raw Data Matrix in Table 2 represents the themes, subthemes, and terms.

Table 1

Raw Data Matrix

Themes	Subthemes	Terms
Management discipline	• Project leadership	Scope and sequence, cultural differences, issues, risk, resources, budget, timeline, project management, role and responsibility,

	• Virtual workplace rules and expectations • Scope and sequence	assignments, product development, terminologies, virtual teams, virtual teams, team coordination, facilitation, team lead, barriers.
Problem solving	• Technology barriers • Virtual teams • Relationships	Rare occurrences, barriers, terminologies, execution, planning, coordination of services, monitoring, work ethics, conflict resolution, virtual climate.
Cultural awareness	• Virtual climate • Transparency and trust • Cultural differences	Terminologies, monitoring, work ethics, commitment, transparency & trust, conflicting styles, time zones, coordination of services, team leader, virtual climate.

Theme 1: Management Discipline

The first theme that emerged from the data collected was management discipline. Management discipline is necessary for all leaders in roles of authority with no exception to those supervising virtual project-based teams. The theme of management discipline confirms that leaders managing virtual teams use the same approach as managers managing face-to-face teams. Confirmation was given from the participants that the effectiveness of the team was greatly influenced by the leadership and the tone that was set from the beginning of a project.

The analysis of data prompted three subthemes that resulted from the disciplines associated with management. The importance of project leadership, workplace rules, and scope and sequence were consistently discussed by the participants. A clear distinction was made between leadership and project leadership. There was also an indication that workplace rules were important in a virtual environment. While the rules appeared to some participants as necessary in both traditional and virtual organizations, clearly there

was a distinction that seemed necessary with virtual rules. The final subtheme for management discipline was the importance of scope and sequence. Of the three subthemes, there was no order of preference or order of importance.

Subtheme 1: Project Leadership

Project leadership emerged from the analysis of data addressing the need for leadership when project managers lead virtual project teams. The coded data shows the following qualities of successful virtual project managers: understanding different cultures, being proactive, being respectful, being friendly, communication, ensuring accessibility, and providing a clear project scope and objectives.

The concept of transformational leadership is prevalent in project management where some project leaders construct a set of leadership behaviors to enhance project effectiveness (Yang et al., 2011). Another leadership quality of a successful project manager identified through the research and supported by the participants was the need to be proactive. Participant 1 said, "Now, more than ever, it is important to be proactive. The pandemic has taught us all not to fall prey to being a victim or to blame others. Leaders must be responsible for making good a sound choice." Participant 3 supported this claim,

> Prior to beginning a project, I try to anticipate the needs. I have always been a strong advocate of operating in a virtual world. Therefore, when the pandemic happened, it was hard for me to understand why some operations shut down. I believe in being prepared for the unexpected.

Another leadership characteristic of a successful project manager leading a virtual project team is to be available when needed. According to Participant 2, it is essential that the virtual project manager established consistent check-in times. Participant 2 stated,

> It is essential to check in often with your team especially when the work is happening in a virtual world. In a traditional environment, you can see the person and most times monitor progress. However, virtually, unless you have tools such as Smartsheet, ClickUp, Wrike, or other project management tools, it is difficult to even know if work is being completed.

Participant 3 added,

> I cannot emphasize enough the importance of checking in with the team. In a previous role, I worked online as a faculty chair in a major university. We did not have an effective means for checking in with our students or our staff. I was sad to learn that a student died the second day of class, and several weeks passed before we found out. I am an advocate for not just checking in, but frequent and meaningful check-ins.

Participant 1 echoed similar responses regarding deliverables, "You should not wait until the project is due to check with your virtual teams. There should be built-in times to ensure the work is being completed and as expected."

The findings also indicated that successful virtual team leadership requires the establishment of clear goals. Participant 1 discussed how she used her knowledge of Covey's seven habits of successful leadership, stating,

I also think it is important to use Covey's second habit that requires leaders to

begin with the end in mind. If we want to remain successful, it is important to

know what success looks like. In doing so, you must establish clear goals.

Research participants consistently indicated the importance of inspiring teams to focus on

big-picture impacts, which is directly related to transformational leadership

characteristics. A transformational leader has an impact on followers by shifting their

emphasis from individual goals to an environment where team goals are prioritized and

personnel are encouraged to strive for greater success (Chun et al., 2016).

Subtheme 2: Virtual Workplace Rules and Expectations

Management discipline needs to be set in place when project leaders establish

discipline in the virtual workplace. Studies have shown that virtual teams are productive

and add value to organizations. For example, a Stanford study surveyed 16,000 workers

and found that there was a 13% increase in productivity from those working virtually

(Morrison-Smith & Ruiz, 2020). Consistently, the three participants agreed that there was

a need to have rules and expectations in place in virtual environment, but it was equally

as important not to be overbearing.

Research has indicated that working remotely can be substantially harder than

collaborating face-to-face (Wu et al., 2020). Therefore, it is even more important to

establish workplace rules and expectations in a virtual workplace. Participant 1 shared,

A project manager, like any great manager, needs to establish rules and

expectations that guides the work. This should happen at the beginning of the

project. Virtual teams what to know the expectations. Simply put, what are the

rules that guide our work.

Participant 2 mentioned that "rules should be established at the start of the project so that

all are on the same page, and there are no surprises." Participant 3 felt that "while virtual

teams tend to be more disciplined, there are those occasions when you have to be

prepared to discipline. In those rare occasion, if rules were not clearly stated, it is difficult

to discipline the employee." Participant 1 provided an example, stating,

The rules do not have to be harsh. I simply shared that I needed updates on

projects every Monday. Or, I would let my team members know that when we are

on Zoom, we are at the Board table, meaning, dress for the occasion and let your

face be seen.

Participant 3 mentioned, "I always provided a rationale for my rules and expectations.

One reason I would give for showing their face online is my need to get to know the

people on my team." Participant 2 stated the opposite regarding being visible online. She

shared,

Having my team turn on their camera for meetings was not important for me. I

share at the beginning of each project that the most important thing for me was to

show up read, and to show up on time.

Leadership characteristics may not always be consistent with the expectations of

those around them, but the fact that rules and expectations need to be clear to team

members much be apparent (Zaccaro, 2007). Research has suggested that some

individuals tend to be good leaders only under certain circumstances, making it difficult

to determine their suitability when leading virtual teams (Morrison-Smith & Ruiz, 2020). In other words, leaders must make clear the process that must be followed as well as their expectations.

Subtheme 3: Scope and Sequence

Understanding how to operate with a scope and sequence is an essential element of management discipline. The findings showed confirming goals and objectives, documenting scope, identifying project requirements, setting timelines, and having a clear project methodology were essential to project success. Therefore, virtual team leaders must put in a greater effort to ensure that task scope is communicated effectively in order to reach the same goal or complete projects on schedule. Eisenberg et al. (2019) suggested that for virtual leaders, identifying scope is essential to managing team operations and outcomes in a distributed environment. Researchers found that the success of a project arose from the fact that leaders who focus on the appropriate goals, do the right activities, and interact with the right people have a good project methodology (Condea, 2020).

