EFFECTIVENESS OF GOVERNMENT LEADERSHIP TO MAINTAIN

PRODUCTIVITY IN A VIRTUAL ENVIRONMENT

by

Crystal J. Showell

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Dissertation

Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

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Liberty University, School of Business

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Abstract

The purpose of this qualitative flexible design single case study was to expand the understanding of reasons behind the potential challenges of federal government leaders with maintaining employee productivity in a virtual environment. The general problem addressed was the challenges leaders face with maintaining employee productivity in a virtual environment, resulting in reduced organizational performance. The research included determining the driving factors in employee productivity in the federal government while in a virtual environment and determining if there was a specific leadership style to help maintain productivity and organizational performance. The research questions and sub-questions fully addressed the specific problem statement as they led to knowledge of why leaders face the challenges of maintaining employee productivity in a virtual environment and uncovered ideal leadership styles and behaviors to prevent or reduce failure. The findings of this study illustrated a complete understanding that leaders are still facing communication challenges from leading in a virtual environment but are finding successful styles and methods to overcome these challenges successfully. The results could assist individuals and leaders to understand and recognize practices leadership can use to maintain employee productivity in a virtual environment.

Key words: virtual leadership, virtual communication, government leadership, transformational leadership

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Approvals

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Dedication

I dedicate this accomplishment to my Lord and Savior, Jesus Christ, my dear Godhead. Thank you for giving me the strength and determination to complete my dissertation and Doctor of Business Administration program. I truly can do all things through Christ who strengthens me. I would like to also dedicate this work to my late parents who died along my journey. May you rest in peace until the day of Revelation. I will always cherish the friendships we had, and I will always remember the motivation and drive you both instilled in me. I also dedicate this writing to my children and grandchildren. Remember, if I can, you can also. No matter how hard you fall or how far away your dreams may appear, never give up on the power of God; never give up on calling on Him; never not know that you all are children of the Most High King.

Acknowledgments

I want to acknowledge Liberty University, an amazing faith-based Academia, my Chair, and all the instructors who guided, mentored, and educated me towards completing my research and the valuable knowledge and experience I gained. Furthermore, I would like to extend my gratitude to the VA organization and all the participants who allowed me to complete my research. I sincerely thank you for volunteering to participate by providing the knowledge and data that drove the conclusions of this research. The completion of this study would not have been possible without your participation.

Table of Contents

List of Tables

List of Figures

Section 1: Foundation of the Study

The general problem addressed was the challenges leaders face with maintaining employee productivity in a virtual environment, resulting in the reduction of organizational performance. The specific problem addressed was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. Many challenges associate with the leadership, coordination, and control of teams in a virtual environment because of the low level of face-to-face relationships as compared to conventional teams, setting a new kind of skill set needed by leaders (Mysirlaki & Paraskeva, 2020). This study included a Flexible Design Method using qualitative methods specifically, a Single Case Study design. For this specific problem, a qualitative research methodology was the most appropriate approach. This study included identifying leadership styles and behaviors that are best practices to maintain employee productivity in a virtual environment for successful organizational performance.

Section 1 presents a detailed discussion of the background of the problem in focus, the problem statement and purpose statement, as well as the research questions with a detailed discussion of how each question directly addresses an element of the problem studied, and how taken together, they completely address the specific problem examined. Section 1 also presents a comprehensive discussion of the primary research paradigms, the research study design, and the appropriateness of the chosen design for this research study. A detailed discussion of the research method as well as a discussion of triangulation is also illustrated.

The paper also presents a definition of terms section defining key words or phrases which are associated to this study, and which have been obtained from professional and scholarly sources. The paper also presents assumptions, limitations, and delimitations. Assumptions are

understanding potential risks that may be introduced and to consider how this potential risk could be mitigated. Researchers have an obligation to present complete, known, and honest limitations of their presented study (Ross & Bibler-Zaidi, 2019). Delimitations are also presented with an explanation of how they impacted this study into the specific problem of the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment. Lastly, Section one explains the significance of this study and an outline review of the professional and academic literature.

The findings of this study illustrated a total understanding that leaders are still experiencing communication challenges from leading in a virtual environment but are finding successful styles and methods to successfully overcome these challenges. The findings of this study suggest that the federal government leaders use intrinsic motivation to maintain productivity levels and organizational success. The findings of this study revealed the importance of leadership style both on an organizational success level and on a personal leader's perspective. The findings of this study suggest that the population has not experienced a loss in productivity after moving into a fulltime virtual environment due to adapting communication and leadership methods. The findings of this study showed that the federal government agency leaders overall organizational performance level of employees remain stable in a fulltime virtual environment. Furthermore, the findings of this study show that the participants are experiencing success while leading in a virtual environment. Lastly, the findings of this study show that the participants have accepted and adapted to their new work environment.

Background of the Problem

The COVID-19 pandemic resulted in unprecedented changes to organizations, requiring the immediate transformation of effectively leading in a virtual environment. In a recent study,

Efimov et al. (2020) indicated that characteristics of a virtual work environment not only changes employees' motivation, but also pose unique challenges for virtual leaders. Maduka et al. (2018) claimed that a leader's social presence can occur difficult to achieve in a virtual environment, therefore, creating challenges in team integration, work coordination, and maintaining successful organizational performance. Maduka et al. (2018) further claimed that classic leadership concepts applied in face-to-face work structures cannot simply transfer to virtual leadership. In a virtual environment, leaders lose the physical face-to-face interaction and communication with their employees. Byrd (2019) argued that virtual working environments characterize by lack of physical cues and body language with fewer face-to-face opportunities to collaborate with co-workers and the risk of isolation, leading to the need for organizations to have an in-depth understanding of effective leadership styles and behaviors for virtual leaders. The nature of a virtual organization creates the additional obstacle of providing growth opportunities to employees who may be spread out geographically (Byrd, 2019).

Leading in a virtual environment caused leaders to rely exclusively on virtual communication to motivate their employees. Likewise, it was explained that many organizational leaders in virtual environments find it difficult to keep employees motivated to meet performance goals (Steude, 2021). To add to causes for the potential failure of leaders to maintain employee productivity in a virtual environment, challenges in virtual work structures could link to any combination of the organization, employee motivation, and the virtual environment (Cripe & Burleigh, 2022). The literature included identifying transformational leadership (Bass, 1985) and emotional intelligence (Goleman, 1995) as being important characteristics required of leaders to maintain productivity in a virtual environment (Mysirlaki &

Paraskeva, 2020). This current study supported similar findings as transformational leadership was directly related to the leadership related discovered themes.

Problem Statement

The general problem addressed was the challenges leaders have with maintaining employee productivity in a virtual environment resulting in the reduction of organizational performance. In a recent study, Azukas (2022) found that during the COVID-19 crisis, leaders must understand, and competencies required for virtual leadership. Efimov et al. (2020) supported these views by explaining that virtual leadership requires specific skills from leaders, electronic venues The electronic venues include (a) team building, (c) communication skills, (d) social skills, (e) change management and (f) trustworthiness. Steude (2021) stated that many organizational leaders in virtual environments struggle with motivating employees to meet performance goals. The specific problem addressed by this study was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance.

Purpose Statement

The purpose of this flexible design single case study was to add or expand the understanding of reasons behind the potential challenges of federal government leaders with maintaining employee productivity in a virtual environment. The research included determining the driving factors in employee productivity in the federal government while in a virtual environment and to see if there was a specific leadership style to help maintain productivity and organizational performance. The larger problem of maintaining employee productivity in the federal government was an exploration of in-depth study of employee productivity and its effect on organizational performance in the Veterans Affairs (VA). Additionally, this study added to

the body of knowledge by studying the effects of virtual leadership styles in the VA, the nation's largest healthcare system (Administration, 2008).

Research Questions

This research study guided by the research questions, was qualitative research questions seek to understand or explain (Liberty University, 2020). Research questions must occur clear, unambiguous, designed to successfully guide the research study, broad and open to unexpected findings (Moser & Korstjens, 2017). Moser and Korstjens explained that the right research questions enable the researcher to delve beneath the surface of events and provide rich understandings that could enable the investigator to make sense of the situation and deal effectively with the complex problem at hand. Another purpose of the research question(s) is to clarify the purpose of the research (Staller, 2022). The research questions formed the basis of the inquiry for the study. Furthermore, the research questions for this study allowed for the subjective values and beliefs that this researcher brought to this study. Staller also claimed that research questions should develop with a connection to existing theories and previous findings with the literature. Finally, Staller (2022) explained that a good research question should create new or meaningful knowledge. Three primary questions and sub-questions provided the framework and guide direction for this study.

RQ1: What are the experiences of VA leaders in maintaining employee productivity in a virtual environment?

This research question addressed aspects of the specific problem statement as it could answer the *why* of the problem statement. If the *why* is responded to, it could possibly lead to answers on how to prevent or overcome the potential failure of federal government leaders to maintain employee productivity in a virtual environment. This research question addressed

aspects of the resulting consequences of the specific problem statement as it has the potential to answer the *why* as it could possibly lead to answers on how to prevent or overcome a possible reduction of organizational performance. Alam (2021) explained that a characteristic for considering case study research is to explore the response of how and *why* questions.

RQ1.a: What leadership styles or behaviors may possibly contribute to failure to maintain employee productivity in a virtual environment?

This research sub-question addressed aspects of the specific problem statement as it could provide answers to the possible cause for the challenges of federal government leaders with maintaining employee productivity in a virtual environment. This research sub-question addressed aspects of the resulting consequences of the specific problem statement as it has the potential of providing answers that could lead to the understanding of why some federal government leaders fail to maintain employee productivity in a virtual environment.

RQ1.b: What leadership styles or behaviors contribute to success to maintain employee productivity in a virtual environment?

This research sub-question addressed aspects of the specific problem statement as it could identify direct leadership styles or behaviors that could prevent federal government leaders' failure to maintain employee productivity in a virtual environment. This research sub-question addressed aspects of the resulting consequences of the specific problem statement as it has the potential of identifying direct leadership styles or behaviors that could possibly prevent the possible reduction of organizational performance from the failure of federal government leaders to maintain employee productivity in a virtual environment.

RQ2: In what way is leadership in a virtual environment different from leadership in a face-to-face environment?

This research question addressed aspects of the specific problem statement as it could uncover root causes and possibly answer aspects of the *how*. If the *how* is responded to, it could potentially lead to answers on how to apply the best type of leadership to prevent or overcome the potential failure of federal government leaders to maintain employee productivity in a virtual environment. This research question addressed aspects of the resulting consequences of the specific problem statement. This research question has the potential to uncover root causes that could lead to answers that could possibly prevent the reduction of organizational performance from the potential failure of federal government leaders to maintain employee productivity in a virtual environment.

RQ2.a: How do those differences affect employee productivity in a non-government organization?

This research sub-question addressed aspects of the specific problem statement as it could potentially drive deeper into how federal government leaders are potentially failing to maintain employee productivity in a virtual environment. This research sub-question addressed aspects of the resulting consequences of the specific problem statement as it could drive deeper into how federal government leaders are potentially failing to maintain employee productivity in a virtual environment. Understanding *the how* from the overarching research question could lead to the elimination of the possible reduction of organizational performance. Kross and Giust (2018) argued that having an overarching research question followed by a subsidiary question allows the researcher to address specific components of the original research question.

RQ2.b: How do those differences affect employee productivity in a government agency?

This research sub-question addressed aspects of the specific problem statement as it could dive deeper into potential challenges with maintaining employee productivity in a virtual

environment specific to leaders within a federal government agency. Driving research questions have the potential to generate new insights and see things in a different way (Mattick et al., 2018). This research sub-question addressed aspects of the resulting consequences of the specific problem statement as it could drive deeper into potential failures with maintaining employee productivity in a virtual environment specific to leaders within a federal government agency. Understanding the data from the overarching research question, could further focus on federal government leaders and their potential challenges with maintaining employee productivity in a virtual environment. The proper research question can narrow the focus and provide form to the research (Kross & Giust, 2018).

RQ3: What cultural elements are present in a virtual environment that position a federal agency for success in maintaining organizational performance?

This research question addressed aspects of the specific problem statement. The question has the potential to uncover possible cultural elements such as leadership styles, values, traditions, regulations, mission, and vision statements, and other forms of communication that could utilized to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. This research question addressed aspects of the resulting consequences of the specific problem statement as it has the potential to uncover possible cultural elements that could be utilized uniformly by federal government leaders to prevent the possible reduction of organizational performance.

The research questions and sub-questions fully addressed the specific problem statement as they led to understanding of why leaders face the challenges of maintaining employee productivity in a virtual environment and uncovered ideal leadership styles and behaviors to prevent or reduce failure. Furthermore, the research questions and sub-questions fully addressed

the specific problem statement as they allowed me to collect data from different aspects of the problem and situation that was analyzed and interpreted, while providing data that was applied to overcome the problem. The research questions and sub-questions had the potential to lead to original and generate new insights.