The participants reported that knowing and understanding the scope of the project was important for the successful completion of the project. Participant 1 emphasized the importance of clarity on the scope, "With any project, you begin with being clear on the scope. At the very beginning whether that is in person or virtual, you have identified the needs of the project." Participant 2 indicated,

A lot of people are used to what they're used to, but they don't really understand

the project management methodologies and practices, and that makes the scoping

of things, a lot more difficult kind of bringing the conversation full circle.

Transformational leaders understand the need for clear scope and project methodology.

Scope without sequence will not result in the strong completion of a project.

Participant 2 stated, "I have never witnessed a good project manager who does not fully

understand the importance of scope and sequence. After identifying the scope, then all

projects must have a carefully crafted sequence of event in a progressive order." Further,

Participant 2 suggested that "Project managers need to create and thoroughly explain the

scope and sequence to ensure teams recognize the concepts necessary for the project."

Research has suggested that the uniqueness of the project causes uncertainties and project

management ensures meeting the project requirements by the application of knowledge,

skills, tools, and techniques to project activities (Castro et al., 2021).

Theme 2: Problem Solving

Project managers are responsible for initiating, planning, organizing, executing,

monitoring, and controlling as well as providing support for problem solving. This is

especially true in virtual projects, where virtual project managers must provide clear

direction and goals as well as facilitate problem-solving spaces for the project team.

Virtual teams have been found to be more effective in decision-making situations

due to their ability to solve complex problems (Morrison-Smith & Ruiz, 2020). In

particular, transformational leaders encourage their employees to align their values with

the organization's while offering development opportunities for their employees to

become problem solvers (Eberly et al., 2017). However, when I asked the virtual project managers about their methods of solving problems, three subthemes emerged: technical barriers, virtual teams, and relationships.

Subtheme 1: Technology Barriers

The first subtheme related to Theme 2 that emerged from data analysis was technology barriers that project managers experience when leading virtual project teams. Various technological platforms can be used to manage projects, but they each have their own limitations. Some systems, for instance, are incompatible with others and cannot be integrated. The systems may also be complicated to use, may not have the features that are needed, and others may not be functionally stable.

In a virtual team setting, technology is the primary method of communication. If the technology is not working properly or in the rare occurrences when members of the project team are not familiar with the technology platforms, this presents barriers for the project team completing tasks and communicating. Participant 3 indicated,

> One important part of managing a project virtually is making sure that people
> have the right technology available and that they are familiar with this
> technology. There is nothing more frustrating at this point than seeing someone
> talking and not being able to hear them because they are on mute."

Another cause for technology barriers is internet capabilities. Participant 2 stated,

> One thing that I didn't really consider was the internet usage. Sometimes it is
> overlooked even though there's a certain bandwidth that is required. When you
> have virtual meetings one of the duties of the project manager is to make sure that

you have the proper tools (i.e., the internet) and the proper bandwidth needed, or

this could cause slow connections and lead to missing information and frustration

in meetings.

Participant 1 noted that "when I am working from home, and others in my family are also

working from home it tends to slow down connectivity because there are many devices

on the network that are competing for bandwidth." Each of these technical barriers

potentially cause delays in the work or miscommunications within the team. Mitigating

these technical barriers is key to problem solving for virtual teams.

Subtheme 2: Virtual Teams

The purpose of this study was to investigate strategies employed by project

managers to overcome challenges in leading virtual teams. Responses indicated one of

the challenges is problem solving in a virtual team setting. Problem solving is necessary

in all phases of project management including planning, execution, and monitoring. It is

possible to encourage innovation and creativity in virtual meetings, even when team

members are not able to interact face-to-face. The analysis of results indicated virtual

leadership is effective at encouraging team problem solving and finding innovative ways

to complete a project. Virtual team leaders report that brainstorming sessions and

facilitation of collaboration are effective methods of managing their teams. The purpose

of brainstorming sessions is to encourage problem solving with the project team.

According to Participant 1, "We hold brainstorming sessions. It is important that every

team member is heard and has a voice in the process." Team leaders should foster open

communication and brainstorming rather than assigning blame to team members (Pinjani

& Palvia, 2013). Providing encouragement to team members to share ideas and collaborate also facilitates problem solving. Participant 3 shared, "I also ask members to bring one idea to the team meeting." Inspiring their team members to think differently about problems and obstacles has been one of the goals of transformational leaders (Mysirlaki & Paraskeva, 2020).

Similarly, another tactic shared by Participant 2 was that of scheduling meetings in advance and entering appointment notes ahead of time into the calendar. Participant 3 stated "For larger projects, we have a standing meeting each morning and afternoon. I use the morning meetings for discussing tasks, and afternoon for check-ins to discuss any barriers to progress." Participant 1 is quoted, "tasks have often fallen by the wayside so anytime someone is assigned a task, I send them a calendar appointment for the day the task is due. This really helps out because more often than not, the first thing that people do when they log on for the day is look at what meetings they have." These meetings and follow-ups provide an opportunity for the project manager to provide feedback as needed. Previous research of the literature indicated that virtual leaders should increase the time spent engaging with, and opportunities for, their team members to receive feedback in order to make up for a lack of nonverbal, in-person feedback (Ford et al., 2017).

Subtheme 3: Relationships

It is important to have authentic relationships with the virtual team and the project manager in order to facilitate problem solving. Team members who have authentic relationships are more likely to commit to the team and be more engaged in problem solving. Conflict within a team adversely affects team creativity, according to Hu et al. (2017). Because of this, positive relationships make it easier to resolve conflict, especially in a virtual environment.

Employees on a virtual project team who are respected and valued by a project manager are likely to be successful. Participant 1 said, "as a leader it has always been important to me to give respect and know that in the end, I will get respect." Leaders should make sure each team member understand they are valued and encourage members to take owners and support the success of the team. Further, research results indicate that it is important to build rapport with their teams while in a meeting by engaging in lighthearted banter. "I try and not keep it business all the time. Sometimes, I just start off meetings with the little fun or chitchat just to kind of build that rapport" (Participant 2).

In addition to the project leader and team member relationship, it is important that there is a positive relationship between peers. There may be difficulties with group cohesion among virtual project teams, especially when tasks require team cooperation or there are knowledge gaps on the team. Participants also used the mentor-mentee paradigm to break down barriers in the virtual team environment. The mentor mentee approach is utilized to mentor the team and to support the mentee with any questions they may have while performing project responsibilities. According to research, strategy teams or mentors are required to sustain a virtual project team and to support the team as a

virtual project leader in order to have better protocol for communications and question discussions (Condea, 2020). "I also employed more of a partnering structure so my team would have someone to work with or ask questions if needed," Participant 2 noted.