This section presented the research questions and supporting sub-questions and a discussion of how each research question and sub-question addressed aspects of the specific problem sentence. A discussion also provided detailing how the research questions addressed aspects of the resulting consequences of the specific problem statement. Lastly, this section provided a discussion on how the research questions and sub-questions fully addressed the specific problem statement of this study. The appropriate research questions facilitated me to explore beneath the surface of experiences but also provide deep understandings that can allow me to make sense of the condition and deal effectively with the complex problem.

Nature of the Study

Congress enacted the 2010 Telework Enhancement Act (TEA) over a decade ago, leading to the acceleration of COVID-19, which resulted in remote work becoming a more common practice. Consequently, virtual leadership has brought about day-to-day challenges for leaders and followers (Steude, 2021). Of these challenges, recent research showed that working from home affects employees' work motivation and organizational performance (Bae et al., 2019). Current literature included identifying critical factors that have important implications with effective leadership in a virtual environment (Caligiuri et al., 2020). These factors were further explored and considered for this study. This section of this paper presents a comprehensive discussion of the primary research paradigms, the research study design, and the appropriateness of the chosen design for this research study. A detailed discussion of the research method and a

discussion of triangulation is also described. Lastly, this section presents an update to the literature review and conceptual framework based on this study's discovered themes and findings.

Discussion of Research Paradigms

Kankam (2019) indicated that research improves the credibility and generalizability of a study. A research paradigm improves the credibility and generalizability of this study. A paradigm is a concept where shared ideas and concepts guide researchers of a study towards theory and research (Bogna et al., 2020). Furthermore, the research paradigm allowed the incorporation of the researcher's view of reality and helped shape how the problem being studied was approached (Liberty University, 2020). The primary research paradigms include positivism, post-positivism, pragmatism, and constructivism. Researchers that incorporate positivism paradigm generally utilize large sample sizes to focus on identifying explanatory associations or causal relationships through controlled experimentation mainly utilizing quantitative approaches (Park et al., 2020). Post-positivism includes the assumption that an objective is an unfound truth (Young & Ryan, 2020). The pragmatism paradigm embraces mixed methods design and follows the notion that researchers should use any tool or methodological approach that works best for the research problem (Kaushik & Walsh, 2019). According to Kaushik and Walsh (2019) post-positivism and constructivism are complete opposites.

My research paradigm for this study is constructivism. Bogna et al. (2020) claimed that research that utilizes constructivism seeks to identify worldviews, subjective meanings, perspectives, and depends on the beliefs and opinions of the research. With constructivism and from data gathered to generate knowledge, the researcher allows for an interpretation of events as the study's participants see it (Bogna et al., 2020). With the researcher utilizing qualitative

techniques, the constructivism paradigm guided this study by the development of reality and knowledge that occurs through human interaction. Constructivist research is useful in discerning meanings of experience to subsequently inform and improve performance issues (Burns et al., 2022). With the constructivism paradigm, government leaders as the study participants helped form the knowledge through their experience leading in a virtual environment. As a federal government leader, I brought a worldview to this study. By engaging with the participants with constructivism paradigm, I was able to discover the leader's knowledge or reality as it has been socially constructed by a collective generation of meanings or frames of reference. Primecz (2020) indicated that the most important features of the constructivism paradigm are that it investigates and shows the reality of understanding of the study participants and researcher, and the study remains context dependent. Furthermore, Primecz explained that the constructivism paradigm holds to general knowledge with local reality being emphasized. This study included one federal agency. The constructivism paradigm effectively guided this research.

Discussion of Design

Creswell and Poth (2020) explained that research designs provide specific direction for procedures in research and include inquiry within qualitative, quantitative, and mix methods approaches. Abutabenjeh and Jaradat (2018) claimed that selecting the appropriate design is possibly the most important decision a researcher makes, following identifying the research topic and formulating the research questions. Furthermore, research design are plans that guide decisions about when and how often to collect data, what data to gather and from who, and how to collect and analyze the data (Abutabenjeh & Jaradat, 2018). This section of this paper is a discussion of fixed, flexible, and mixed method designs. A discussion of how the best research design appropriate for this study will occur. This discussion will also detail the appropriateness

of the chosen design for this research study which observed the specific problem of the challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance.

Knowing the research design choices and the availability and specifically how to use them is important. Fixed designs use quantitative tools; flexible designs use qualitative tools, and mixed method designs uses quantitative and qualitative tools in a relatively equal amount (Liberty University, 2020). Quantitative methods consist of experimental, quasi-experimental, or nonexperimental designs., Qualitative methods include case study, narrative, grounded theory, phenomenology, ethnography, and historical designs (Siedlecki, 2020). Fixed research designs are fully defined during the research proposal; whereas flexible research designs are a part of the research proposal but may be adjusted as necessary using qualitative tools available (Liberty University, 2020). Lastly, mixed-method research designs allow the researcher to combine elements of qualitative and quantitative research approaches (Edmonds & Kennedy, 2017).

This study included a flexible design method using qualitative methods specifically, a single case study (Yin, 2014). The single case study design was the appropriate methodology for this study because qualitative studies could provide insights that can explain underlying mechanisms and processes (Bouncken et al., 2021). Uncovering underlying processes, structures, or systems, various cultural elements such as values, traditions, regulations, forms of communication and other cultural components present in a virtual environment positions federal organizations for success. Maintaining organizational performance, can appear. Exposing this data utilizing qualitative methods, three answers to research question appeared. Furthermore, qualitative research to answers *how*, *why*, and *what* questions and could reveal the perspectives of the participants concerning the research questions (Haven & Grootel, 2019). Answering the

research questions from the participants perspective was relevant for this study. The methodology was able to uncover processes that are leading to or can prevent the failure of leaders within the Veterans Affairs (VA) to retain employee productivity in a virtual environment. Uncovering this data, answering the first research question one and its related sub-questions occurred. For this complete qualitative research study, based on the explanations above, fixed designed and mixed-method designs were not the appropriate approach.

Discussion of Method

Research methods characterize as observational techniques (Abutabenjeh & Jaradat, 2018). The common methods associated with the flexible design, the chosen design for this study, include single and multiple case study, narrative, grounded theory, phenomenology, and ethnography designs (Siedlecki, 2020). Narratives are when the researcher is seeking stories that include a sequential ordering of events to render or to show the experiences of persons, in a personally and culturally articulate and credible manner (Carless & Douglas, 2017). Carless and Douglas claimed that narrative research methods offer rich insights into lived experience and have informed much of the world's research over the past 15 years. Grounded theory, a form of qualitative research, allows for theory to include social phenomena to develop a higher level of understanding that is grounded in or derived from a systematic analysis of data (Creswell & Poth, 2018). Creswell and Poth (2018) explained that phenomenological research is a method used to explore the lived experiences of a specific phenomenon with the description coming from the actual people involved. Jones and Smith (2017) defined ethnography as the active and prolonged involvement of the researcher with the social situation studied thorough observations and interviews with the intention to provide rich, holistic perceptions into participant's views and

actions, and the sights and sounds of the location they reside. However, the single case study method was appropriate for this research study.

Case study research is a qualitative method that includes multiple sources of data to obtain accounts of complex phenomena in real-life contexts (Morgan et al., 2017). A case study design is appropriate when the focus of the research is to answer 'why' and 'how' questions and when the researcher wants to cover contextual conditions which they believe are relevant to the phenomenon (Cleland et al., 2021). Additionally, Cleland et al. (2021) claimed that researchers use case study research in its real-life setting to reveal the discovery of new meaning or confirm what is already known. Uncovering this data, revealed that the answer to research question two by the discovery of how leadership in a virtual environment differs from leadership in a face-to-face environment. By diving deeper into what was revealed from conducting this study in its real-life setting, answers revealed to identify leadership styles or behaviors that contribute to leaders being able to maintain employee productivity in a virtual environment at the VA and those that contribute to the success to maintain employee productivity in a virtual environment.

Discussion of Triangulation

For this study, the methodology was complete qualitative data collection methods with one stakeholder group. This study included the method triangulation types from multiple data sources. In qualitative research, triangulation with multiple methods can reveal shared perspectives and realities without making theory-of-knowledge claims regarding the determined 'truth' of the findings (Campbell et al., 2020). The data collection methods used for triangulation within this study included interviews and observations, a qualitative leadership survey, and a comparison to the literature. The data collection occurred through one-on-one interviews with the study's participants, from a 15-question leadership survey, direct participant observation.

researcher interactions and prolonged immersion with leaders in a virtual environment. Morgan et al. (2017) explained that direct observation of people in their natural environment can avoid problems inherent in self-reported accounts and can also reveal insights not accessible from other data collection methods. The field notes developed through the observation methods were triangulated with the transcripts obtained from the one-on-one interviews with the study's participants.

Additionally, this study followed the triangulation method described by Sridharan (2021) and termed within *paradigm* triangulation. This process includes collecting responses for the same research question(s) from multiple study participants at a study site, and by allowing for triangulation by verifying that the interview responses match with the researcher's field notes from participants observation. Sridharan (2021) claimed that interview responses are consistent across different participants or data sources. Which is an indication that triangulation uncovered an increased level of credibility. Lastly, this study employed a multiple data analysis approach. This study included data analysis conducted with both inductive and deductive approaches. Natow (2020) explained that the inductive approach draws findings and concepts out of the collected data, and the deductive method uses the research data to test existing theories and concepts. This study did not use any quantitative methods for triangulation proposes.

Summary of the Nature of the Study

This section presented a detailed discussion of the primary research paradigms and the selected paradigm for this study. Furthermore, this section presented the research study design and the appropriateness of the chosen design for this research project. To study the specific problem of the possible challenges of leaders within the Veterans Affairs (VA) and to maintain employee productivity in a virtual environment resulting in the possible reduction of

organizational performance, a qualitative research methodology was the most appropriate approach. To illustrate this research proposal, a detailed account of the research method and a discussion of triangulation occurred. This study included a flexible design method as a single case study utilizing interviews, survey responses, and observations for triangulation of the data.

Conceptual Framework

The research framework is the structure that could support the foundation of a research study. By relying on a powerful and established framework from the literature and research questions, this structure enables the researcher guidance and focus (Risius & Spohrer, 2017). This research includes a presentation and discussion of the framework for this research. Several identified concepts and theories provided the framework for this study. The framework is a necessary discussion in terms of its ability to understand the constructs and actors that drive the problem examined. The specific problem addressed by this study was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. The concepts related to this research study, included in the literature, are also presented. Each concept presented is followed by a brief explanation of how the concept is related to the specific problem. Furthermore, this section details formal theories that relates to this research study also found in the literature. These theories include transformational leadership, situational leadership, the contingency theory, and the goal setting theory. An explanation is also given as to how each theory relates to the specific problem addressed by this research study. The actors or people, groups, and organizations associated with this study are also presented in this research concept section and additionally, correlated with the specific problem addressed by this research study. Furthermore, constructs that were found related to this research study are being offered, followed

by how each is connected to the specific problem examined and confirmed from the findings of this study.

This study incorporated an integrated conceptual and thematic framework. A thematic framework helps researchers identify the areas in existing leadership literature and point out possible directions for future studies (Kwok et al., 2017). The research frameworks allow the researcher to have a clear upfront picture of the specific problem statement. An integrated the research framework diagram is present to highlight the specific problem related to this study and its outcomes. The diagram shows the inputs in the form of constructs and how they relate to the actors of the study. The diagram exhibits how action, information, and influence flows between the actors, and how the actors influence the concepts and the theories. Lastly, the diagram illustrates how the determination of the output construct.

Diagram

Figure 1 shows the research framework diagram to highlight the specific problem under study as well as chart its outcomes. Furthermore, the research diagram shows the flow of information, actions, and ideas that lead to the outcomes. The diagram will receive the appropriate discussion in the 'relationship" section of this paper.

Figure 1

Relationships between concepts

Virtual Environment

A Government Agency – Veterans Affairs

Leaders   **Unions**   **Employees**

Construct: Leadership Style

Construct: Intrinsic Motivation

Construct: Employee Productivity

Construct: Organizational Performance

Theories:

Transformational Leadership   Contingency   Goal Setting   Situational Leadership

Concepts:

Concept 1   **Concept 2**   **Concept 3**   **Concept 4**

Outcomes

Leaders Decision-Making

Employees Decision-Making

Successful Organizational Performance

Failed Organizational Performance

Concepts

Researchers us concepts to describe commonly held views that are found in the literature and that are central to their research problem (Abendstern et al., 2019). Similarly, the research methodology for this study was a qualitative research method with concepts clearly embedded in the research design. In the following section, the concept for this study includes explanations. This section also provides a discussion on how each concept relates to the specific problem addressed by this study. Four concepts associate with this study.

Higher Employee Productivity in a Virtual Environment is Related to Effective Leadership

The first concept presented is: *higher employee productivity in a virtual environment is related to effective leadership*. This concept identifies as 'Concept 1' in the research framework diagram. As illustrated in the diagram, this concept is an outcome of leaders' and employees' flow through communications and actions and each of the four identified theories related to this study, and a result of the leadership style, intrinsic motivation, and employee productivity constructs. This concept relates to the specific problem of this study as it can detail leadership styles that can motivate employees to maintain productivity in a virtual environment.