Theme 3: Cultural Awareness

Virtual teams will continue to exist, and their make-up will also diversify. Therefore, to successfully manage projects virtually it is important to understand the virtual climate of project teams. Additionally, in conversation with project managers leading virtual teams, interview participants mentioned having cultural awareness was essential to the success of a virtual project team. It is important for project managers to ensure all members of their project teams understand the significance of working towards a shared goal despite time zone and cultural differences.

In addition to the shared goal, the literature indicates that trust must exist in teams for all members to work towards a shared goal, and interviews with project managers confirm this (see Ford et al., 2017). The degree of trust between individuals within an organization has a direct impact on how they relate to one another. For a team to function effectively in a virtual climate, its leaders must foster a trusting environment. The project leader must therefore encourage and support the development of trust within the teams.

Subtheme 1: Virtual Climate

Virtual project managers require not only the use of tools and techniques to plan, implement, and manage their projects, but also systems and strategies to monitor and control the performance of the project. Among these strategies are maintaining status updates and consulting subject matter experts to ensure a project stays on track.

Monitoring the progress of tasks can be difficult in a virtual environment. Participant 1 indicated some of the barriers they faced when leading a virtual team were "not being with the person to ensure they are consistent in completing task. Time on task is a big obstacle. Also, I did not have the opportunity to monitor." Participant 2 stated when they were in a face-to-face environment "If I needed somebody I could just get up and go down the hall and ask my question or get a quick status update but being that a lot of the projects are virtual now we must find additional ways to communicate."

Regular status reports from team members and feedback both to and from the project manager is essential to the virtual project. To combat the inability to monitor project tasks in person, participant 3 offered some solutions. "Keeping team members up to date on project status is critical. This allows us to quickly correct any problems or obstacles the team may be facing." These updates can be accomplished through short daily meetings, as meeting frequency and the duration of those meetings do not need to be long in a virtual environment to be productive. Compared to virtual meetings, face-to-face meetings may last longer because distractions and side conversations are minimized in a virtual environment (Thambusamy & Bekirogullari, 2020).

The findings also indicate emailing a status update may not be as effective as holding a quick status meeting in certain situations. Participant 1 also stated "I'll schedule a meeting if something comes up and we're two or three emails deep or I'm not getting anywhere. There's something that is missing or they're not understanding what's going on." Participant 2 stated "In the virtual environment, the primary form of communication

is through email, so if they're involved in multiple projects that means more emails so which can definitely lead to slow response times." Still Participant 3 said

"because we're virtual people might be working on a lot of different projects and a lot of the communication happens through email. Oftentimes they're drinking from a fire hose, and they can't keep up with email, so if I am in a project with somebody, I will schedule a meeting to talk about whatever deliverables that we might have been discussing."

Using the knowledge and assistance of subject matter experts in a project is yet another strategy used to monitor progress in a virtual environment. In a virtual setting, shared expert team leadership supplements traditional hierarchical leadership and institutional support (Liao, 2017). Using this knowledge ensures adherence with the project schedule and assists with monitoring for any risks for falling behind the project schedule. According to Participant 2,

"We get the subject matter experts involved, so you might have your industrial engineer, your electrical engineer, etc., and we talk about the project plan as it relates to them. They are able to determine the progress we should be making based on the project schedule, and we discuss contingencies for not meeting the project schedule."

Participant 3 stated

"I use more of a partnering system so my team would have someone to work with or ask questions if needed. I paired seasoned workers with new team members to create a mentor-mentee model so that we do not fall behind the project schedule, and we can continue to monitor the scheduled outputs."

In addition to monitoring the project performance in a virtual climate, project managers must be aware of the elements that transparency and trust play in the project team.

Subtheme 2: Transparency and Trust

Previous research has found that one of the most significant obstacles in virtual teams include transparency and trust (Barnowska & Kozaryn, 2018). Failure of the project team leader to understand the impact of trust in a virtual environment can negatively impact project performance. A project leader's ability to inspire trust in a team begins with their ability to build trust, and Bass (1985) suggested that transformational leaders have the ability to do so. Relationship building and team building activities are conducted in person in a non-virtual environment, thereby promoting team bonding and trust (Larson & DeChurch, 2020). Therefore, it may be necessary for virtual leaders to find alternative methods of team building and meetings. Participants interviewed indicated developing trust can be challenging in a virtual environment. However, conversations with interview participants indicated several ways to build trust in a virtual environment to achieve team goals.

All the interview participants indicated trust in the virtual environment is essential to project success. Providing effective and honest feedback is essential to creating an environment of trust. According to Participant 1,

"recognition and reinforcing positive behaviors is at the forefront of creating an environment of trust. I have seen an increase in the commitment to the team from some project members that were not fully engaged after using some positive reinforcement."

Participant 3 also offered other ways to build trust within the project team.

"Creating ways to reward and encourage knowledge sharing could be one of these ways to build trust. Knowledge sharing not only contributes to increased trust but also reinforces the work ethics of the team. And when they do, and they go over and beyond that is recognized and rewarded."

Participant 2 said "I think in a virtual environment, it is important for leaders to recognize strengths and celebrate and thrive on the strengths of others." Leading effectively requires virtual project managers to involve their teams and to cultivate an environment in which each individual is valued for who he or she is, for what they contribute, and for how hard they work (Wu et al., 2020)

Participant 2 indicated

"incorporating virtual team members into organizational announcements empowers team members to make decisions that align with the company strategy. It is also important to encourage team members to share their opinions and speak their minds without being critical, which increases employee engagement and trust."

In regard to allowing team members voices to be heard, Participant 2 stated

"Their input is valued right because they're on this project, because the team, whether it be myself or their functional manager considers them a subject matter expert. We need their opinion and expertise in order to bring this project to flourish and so that's part of my encouragement."

Participant 3 shared they promote team members to speak their minds as well, and "if somebody provided some great input letting their manager know how valuable of an asset, they are to the project team is encouraging for them."

Being transparent with the project team can also build trust. Sometimes, that means admitting an aspect of the project is not going as planned. Participant 1 stated

"It is my job to know when to put a response that is not good for the project on the shelf. I communicate this information, and as a project team we have already discussed our next steps as part of the project management plan."

Additionally Participant 3 stated, "sharing information about the business and what it is doing, including the employees in team meetings, and creating informal social opportunities are all ways to build trust." Participant 2 also indicated the importance of transparency and trust. They stated "at the beginning of the project I let my team know the type of project manager I am. I have an open-door policy; they can come to me for anything.

Subtheme 3: Cultural Differences

Project managers must be cognizant of cultural differences in virtual environment that hinders successful communication. Effective communication in cross-cultural virtual teams can be a more cost-effective in exchanging information when managed appropriately (Festing, 2020). Consistent with the research, the participants highlighted culture, communication, and decision-making when referencing cultural differences.

People from different ethnic and cultural backgrounds can be difficult in any workplace and can be even more profound in the virtual world. Managers need to

understand and engage with diverse individuals and groups to avoid confusion and

isolation of ideas. The need to understand diverse backgrounds is also clear according to

Participant 2's statement, "talking about the culture, not just the ethnicity and things like

that, but more of the environmental culture needed to respect the thoughts of others is so

important to the diversity of thought in a project." Participant 1 noted,

      "I welcome a project with a diverse team. I, as the project manager gain so much

from the diversity of ideas. Oftentimes, a project meets all the elements of what is needed

for project completion, but it does not have the edge it needs to make it exceptional. That

is what makes a team with cultural differences great!"

      Participant 3 offered a different perspective for cultural differences on virtual

teams.

      "I have often found that individuals from different ethnicities can hinder progress

on virtual teams when you failed to spend time at the beginning of a project for

teambuilding activities. I almost always begin each project with some sort of activities.

Accepting those diverse ideas are best understood from people you know and respect."

      Communication is not often looked at as a cultural difference, but it can be

detrimental to a project when it is not acknowledged among virtual teams. Oftentimes,

virtual team members fail to recognize the differences in the spoken language and

differences in time zones that make is it difficult for communication. The assumption

with any project is that the team members are proficient in the spoken language of which

the project was sanctioned. However, that is not always the case. All the participants

shared experiences of problems with communication due to language barriers. Participants 1 shared a time when

"One of my team members was an exceptional writer with great ideas. She was always timely with responses, and her work was of such great quality, I asked her to share during one of our asynchronous virtual work sessions. Mine you that I had only communicated with this person via our project manager's tool and never had I spoken to her. At any rate, she said she would be delighted to share. Needless to say, the session was a disaster. Her dialect was so heavy that it was hard to understand what she was saying. English was not her first language."

Participant 2 mentioned,

"I had a member who used dictated her work in a tool but did not know how to make the edits. Her ideas were great when we spoke but understanding how to use the communication tool hindered her ability to effectively communicate."

Participant 3 shared a similar experience. Participant 3 stated,

"I was given ten weeks to oversee a project with a pre-selected team. Every Monday we would discuss the deliverables and what the expectations were for that week. Each member would share there completed work and ongoing work. The team members were from all over the world with English not always their first language. Oftentimes when speaking they would divert to their native language."

Setting the guidelines for effective communication in the language that guides the project should be addressed when selecting teams.

Further, all the project managers spoke of the need to address communication based on a given time zone. Participant 3 said, "At the beginning of each project, I always share what time zone we are operating under. It is always based on the time zone of the headquarter of the company we are doing work for." Participant 2 shared that she always operates based on her personal time zone. Participant 1 mentioned time zone during her interview, stating, "When I am working with virtual times on a project, I remind them who we are working for and the importance of delivering the project based on their hours of operation." Setting the guidelines for timely communication often leads to completion of work on time.

Applications to Professional Practice

The purpose of this qualitative case study was to explore effective leadership strategies currently employed by successful project managers when leading virtual teams. The findings relevant to improve business practice were strategies used by current project managers based on management discipline, problem solving, and cultural awareness. When considering strategies used by effective project managers in virtual teams, learning from those who lead provided an insightful look at the multi-faceted aspect of strategies that are necessary for successful completion of projects. The literature on project management emphasizes effective project leadership as an essential component of successful management, including communication, team cohesion, cooperation, and effective team building (Prabhakar, 2005; Yang et al., 2011). By focusing on the professional knowledge and experiences of team members, as opposed to regions or

locations, businesses can gain a competitive advantage when ensuring a project's diversity of ideas.

The advantage of working virtually supports the need for using virtual teams specifically as it relates to management disciplines. Virtually, upper leadership can have real time and current oversight of project leadership, rules and expectations for deliverables, and real time knowledge of the scope and sequence of the work being completed. When managing any project, organizations want to ensure they are getting a quality project within budget. Specifically, the cost associated with travel and relocation is reduced significantly with teams come together online.

Businesses can benefit from the study of leadership strategies of successful virtual project managers as to how they solve problems and cultural awareness. With all successful organizations come the need to problem solve and make decisions for the betterment of the organization. Strategies addressed in this research demonstrated how themes project manages used strategies that lead to results. By acknowledging the ways that virtual teams differ from traditional teams, those who lead virtual projects can provide benefits to an organization by providing successful, proactive leadership, and outstanding communications that lead to better projects deliverables and products. Additionally, it encourages mindfulness and acceptance of the corporate or team mission, as well as encouraging the focus to be on the good of the whole (Bass, 1990). Virtual teams allow members of different organizational units and diversity to efficiently contribute to achieving an organizational goal. Empowering leadership, which focuses on

employee capacity, moderates the relationship between transformational leadership, which focuses on motivation, and innovative behavior (Günzel-Jensen et al., 2021).

Implications for Social Change

The impact of positive social change is present for organizations and their employees in the form of increased awareness of effective leadership styles for virtual project teams, virtual project team communications approaches, and virtual leadership competencies critical to project and people management in today's successful firms. Business leaders can use the findings of this study to understand the barriers faced by virtual project managers, the virtual climate, and cultural differences. Additionally, leaders can promote problem-solving and transparency and trust within virtual project teams, thereby leading to increased team performance and success.

Successful project teams implement projects that directly align to the strategic mission of the operation. Furthermore, improved project performance has the potential to improve organizational performance on a larger scale, lower financial risks by adhering to project scope and schedule and reduce the number of unsuccessful project implementations. With the ability to work virtually, companies are no longer limited to talent pools close to their offices, but can instead choose from a diverse talent pool, allowing them to find employees who are more aligned with their objectives.

Virtual work is advantageous not only to the company, but also to the workers. Effective virtual project performance can lead to more flexible schedules and a better work-life balance for employees, resulting in happier, more productive employees (Olaisen & Revang, 2017). There will also be no need to commute or travel to different

job locations. Reduced travel reduces both airline and automotive emissions, resulting in a cleaner environment (Olaisen & Revang, 2017).

Recommendations for Action

In this study, the experiences of project managers were explored to gain insight in strategies used when managing successful virtual teams. The findings from this research may assist project managers in managing the issues associated with virtual projects. Based on the research findings, project managers tend to be most successful when adhering to management disciplines, barriers, cultural awareness that guide the effectiveness and successful implementation of a project.