The literature linked effective leadership to the success of having higher employee productivity in a virtual environment (Ashmi & Kumar, 2018; Bickle et al., 2019; Cole et al., 2019; Hill & Bartol, 2016; Kremer, et al., 2019; Maes & Weldy, 2018; Paliszkiewicz, 2019; Purvanova & Kendra 2022; Turesky et al., 2020; Venus et al., 2019). Furthermore, the literature linked effective leadership to the success of having higher employee productivity in face-to-face leader/employee work arrangements (Sayyadi, 2019; Wijayaningtyas & Lukiyanto, 2019). Sayyadi (2019) conducted a study to illustrate how transformational leadership influences knowledge management to improve employee productivity and organizational performance and

identify ways leaders can build a high-performance organization. Linking social capital theory with social networks, developing relationships between leaders and followers, and improving cohesiveness to achieve goals, Sayyadi (2019) concluded that transformational leadership plays a critical role in creating opportunities for productive employees.

Ensuring employees sustain productivity while maintaining well-being in a virtual environment is a crucial responsibility of organizational leadership (Toniolo-Barrios & Pitt, 2021). Wijayaningtyas and Lukiyanto (2019) examined and discussed an effective leadership style they claimed can improve workers' performance in the housing construction industry. Using a qualitative research method with a phenomenological approach, Wijayaningtyas and Lukiyanto (2019) determined that the effective leadership style for the selected participants is the transactional leadership design. Further, Wijayaningtyas and Lukiyanto concluded that effective employee performance and productivity will achieve under this leadership behavior. Similar to this current study, Wijayaningtyas and Lukiyanto used a qualitative method to develop an understanding based on the participants' view and experience. With a reliance on literature Wijayaningtyas and Lukiyanto (2019) claimed that research in the field of leadership proved that being a successful leader requires effective leadership skills and the ability to successfully encourage and bring the team to goal achievement cohesiveness.

Guided by three research questions concerning the challenges of IT sector leaders during the COVID-19 pandemic, Barhate et al. (2022) concluded that leaders faced challenges with employee productivity, teamwork, and customer interactions. However, it was determined that leaders who invested in increasing their virtual presence and with effective leadership can motivate for successful employee productivity through effective communication. Literature revealed that in the context of virtual leadership, several studies have emphasized the influence

of transformational leadership in support of employee productivity (Azizah, et al., 2021; Barhate et al. 2022; Supriadi et al., 2020). Barhate et al. (2022) further claimed that transactional leaders elicit employees continued effective performance and productivity through contingent rewards.

Purvanova and Kenda (2022) conducted a study using 73 samples of organizational teams made up of 5738 teams to measure the virtuality-team effectiveness relationship. To contrast their findings, Purvanova and Kenda used 109 samples of nonorganizational teams made up of 5620 teams to measure the virtuality-team effectiveness relationship. Productivity and performance were key measurement indicators. Purvanova and Kenda suggested that studies have shown that important team outcomes such as productivity and efficiency are significantly worse in virtual teams relative to traditional face-to-face working relationship, but also suggested that the impact of virtuality on organizational performance is still poorly understood. This study concluded that virtual environments does not exert a direct relationship either positive or negative on team effectiveness outcomes to include productivity and performance (Purvanova & Kenda).

Effective Leadership is Related to Successful Organizational Performance

A second concept is: *effective leadership is related to successful organizational performance*. This concept identifies as 'Concept 2' in the research framework diagram. As illustrated in the diagram, this concept is an outcome of leaders' effectiveness and employees' motivation with flow through communications and actions and each of the four identified theories related to this study, as well as is a result of the leadership style, intrinsic motivation, and employee productivity constructs. Effective leadership could support virtual employees by helping staff members resolve conflict, ensuring effective communication, and establishing clear roles and responsibilities (Wilson et al., 2021). This concept relates to the specific problem of

this study as leadership and leaders' behaviors are critical factors for organizational success (H. Lee, 2018). Zeb et al. (2018) claimed that studies have overlooked the relationship between organizational performance and effective leadership, resulting in limitations, difficulties, and unsolved problems associated with this relationship. A positive link has been found between this concept and maintaining employees' productivity in the federal government.

Turesky et al. (2020) analyzed the leadership behaviors of managers of virtual teams in the areas of trust building and conflict management. Turesky et al. indicated that these researchers sought to answer how trust and effective conflict management remotely fosters virtual leaders supported by organizational leaders. Turesky et al. claimed that this study's contribution is the exploration and identification of innovative methods virtual leaders implemented to build trust and resolve conflict, leading to higher productivity and organizational performance. Referencing a grounded theory approach and in-depth interviews of eight virtual leaders to examine leadership behaviors, Turesky et al. (2020) concluded that building a high trust leader/follower relationship and leaders with effective conflict resolution skills were found to be critical to successfully maintaining employee productivity and virtual organizational performance.

Katou et al. (2021) argued that emotional intelligence is a trait of transformational leadership behavior, and it is claimed that there is a relationship between emotional intelligence and successful organizational performance. Leadership's social presence, poses a challenge and difficult to achieve in a virtual environment, is critical for leaders' ability to maintain successful organizational performance (Maduka et al., 2018). The literature revealed another challenge leaders often experience, which is how to combine their roles of direction and contribution (Rahmani et al., 2018). Rahmani et al. (2018) claimed that two types of leadership revealed from

their study, namely participatory and directive leadership. Rahmani et al. explained that directive leadership is ideal when employees have low incentives towards contributing to successful organizational performance; that participative leadership is more effective for unstructured problems, and that directive leadership is more effective for structured problems affecting organizational performance (Rahmani et al., 2018).

Effective Communication From Leaders Leads to Followers' Shared Values and a Shared Vision

This study included uncovering or explaining how leaders at a federal agency and in a virtual environment can motivate employees to maintain productivity, which is associates with organizational performance and success. A third concept is: *effective communication from leaders leads to followers' shared values and a shared vision*. This concept identifies as *concept 3* in the research framework diagram. As illustrated in the diagram, this concept is an outcome of leaders' and employees' flow through communications and actions and each of the four identified theories related to this study and is a result of the leadership style. This concept relates to the specific problem of this study as communication, values, and vision are cultural elements. These cultural elements could serve in a virtual environment uniformly by federal government leaders to prevent the possible reduction of organizational performance. A positive link has been found between this concept and maintaining employees' productivity in the federal government.