Based on the findings, recommendations are made for project managers in a virtual environment based on the following actions:

- Establish and communicate clear goals, objectives, objectives and rules at the onset of every project;

- Facilitate effective problem solving by being proactive in addressing potential technological barriers, encouraging brainstorming of innovative ideas, and fostering relationships necessary for productive outcomes;

- Be aware and mindful of differences the virtual climate presents and position oneself to be proactive in addressing such differences;

- Create a system for obtaining status updates to monitor project progress, and support for project members when needed; and

- Establish transparency and trust within the project team.

These results are applicable to project managers that lead virtual projects, project teams, and organizational leaders that implement projects with a virtual environment. The results of this study will be included in professional literature and presented in a webinar via tthe organization where I conducted my research. Further, articles will be written based on the finding in professional journals.

Recommendations for Further Research

The population for this study was three project managers . The project managers that were interviewed discussed the leadership strategies they used to successfully implement projects in a virtual project team. While completing this study, the small sample size of the study became necessary to highlight because did not necessarily represent the entire population of project managers. Therefore, the recommendation for future research is to increase the sample size or expand the target population to a broader geographical area. Additionally, research can be done to be more industry specific.

Additional recommendations to improve business practices can be made based on several subthemes that were addressed:

- Exploring the experiences of project managers who create virtual workplace rules and expectations;
- Examining the strategies used by project managers when addressing barriers;
- Examining strategies specific to monitoring the climate and conditions for effective leadership of virtual teams; and
- Understanding cultural differences that create cultural conflict.

Operating in a virtual environment is relatively new and is becoming increasingly more useful in organizations. Conducting more research in this area will provide for more productive implementation of project and the opportunity for cohesive relationships in the process.

Reflections

This doctoral process was a challenging journey however, I am grateful for the experiences. Prior to beginning the study, I did not have any preconceived notions of the results even though I have professional experience as a project manager. I recognized the potential for bias in the research because of my experience. Therefore, I relied on professional steps and processes for conducting a case study to help me in minimizing any biases that could potentially impact any questions or results. Following the interview protocol for both the interview method and interview questions further helped to present the thoughts and experiences of the participants and not that of my own. I am additionally grateful for the project managers in their review of the transcripts. This process ensured that their thoughts and strategies were ones that were presented in this document, and that the findings were based upon the experiences shared. The project managers that were interviewed were able to suggest several strategies for successful virtual project implementation.

With regards to my personal thoughts after completing this work, I must say that I have changed in how I will operate as a project manager in several ways. First, I will always be mindful of the manner in which I communicate. Although I have used relation building strategies in traditional environments, I never considered the use or the need for

relationship building in a virtual environment. In the future I will implement this strategy. Secondly, I will be aware of different time zones. I have always operated based upon my location. However, I now understand the importance of conducting virtual teams based on the time zone of the organization where the project resides. Finally, I will be more proactive in examining the technical tools used for the project and addressing barriers that could prohibit meeting the deliverables outlined in the project.

As I reflect on these total experiences, I am aware of how the process has humbled me as a leader. In working on day-to-day project, I am reminded of a book I once read and a workshop that I attended by that author. Heifetz (1994) shared that leaders are often on the dance floor when it comes to getting the work done, but never take the time to go to the balcony. In completed this study, I can truthfully admit that I have learned how the demands and expectations as a student in completing this work is contingent upon how the findings were examined.

Conclusion

This qualitative case study served to answer the overarching research question: What leadership strategies do project managers use to lead virtual teams successfully? In search of an answer, I explored the experiences of three certified project managers who successfully led virtual project teams. Interviewed questions were examined and reexamined using electronic tools and traditional posters and index cards to ensure the voices of the participants were presented in the findings. The three major themes that emerged were (a) management discipline, (b) problem solving, and (c) cultural awareness. The strategies that emerged include having a strong follow up process,

proactive project planning, promoting problem solving, and providing honest feedback.

These are the key components to successful project implementation for virtual project

leaders.

References

Albert, K. (2017). The certification earnings premium: An examination of young

workers. *Social Science Research*, *63*, 138–149.

https://doi.org/10.1016/j.ssresearch.2016.09.022

Aldridge, J. (2014). Working with vulnerable groups in social research: Dilemmas by

default and design. *Qualitative Research*, *14*(1), 112–130.

https://doi.org/10.1177/1468794112455041

Alrowwad, A., Abualoush, S. H., & Masa'deh, R. (2020). Innovation and intellectual

capital as intermediary variables among transformational leadership, transactional

leadership, and organizational performance. *Journal of Management

Development*, *39*(2), 196–222. https://doi.org/10.1108/JMD-02-2019-0062

Alsharo, M., Gregg, D., & Ramirez, R. (2017). Virtual team effectiveness: The role of

knowledge sharing and trust. *Information & Management*, *54*(4), 479–490.

https://doi.org/10.1016/j.im.2016.10.005

Araki, S. (2020). Educational expansion, skills diffusion, and the economic value of

credentials and skills. *American Sociological Review*, *85*(1), 128–175.

https://doi.org/10.1177/0003122419897873

Arshi, T., & Burns, P. (2018). Entrepreneurial architecture: A framework to promote

innovation in large firms. *The Journal of Entrepreneurship*, *27*(2), 151–179.

https://doi.org/10.1177/0971355718781245

Aveling, E.-L., Gillespie, A., & Cornish, F. (2015). A qualitative method for analysing multivoicedness. *Qualitative Research*, *15*(6), 670–687. https://doi.org/10.1177/1468794114557991

Badewi, A. (2016). The impact of project management (PM) and benefits management (BM) practices on project success: Towards developing a project benefits governance framework. *International Journal of Project Management*, *34*(4), 761–778. https://doi.org/10.1016/j.ijproman.2015.05.005

Barnowska, B., & Kozaryn, M. (2018). Benefits from the implementation of project tasks with the use of virtual team. *Management*, *22*(2), 204–216. https://doi.org/10.2478/manment-2018-0032

Bass, B. M. (1990). From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics*, *18*(3), 19–31. https://doi.org/10.1016/0090-2616(90)90061-S

Bednall, J. (2006). Epoche and bracketing within the phenomenological paradigm. *Issues in Educational Research*, *16*(2), 123–128.

Bills, D. B., & Brown, D. K. (2011). New directions in educational credentialism. *Research in Social Stratification and Mobility*, *29*(1), 1–4. https://doi.org/10.1016/j.rssm.2011.01.004

Birt, L., Scott, S., Cavers, D., Campbell, C., & Walter, F. (2016). Member checking: A tool to enhance trustworthiness or merely a nod to validation? *Qualitative Health Research*, *26*(13), 1802–1811. https://doi.org/10.1177/1049732316654870

Blaskovics, B. (2020). Project manager's competencies in virtual SME projects. *Chapters from the Academic Aspect of Project Management-Research and Teaching Methodologies*, *4*, 37–51.

Caelli, K., Ray, L., & Mill, J. (2003). 'Clear as mud': Toward greater clarity in generic qualitative research. *International Journal of Qualitative Methods*, *2*(2), 1–13. https://doi.org/10.1177/160940690300200201

Carvalho, M. M. de, Patah, L. A., & de Souza Bido, D. (2015). Project management and its effects on project success: Cross-country and cross-industry comparisons. *International Journal of Project Management*, *33*(7), 1509–1522. https://doi.org/10.1016/j.ijproman.2015.04.004

Castro, M. S., Bahli, B., Barcaui, A., & Figueiredo, R. (2021). Does one project success measure fit all? An empirical investigation of Brazilian projects. *International Journal of Managing Projects in Business*, *14*(3), 788–805. https://doi.org/10.1108/IJMPB-01-2020-0028

Chenail, R. J. (2011). Interviewing the Investigator: Strategies for Addressing Instrumentation and Researcher Bias Concerns in Qualitative Research. The Qualitative Report, 16(1), 255-262. https://doi.org/10.46743/2160-3715/2011.1051

Chun, J. U., Cho, K., & Sosik, J. J. (2016). A multilevel study of group-focused and individual-focused transformational leadership, social exchange relationships, and performance in teams: Group- and individual-focused leadership. *Journal of Organizational Behavior*, *37*(3), 374–396. https://doi.org/10.1002/job.2048

Condea, C. (2020, November 5-6). *Successful leadership of virtual teams: challenges and best practices*. International Management Conference, Bucharest, Romania. https://doi.org/10.24818/IMC/2020/04.06

Cortellazzo, L., Bruni, E., & Zampieri, R. (2019). The role of leadership in a digitalized world: A review. *Frontiers in Psychology*, *10*, 1938. https://doi.org/10.3389/fpsyg.2019.01938

Creswell, J. W., & Miller, D. L. (2000). Determining validity in qualitative inquiry. *Theory Into Practice*, *39*(3), 124–130. https://doi.org/10.1207/s15430421tip3903_2

Dawley, S. (2014). Transnational corporations and local and regional development. A. Pike, A. Rodriguez-Pose and J. Tomaney (eds). In *Handbook of local and regional development*. 394-412. Routledge. https://doi.org/10.4324/9780203842393.ch33

Demircioglu, M. A. (2020). The effects of organizational and demographic context for innovation implementation in public organizations. *Public Management Review*, *22*(12), 1852–1875. https://doi.org/10.1080/14719037.2019.1668467

Derue, D. S., Nahrgang, J. D., Wellman, N., & Humphrey, S. E. (2011). Trait and behavioral theories of leadership: An integration and meta-analytic test of their relative validity. *Personnel Psychology*, *64*(1), 7–52. https://doi.org/10.1111/j.1744-6570.2010.01201.x

Dinh, J. E., Lord, R. G., Gardner, W. L., Meuser, J. D., Liden, R. C., & Hu, J. (2014). Leadership theory and research in the new millennium: Current theoretical trends

and changing perspectives. *The Leadership Quarterly*, *25*(1), 36–62.

https://doi.org/10.1016/j.leaqua.2013.11.005

Dulebohn, J. H., & Hoch, J. E. (2017). Virtual teams in organizations. *Human Resource Management Review*, *27*(4), 569–574. https://doi.org/10.1016/j.hrmr.2016.12.004

Eberly, M. B., Bluhm, D. J., Guarana, C., Avolio, B. J., & Hannah, S. T. (2017). Staying after the storm: How transformational leadership relates to follower turnover intentions in extreme contexts. *Journal of Vocational Behavior*, *102*, 72–85.

https://doi.org/10.1016/j.jvb.2017.07.004

Eisenberg, J., Post, C., & DiTomaso, N. (2019). Team dispersion and performance: The role of team communication and transformational leadership. *Small Group Research*, *50*(3), 348–380. https://doi.org/10.1177/1046496419827376

Elam, D. A., & Brands, K. M. (2019). Appreciative inquiry—Lessons learned from virtual teams. *International Journal of Entrepreneurship and Innovation Management*, *23*(5), 530. https://doi.org/10.1504/IJEIM.2019.10022416

El-Sofany, H. F., Alwadani, H. M., & Alwadani, A. (2014). Managing virtual team work in IT projects: Survey. *International Journal of Advanced Corporate Learning*, *7*(4), 28. https://doi.org/10.3991/ijac.v7i4.4018

Etmanski, B., Walters, D., & Zarifa, D. (2017). Not what I expected: Early career prospects of doctoral graduates in academia. *Canadian Journal of Higher Education*, *47*(3), 152–169. https://doi.org/10.47678/cjhe.v47i3.187784

Ewing, M., Men, L. R., & O'Neil, J. (2019). Using social media to engage employees: Insights from internal communication managers. *International Journal of*

Strategic Communication, *13*(2), 110–132.

https://doi.org/10.1080/1553118X.2019.1575830

Festing, M. (2020). *Cross-cultural virtual teams are on the rise, but can they communicate effectively*? https://blogs.lse.ac.uk/businessreview/2020/07/24/cross-cultural-virtual-teams-are-on-the-rise-but-can-they-communicate-effectively/

Fielding, N. (2010). Mixed methods research in the real world. *International Journal of Social Research Methodology*, *13*(2), 127–138. https://doi.org/10.1080/13645570902996186

Fleischmann, A. C., Aritz, J., & Cardon, P. (2020). Language proficiency and media richness in global virtual teams: Impacts on satisfaction, inclusion, and task accomplishment. *ACM Transactions on Social Computing*, *2*(4), 1–18. https://doi.org/10.1145/3363564

Fletcher, A. J. (2017). Applying critical realism in qualitative research: Methodology meets method. *International Journal of Social Research Methodology*, *20*(2), 181–194. https://doi.org/10.1080/13645579.2016.1144401

Ford, R. C., Piccolo, R. F., & Ford, L. R. (2017). Strategies for building effective virtual teams: Trust is key. *Business Horizons*, *60*(1), 25–34. https://doi.org/10.1016/j.bushor.2016.08.009

Fusch, P., Fusch, G., & Ness, L. (2017). How to conduct a mini-ethnographic case study: A guide for novice researchers. *The Qualitative Report*, *22*(3), 923–941.

Fusch, P., & Ness, L. (2015). Are we there yet? Data saturation in qualitative research. *The Qualitative Report*, *20*(9), 1408–1416.

Hagues, R. (2019). Conducting critical ethnography: Personal reflections on the role of

    the researcher. *International Social Work*,

    https://doi.org/10.1177/0020872818819731

Han, S. J., Kim, M., Beyerlein, M., & DeRosa, D. (2020). Leadership role effectiveness

    as a mediator of team performance in new product development virtual teams.