Aimed to comparatively analyze some key factors pertinent for the dynamics of traditional working arrangements versus virtual teams in the context of COVID-19 pandemic, Stratone et al. (2022) sought to understand the positive leadership relationship between effective communication and performance outcomes. Utilizing an online questionnaire and a snowball sampling technique resulting in 137 participants, Stratone et al. (2022) concluded that

meaningful differences were observed regarding the perception of effective leadership, effective communication, and cohesiveness towards shared values and goals. Stratone et al. explained that virtual leadership brings new and unexpected challenges and concluded that leaders must have skills, trained, and experienced in facilitating communication. Leaders must communicate understanding and common goals among employees, must include all employees in the day-to-day activities by using proper communication methods, and must apply strategies for effective decision making (Stratone et al., 2022). Furthermore, Stratone et al. (2022) claimed that 10 key areas leaders should pay attention to exist to ensure employee productivity. The 10 key areas include are communication and feedback, discussion, decision-making, evaluation, and conflict management.

K. Kim (2022) explained that leader/follower relationships with mutual trust leads to a willingness to engage in more open and effective communication which, enables employees to understand shared values and goals and achieve higher task performance. Liu et al., claimed that a gap remains in the literature on the study of virtual leadership practice and implementation (2018). However, Liu et al. concluded that a very significant function of leadership is effective communication with followers. Vercueil and Nicolaides (2021) demonstrated that leaders who have effective communication in virtual environments have typically been evaluated as successful. Roman et al. claimed that virtual communication is among the top six competencies that lead to shared values and overall organizational success (2018). According to Newman et al. (2020), a positive relationship exists between virtual employees' perceptions of leaders' effective use of communications of shared values and employee performance. Newman et al. conducted a study to understand and illustrate how leaders' use of communication affect virtual performance

and reported that trust strengthens leader/employee relationships, shared values, and successful performance.

Context is a Major Factor in the Competencies Required for Effective Leadership

A final concept is *context is a major factor in the competencies required for effective leadership*. This concept identifies as *concept* 4 in the research framework diagram. As illustrated in the diagram, this concept is an outcome of leaders' flow through communications and actions, the transformational leadership, situational leadership, and contingency theories, and is a result of the leadership style construct. Azukas (2022) referenced recent studies that found that leadership is highly contextual and that effective leaders can adapt their style and behavior to the immediate contextual factors and requirements. The way leadership leads are contingent of the context where leadership is effective (Vaagaasar et al., 2020). This concept relates to the specific problem of this study as this research included identifying what possible leadership skills or behaviors are necessary in a virtual environment that may not be the same in a face-to-face environment. Leadership is a term that defines leaders, leader-employee relationships, employees, groups, and processes that occur at all levels in an organization and its context (Liu et al., 2018). Similarly, Y. Lee et al. (2018) defined leadership as a context.

Context is defined as evidence or data that could include describing the situation of an entity (Hassani et al., 2019). Concluding from a review of the literature, minimal research considered how organizational context might influence relationships between perceptions of leadership and motivation. According to Francoeur-Marquis and Aube (2021), minimal research has systematically analyzed the potential role of contextual factors in team studies, and therefore limiting organization's ability to provide contextual conditions that would foster employee performance effectiveness. Renz et al. (2018) claimed that research that utilizes content analysis

focuses on written or spoke communication with emphasis placed on the context of the communication, content, and/or structure. Visser and Scheepers (2022) indicated that contextual leadership is a significant predictor for improving performance. Furthermore, according to Kremer et al. (2019), employees are better motivated from leaders capable of staging organizational contexts that promotes and encourages.

By conducting a literature review, Oc (2018) sought to fully illustrate the leadership context and any associated impacts and used context to define leadership while explaining that researchers frequently describe leadership by the context in which the influencing process occurs. Loucks and Ozogul (2020) argued that students who could acquire virtual leadership skills in an authentic context setting in their undergraduate program, will serve better when placed in virtual leadership roles in the workplace. According to Dufrene and Lehman (2015), communication issues present challenges to virtual leadership effectiveness and a lack of effective communication standards and processes has led to a lower level of virtual employee productivity and performance. Loucks and Ozogul (2020) claimed that by teaching students' virtual leadership in an authentic context provides students with the opportunity to learn to lead in virtual environments through practice and feedback. Lastly, Lim and Moon (2021) argued that transformational leadership effectiveness is contingent on organizational context. A positive link has been found between this concept and maintaining employees' productivity in the federal government.

Theories

Dating back more than 100 years, leadership theories evolved bringing relationships, behavior, and emotions into perspective (Kovach, 2018). Researchers use theories to analyze, explain, foresee, and understand relationships or behavior. In the following section, the theories

for this study receive explanation. This section also provides a discussion on how each theory related to the specific problem addressed by this research study. As illustrated in the diagram, each theory has a flow of information or communication and actions from the leaders to the employees, resulting in actions flowing between the employees and the leaders and to the government agency from each. Four theories correlated with this study.

Transformational Leadership Theory

The first identified theory is the Transformational Leadership Theory (Bass, 1985). This leadership theory relates to the specific problem of this study since transformational leaders can transform employees to rise above self-interest by altering their ideals and motivating them to perform better to achieve organizational performance goals (Guhr et al., 2019). A key contribution of the transformational leadership theory is the ability of leaders to take a situation that may deliver ordinary or poor results such as leading in a virtual environment to extraordinary results through inherently motivating followers (Kovach, 2018). Transformational leadership theory used in this current study by guides me observe and analyze participants responses. By understanding the traits of transformational leadership and having access to the vast amounts of studies illustrating this theory in practice, I was better informed and knowledgeable of possible traits of the participants for this current study. A positive link exists between this theory and maintaining employees' productivity in the federal government.

Literature revealed that in the context of virtual leadership, several studies have emphasized the influence of transformational leadership in support of employee productivity (Azizah et al., 2021; Barhate et al., 2022; Jensen et al., 2018); Mutha & Srivastava, 2021; Mysirlaki & Paraskeva, 2020; Supriadi et al., 2020). Literature has also revealed several studies that have emphasized the influence of transformational leadership in support of employee

productivity but not distinguishing between a virtual or traditional working environment (Fontoura & Coelho, 2020; Guhr et al., 2019; Jensen & Ladegaard Bro 2018; Lim & Moon, 2021; Para-Gonzalez et al., 2018; Sayyadi, 2019; Ullah et al., 2021). Studies contradicting the value from utilizing the transformational leadership style and influence productivity and performance does not exist. However, Chen et al. (2018) claimed that positive and negative effects from transformational leadership and performance referenced the cause as too much of a positive thing in an overwhelming manner. Para-Gonzalez et al.'s (2018) measured the effects of transformational leadership and organizational performance. Para-Gonzalez et al. argued that their findings revealed that the transformational leadership style improves organizational performance. Al Harbi et al. (2019) examined the effects transformational leadership has on employees' intrinsic motivation and concluded a positive link between the two.