    Journal of Leadership Studies, *13*(4), 20–36. https://doi.org/10.1002/jls.21677

Hancock, D. R., & Algozzine, R. (2017). *Doing case study research: A practical guide

    for beginning researchers*. Teachers College Press.

Hardaker, C. (2010). Trolling in asynchronous computer-mediated communication: From

    user discussions to academic definitions. *Journal of Politeness Research:

    Language, Behaviour, Culture*, *6*(2). https://doi.org/10.1515/jplr.2010.011

Harvey, L. (2015). Beyond member-checking: A dialogic approach to the research

    interview. *International Journal of Research & Method in Education*, *38*(1), 23–

    38. https://doi.org/10.1080/1743727X.2014.914487

Harvey, S., & Berry, J. (2022). Toward a meta-theory of creativity forms: How novelty

    and usefulness shape creativity. *Academy of Management Review*,

    amr.2020.0110. https://doi.org/10.5465/amr.2020.0110

Herren, R., Ary, D., Jacobs, L., Sorenson, I., & Arrington, W. (2020). Introduction to

    research in education. *International Journal of Research*, *7*, 1–2.

Hoch, J. E., & Dulebohn, J. H. (2017). Team personality composition, emergent

    leadership and shared leadership in virtual teams: A theoretical framework.

Human Resource Management Review, *27*(4), 678–693.

https://doi.org/10.1016/j.hrmr.2016.12.012

Holland, S., Renold, E., Ross, N. J., & Hillman, A. (2010). Power, agency and

participatory agendas: A critical exploration of young people's engagement in

participative qualitative research. *Childhood*, *17*(3), 360–375.

https://doi.org/10.1177/0907568210369310

Hu, N., Chen, Z., Gu, J., Huang, S., & Liu, H. (2017). Conflict and creativity in inter-

organizational teams: The moderating role of shared leadership. *International*

Journal of Conflict Management, *28*(1), 74–102. https://doi.org/10.1108/IJCMA-

01-2016-0003

Imtiaz, S., & Ikram, N. (2017). Dynamics of task allocation in global software

development: Dynamics of task allocation in global software development.

Journal of Software: Evolution and Process, *29*(1), e1832.

https://doi.org/10.1002/smr.1832

Jaskiewicz, P., Block, J. H., Combs, J. G., & Miller, D. (2017). The effects of founder

and family ownership on hired CEOs' incentives and firm performance.

Entrepreneurship Theory and Practice, *41*(1), 73–103.

https://doi.org/10.1111/etap.12169

Kenno, S. A., McCracken, S. A., & Salterio, S. E. (2017). Financial reporting interview-

based research: A field research primer with an illustrative example. *Behavioral*

Research in Accounting, *29*(1), 77–102. https://doi.org/10.2308/bria-51648

Khanlou, N., & Peter, E. (2005). Participatory action research: Considerations for ethical

    review. *Social Science & Medicine*, *60*(10), 2333–2340.

    https://doi.org/10.1016/j.socscimed.2004.10.004

Koeslag-Kreunen, M., Van den Bossche, P., Hoven, M., Van der Klink, M., & Gijselaers,

    W. (2018). When leadership powers team learning: A meta-analysis. *Small Group*

    Research, *49*(4), 475–513. https://doi.org/10.1177/1046496418764824

Kristensen, G. K., & Ravn, M. N. (2015). The voices heard and the voices silenced:

    Recruitment processes in qualitative interview studies. *Qualitative Research*,

    15(6), 722–737. https://doi.org/10.1177/1468794114567496

Kyngäs, H., Mikkonen, K., & Kääriäinen, M. (Eds.). (2020). The application of content

    analysis in nursing science research. Springer International Publishing.

    https://doi.org/10.1007/978-3-030-30199-6

Larson, L., & DeChurch, L. A. (2020). Leading teams in the digital age: Four

    perspectives on technology and what they mean for leading teams. *The*

    Leadership Quarterly, *31*(1), 101377.

    https://doi.org/10.1016/j.leaqua.2019.101377

Li, J., & Yuan, B. (2017). Both angel and devil: The suppressing effect of

    transformational leadership on proactive employee's career satisfaction.

    International Journal of Hospitality Management, *65*, 59–70.

    https://doi.org/10.1016/j.ijhm.2017.06.008

Liao, C. (2017). Leadership in virtual teams: A multilevel perspective. *Human Resource*

    Management Review, *27*(4), 648–659. https://doi.org/10.1016/j.hrmr.2016.12.010

Majchrzak, A., Rice, R. E., Malhotra, A., King, N., & Ba, S. (2000). Technology

adaptation: the case of a computer-supported inter-organizational virtual team.

MIS Quarterly, *24*(4), 569. https://doi.org/10.2307/3250948

Marginson, S. (2019). Limitations of human capital theory. *Studies in Higher Education*,

44(2), 287–301. https://doi.org/10.1080/03075079.2017.1359823

Marlow, S. L., Lacerenza, C. N., & Salas, E. (2017). Communication in virtual teams: A

conceptual framework and research agenda. *Human Resource Management

Review*, *27*(4), 575–589. https://doi.org/10.1016/j.hrmr.2016.12.005

Marshall, C., & Rossman, G. B. (2016). *Designing qualitative research*. SAGE.

Meredith, J. R., & Zwikael, O. (2020). Achieving strategic benefits from project

investments: Appoint a project owner. *Business Horizons*, *63*(1), 61–71.

https://doi.org/10.1016/j.bushor.2019.09.007

Mohajan, H. (2018). Qualitative research methodology in social sciences and related

subjects. *Journal of Economic Development, Environment and People*, *7*(1), 23–

48.

Morrison-Smith, S., & Ruiz, J. (2020). Challenges and barriers in virtual teams: A

literature review. *SN Applied Sciences*, *2*(6), 1096.

https://doi.org/10.1007/s42452-020-2801-5

Morse, J. M. (2015). Critical analysis of strategies for determining rigor in qualitative

inquiry. *Qualitative Health Research*, *25*(9), 1212–1222.

https://doi.org/10.1177/1049732315588501

Muja, A., Blommaert, L., Gesthuizen, M., & Wolbers, M. H. J. (2019). The role of different types of skills and signals in youth labor market integration. *Empirical Research in Vocational Education and Training*, *11*(1), 6. https://doi.org/10.1186/s40461-019-0081-3

Mysirlaki, S., & Paraskeva, F. (2020). Emotional intelligence and transformational leadership in virtual teams: Lessons from MMOGs. *Leadership & Organization Development Journal*, *41*(4), 551–566. https://doi.org/10.1108/LODJ-01-2019-0035

Neuman, D. (2014). Qualitative research in educational communications and technology: A brief introduction to principles and procedures. *Journal of Computing in Higher Education*, *26*(1), 69–86. https://doi.org/10.1007/s12528-014-9078-x

Nosek, B. A., Spies, J. R., & Motyl, M. (2012). Scientific utopia: II. Restructuring incentives and practices to promote Truth Over publishability. *Perspectives on Psychological Science*, *7*(6), 615–631. https://doi.org/10.1177/1745691612459058

Nsom, N. K., Maih Teih, M., & Sundjo, F. (2019). The effects of transactional and transformational leadership on personnel conduct. *International Journal of Research-granthaalayah*, *7*(6), 155–164. https://doi.org/10.29121/granthaalayah.v7.i6.2019.784

Olaisen, J., & Revang, O. (2017). Working smarter and greener: Collaborative knowledge sharing in virtual global project teams. *International Journal of*

Information Management, *37*(1), 1441–1448.

https://doi.org/10.1016/j.ijinfomgt.2016.10.002

Owens, D., & Khazanchi, D. (2018). Exploring the impact of technology capabilities on

trust in virtual teams. *American Journal of Business*, *33*(4), 157–178.

https://doi.org/10.1108/AJB-04-2017-0008

Pastorino, E. (2013). Careers in Firms: Estimating a Model of Job Assignment, Learning,

and Human Capital Acquisition [Preprint]. Staff Report.

https://doi.org/10.21034/sr.469

Petty, N. J., Thomson, O. P., & Stew, G. (2012). Ready for a paradigm shift? Part 2:

Introducing qualitative research methodologies and methods. *Manual Therapy*,

17(5), 378–384. https://doi.org/10.1016/j.math.2012.03.004

Phillips, M., & Lu, J. (2018). A quick look at NVivo. *Journal of Electronic Resources

Librarianship*, *30*(2), 104–106. https://doi.org/10.1080/1941126X.2018.1465535

Pinjani, P., & Palvia, P. (2013). Trust and knowledge sharing in diverse global virtual

teams. *Information & Management*, *50*(4), 144–153.

https://doi.org/10.1016/j.im.2012.10.002

Ryan, F., Coughlan, M., & Cronin, P. (2009). Interviewing in qualitative research: The

one-to-one interview. *International Journal of Therapy and Rehabilitation*, *16*(6),

309–314. https://doi.org/10.12968/ijtr.2009.16.6.42433

Serrat, O. (2017). Managing virtual teams. In O. Serrat, *Knowledge solutions* (pp. 619–

625). Springer Singapore. https://doi.org/10.1007/978-981-10-0983-9_68

Stewart, J. (2006). Transformational leadership: An evolving concept examined through the works of Burns, Bass, Avolio, and Leithwood. *Canadian Journal of Educational Administration and Policy*, *54*.

Sukarieh, M., & Tannock, S. (2020). Deschooling from above. *Race & Class*, *61*(4), 68–86. https://doi.org/10.1177/0306396819889294

Tan, E. (2014). Human capital theory: A holistic criticism. *Review of Educational Research*, *84*(3), 411–445. https://doi.org/10.3102/0034654314532696

Thambusamy, R. X., & Bekirogullari, Z. (2020). Virtual leadership in small businesses during the COVID-19 pandemic: challenges and possibilities. *The European Journal of Social & Behavioural Sciences*, *29*(3), 179–190. https://doi.org/10.15405/ejsbs.281

Thamhain, H. J., & Wilemon, D. L. (1977). Leadership effectiveness in program management. *IEEE Transactions on Engineering Management*, *24*(3), 102–108. https://doi.org/10.1109/TEM.1977.6447248

Theofanidis, D., & Fountouki, A. (2019). Limitations and Delimitations in the research process. https://doi.org/10.5281/ZENODO.2552022

Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, *30*(3), 167–186. https://doi.org/10.1177/0735275112457914

van de Werfhorst, H. G. (2011). Skill and education effects on earnings in 18 countries: The role of national educational institutions. *Social Science Research*, *40*(4), 1078–1090. https://doi.org/10.1016/j.ssresearch.2011.03.004

Vanclay, F., Baines, J. T., & Taylor, C. N. (2013). Principles for ethical research involving humans: Ethical professional practice in impact assessment Part I. *Impact Assessment and Project Appraisal*, *31*(4), 243–253. https://doi.org/10.1080/14615517.2013.850307

Wang, N., Yao, S., Wu, G., & Chen, X. (2017). The role of project management in organisational sustainable growth of technology-based firms. *Technology in Society*, *51*, 124–132. https://doi.org/10.1016/j.techsoc.2017.08.004

Williams, C. (2011). Research methods. *Journal of Business & Economics Research*, *5*(3). https://doi.org/10.19030/jber.v5i3.2532

Wright, Alia. (2017, October 18). *Why are some companies moving away from telework?* SHRM. https://www.shrm.org/resourcesandtools/hr-topics/technology/pages/why-are-some-companies-moving-away-from-telework.aspx

Wu, G., Li, H., Wu, C., & Hu, Z. (2020). How different strengths of ties impact project performance in megaprojects: The mediating role of trust. *International Journal of Managing Projects in Business*, *13*(4), 889–912. https://doi.org/10.1108/IJMPB-09-2019-0220

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). SAGE.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (Sixth edition). SAGE.

Yousefi Nooraie, R., Sale, J. E. M., Marin, A., & Ross, L. E. (2020). Social network analysis: An example of fusion between quantitative and qualitative methods.

Journal of Mixed Methods Research, *14*(1), 110–124.

https://doi.org/10.1177/1558689818804060

Zaman, U., Jabbar, Z., Nawaz, S., & Abbas, M. (2019). Understanding the soft side of software projects: An empirical study on the interactive effects of social skills and political skills on complexity – performance relationship. *International Journal of Project Management*, *37*(3), 444–460.

https://doi.org/10.1016/j.ijproman.2019.01.015

Zhang, X., Li, N., Ullrich, J., & van Dick, R. (2015). Getting everyone on board: The effect of differentiated transformational leadership by CEOs on top management team effectiveness and leader-rated firm performance. *Journal of Management*, *41*(7), 1898–1933. https://doi.org/10.1177/0149206312471387

Zucker, D. (2007). The Belmont Report. In R. B. D'Agostino, L. Sullivan, & J. Massaro (Eds.), *Wiley encyclopedia of clinical trials* (p. eoct093). John Wiley & Sons, Inc. https://doi.org/10.1002/9780471462422.eoct093

Appendix: Interview Protocol

1. Introductions:

    a. Names, background, problem, and purpose statements

2. Consent Form:

    a. Review consent form and signature

    b. Answer questions and concerns of participant

    c. Provide copy of consent form to participant

3. Recording

    a. Remind participant the interview is recorded as stated in consent form

    b. Turn on recording device

4. 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.

5. Closing:

    a. Review next steps with participant:

        i. Transcript review

        ii. Member Checking

    b. Thank the participants for answering questions

    c. Confirm Contact details for follow up questions

6. End Interview