Ribeiro et al. (2018) explained that transformational leadership has been considered the most influential leadership theory in over 20 years and claimed that the role transformational leadership has on organizational success is well established in the literature. Ribeiro et al. (2018) concluded that studies have found a positive impact from transformational leadership on employees' performance and organizational commitment, and transformational leaders motivate and inspire employees to achieve organizational goals. According to Akdere and Egan (2020), transformational leaders encourage employees to advance their knowledge, skills, and abilities to increase employee and organizational performance alike. It was also proclaimed that transformational leadership creates a positive organizational culture, positively motivates performance and productivity, and creates leader/employee partnerships (Akdere & Egan, 2020). Paolucci et al. (2018) examined the effects of transformational leadership on team effectiveness and argued that transformational leaders influence employees' values, emotions, and attitudes,

and motivates towards higher performance. This theory is further supported by literature in the literature review section of this study.

Goal Setting Theory

Another theory included for this study is the goal setting theory (Locke, 1968). I initially related this theory to the specific problem of this study as the goal setting theory suggests that having clear and challenging goals increases motivation (Clements & Kamau, 2018). Therefore, leaders in a federal agency may be able to consider more challenging tasks to maintain productivity in a virtual environment. Literature has also revealed some studies that have emphasized the influence of the goal setting theory in support of employee productivity and effective leadership (Clements & Kamau, 2018; Demirkol, 2021; Locke & Latham,). Studies did not exist that contradicted the value from utilizing the goal setting theory to influence or measure its association with effective leadership, productivity and/or performance. However, Kehr (2019) questioned whether the usability of the goal setting theory is sufficient to make it a full-fledged approach for productivity and performance motivation. Aarts (2019) further questioned the goal setting theory and considered how employees set their own goals and how the leaders set the goal to assign goals.

The goal setting theory included in this current study guided me in observation and analysis of participants responses. Goals motivate employees to performance and adaptable to changes (Aarts, 2019). understanding the traits of goal setting theory and having access to the vast amounts of studies illustrating this theory in practice, I was better informed and knowledgeable of possible behaviors of the participants for this current study. However, the participants did not directly reference this theory. A direct positive correlation was not found

between this theory and maintaining employees' productivity in the federal government population for this study.

Literature reveals that goal setting theory can generalize across tasks, participants, outcome measures, and settings, and reveals specific facilitators and moderators of goal setting effects on performance (Kehr, 2019). Kehr argued that it is very likely that the goal setting theory will withstand the test of time with having a positive effect on organizational performance. Locke and Latham (2019) explained that the basic concept of the goal setting theory was based on more than 50 years of research and that the formal theory has endured for more than 28 years. Pritchard-Wiart et al. (2019) claimed that over 400 studies that helped to conclude that the goal setting theory focuses on illuminating relationships between goal qualities by way of specificity and difficulty, self-efficiency and goal initiator, and organizational performance. According to Pritchard-Wiart et al., a theoretical and evidence-informed approach to goal setting would provide a framework for goal setting in practice and facilitate systematic evaluation of the effects of goal setting rules on performance.

Goal setting increases team performance if leaders properly implement the technique (Locke & Latham, 2019). Miller (2020) explained that the goal-setting theory supports the notion that various objectives affect performance and motivation and achieve organizational goals. Demirkol (2021) demonstrated that in relationship to the goal setting theory, goals control behaviors; goals, if related to a task, will affect employees' performance, difficult goals, and specific goals lead to higher performance, and setting and reaching a goal led to employees feeling a sense of shared values. The use of this theory is further strengthened by literature in the literature review section of this study.

Situational Leadership Theory

A third identified theory associated with this study is the Situational Leadership Theory (Hersey & Blanchard, 1969). With situational leadership, leaders' behavior consists of dimensions of supportiveness and directness in directing, coaching, supporting, and delegating (Thompson & Glaso, 2018). This theory relates to the specific problem of this study as results revealed that leaders could use a highly directive behavior with employees failing to maintain productivity in a virtual environment and then move to a supportive leadership style once their productivity has increased and is maintained sufficiently. The situational leadership theory used in this current study guided me in observing and analyzing participants' responses. Literature has also revealed several studies that have emphasized the influence of the situational leadership theory in support of employee productivity and effective leadership (Bhasin, 2019; Negro & Mesia, 2020; Thompson & Glaso, 2018; Walls, 2019). Understanding the traits of situational leadership theory and having access to the vast amounts of studies that illustrate this theory in practice, the researcher was better informed and knowledgeable of possible traits of the participants for this current study. Studies do not exist that contradicted the value of utilizing the situational leadership theory to influence or measure its association with effective leadership, productivity, and performance. Even further, Bhasin suggested a positive correlation between the situational leadership theory applied in a virtual environment and effective performance.

Situational leadership theory suggests that a leader must adapt and change their approach to wide-ranging demands or the situation at hand to be most effective (Bhasin, 2019). Consequently, Dhamija et al. (2021) proposed that the fundamental principle behind the situational leadership theory revolves around the fact that no single leadership style is identified as the best form of leadership. Princes and Said (2022) conducted a study to measure the impacts

of task complexity, trust in leadership, performance readiness, and situational leadership on organizational performance. Princes and Said (2022) claimed that variables supported by situational leadership positively affect organizational performance. However, Princes and Said (2022) noted that the situational leadership theory chosen in their study was because of a lack of time required for leaders to form relationships with their employees. Nevertheless, an effective leader is contingent on adapting the leader's ability to use different models of behavior or leadership traits in certain situations (Negro & Mesia, 2020). This theory is further supported by literature in the literature review section of this study. A positive link was found between this theory and maintaining employees' productivity in the federal government.

Contingency Theory

The domination of a theory in a specific area is by the inside logic and validity and by the appearance of the academic environment (Shenkar & Ellis, 2022). The final theory guiding this study is the contingency theory. The contingency theory includes leadership and their flexible and adaptive decision-making and helps to explain leaders' decisions and actions contingent on determinants in a particular situation that is most appropriate for the condition (Childs et al., 2022). The contingency theory was appropriate in this study by guiding me in the observation and analysis of the participants' responses. In addition, the literature includes several studies that influence the contingency theory in support of employee productivity and effective leadership (Childs et al., 2022; Kundu & Mondal, 2019; Madlock, 2018; Popp & Hadwich, 2018; Shonhadji & Maulidi, 2022; Vidal et al., 2017). No studies originated that contradicted the value of utilizing the contingency theory to influence or measure its association with effective leadership, productivity, or performance (Shepard & Hougland, 1978). However, the participants did not directly reference this theory. Conversely, based on the participants' claims of adjusting their

leadership styles for success in a virtual environment, this theory indirectly relates to the findings of this study.

Madlock (2018) applied the contingency theory to theoretically guide a study exploring how virtual employees view their leader's leadership style and claimed that the results identified situations which leaders are to perform in a manner that is unique to the organizational setting. Madlock explained that the contingency theory reflects that no single best leadership style exists to manage processes, make decisions, or lead since different environments afford different antecedents. As noted by Vidal et al. (2017) leadership styles are constantly evolving according to the context leaders are facing, and the degree to which a leader demonstrates leadership qualities depends on their traits and the characteristics of the situation. In addition, according to Vidal et al. (2017), the contingency theory relates to leadership that is prevalent in understanding leadership styles. Popp and Hadwich (2018) claimed that the success of the contingency theory depends on the leadership style and the situation in a service context. By focusing on the leadership context and applying the contingency theory, effective leadership would differ in different leadership situations (Popp & Hadwich, 2018). Understanding the traits of the contingency theory and having access to the vast amounts of studies illustrating this theory in practice, I was better informed and knowledgeable of the participant's traits for this current study. The theory is in the literature review section. An indirect and positive link existed between this theory and maintaining employees' productivity in the federal government population.

Actors

Qualitative research studies have key people or groups central to the research problem (Yin, 2014). For this research study, four main actors associate with the problem statement. As illustrated in the diagram, each actor has a flow of information or communication and actions to

and from each other, resulting in actions between the leaders and the employees. The actors in this study included the government agency, government leaders and employees, and unions governing employees.

Government Agency

The study included a *government agency* as an actor related to and under examination. During the COVID-19 pandemic, government agencies had to change their practices and processes dramatically by becoming more effective virtually (Elnaghi et al., 2019). Government agencies must have strong leaders with vision and the need for comprehensive strategic planning and implementation in a virtual environment. However, public agency leaders have a strong characteristic of bureaucracy and mostly rely on the design of formal systems of rules and regulations for coordination and control (H. Lee, 2018). Asencio (2022) indicated that government agencies' organizational dynamics can encourage performance and productivity or discourage employees from poor work outputs. The issues relate to the specific problem of this study since this research specifically included the possible failure of leaders within a federal government agency to maintain employee productivity in a virtual environment.

Government Leadership and Government Employees

This study included *government leadership* and *government employee*s as actors related to this study. After being thrust into a permanent virtual environment because of COVID-19, government leaders must learn the importance of identifying challenges, motivating employees, meeting the needs of employees, and reevaluating leadership strategies (Cote, 2022). This actor relates to the specific problem of this study since this research was to specifically address the possible failure of leaders within a federal government agency to maintain employee productivity in a virtual environment. Furthermore, government employees are the main actors under focus

for this study as the situation is this group's productivity that leadership must maintain while in a virtual environment. According to Kwon and Jeon (2020), studies revealed that federal employees, at times, abuse telework privileges, leading to decreased motivation. Therefore, addressing the possible failure of leaders is essential within a federal government agency to maintain employee productivity in a virtual environment.

Unions Governing Government Employees

In addition, included as an actor within this study is *unions governing government employees*. This actor relates to the specific problem of this study since government employees have many protections and rights by collective bargaining agreements (CBAs). Changes to government employees' disciplinary actions, telework privileges, associated federal policies, and the leadership structure reflect the negotiations by unions, making this actor prevalent in this study.

Constructs

Qualitative research with a case study methodology has constructs that are broad concepts central to a research problem (Yin, 2014). When utilizing constructs and trying to establish their validity, the researcher must demonstrate the added value or distinctive nature of the construct compared to similar constructs (Francoeur-Marquis & Aube, 2021). However, Forbes and Avis (2020) claimed that an underlying construct measured in a study needs more than statistical validity. Forbes and Avis further claimed that researchers often conduct research with the assumption that the constructs chosen for the study are relevant to and understood by the research participants. The belief leads to the researcher developing questions to examine the constructs. This process leads to the possibility that the researcher will create previously non-existent constructs to the participants. Nonetheless, five constructs emerged for this study. As

illustrated in the diagram, each construct results from a flow of information or communication and actions of each actor of the study. This movement results in actions flowing from the leaders to the employees and the other way around, in the government agency.

Leadership Style

The first construct to mention is *leadership style*. This construct relates to the specific problem of this study as this research included uncovering possible leadership styles that researchers could use to prevent or overcome the potential failure of federal government leaders to maintain employee productivity in a virtual environment. Leadership in virtual environments is more challenging than in face-to-face arrangements, and coordinating with employees, building trust, forming shared values and goals, and managing conflict requires extra efforts than it does in traditional settings (Sedrine et al., 2021). Sedrine et al. (2021) wrote an article to explain their study and the effect leadership styles have on virtual team efficiency and concluded that trust and operational cohesion play a motivating role between leadership and team performance. Measuring transformational versus transactional leadership, Sedrine et al. concluded that both leadership styles have a positive impact in virtual environments and for effective leadership, the leader must have skills to recognize which style is best at any given situation.

Leaders are increasingly finding themselves leading in virtual environments and charged with having an effective leadership style to maintain employee productivity and organizational success. To examine how leadership styles depend on the prevailing labor market conditions for workers, Dur et al. (2022) concluded that leaders differ widely in the styles they adopt to motivate employees based mainly on self-motivation. Still, Dur et al. suggested that an effective use of leadership styles requires repeated interaction or a leader with the right social preferences.

Jensen et al. (2018) suggested that transformational leaders are most effective when employing a motivation approach with face-to-face communication. Similarly, Alblooshi and Haridy (2021) claimed their study resulted with transformational and transactional showing as the most effective leadership styles for organizational innovation. Alblooshi and Haridy (2021) argued that since leadership usually varies and is subject to many variables to include context, there is no universal definition for leadership. Nevertheless, a key factor in effectively leading is having the right motivations. A positive link was found between this construct and maintaining employees' productivity in the federal government.

Intrinsic Motivation

A second associated construct included is *intrinsic motivation*. This construct relates to the specific problem of this study as this research included revealing possible leadership styles that could prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. The skill of effectively managing performance is critically essential for leaders to maintain productivity and is used to develop the organization's workforce, to promote knowledge sharing, and to enhance intrinsic motivation (Kremer et al., 2019). Jensen et al. (2018) suggested that transformational leaders are most effective when employing a motivation approach with face-to-face communication. Efimov et al. (2020) suggested that virtual employees have a high independence in organizing their work and therefore, could have higher intrinsic motivation. This claim was made similarly by Rupietta and Beckmann (2018) as they also stated that working in a job that has a high degree of autonomy as working remotely increases employees' intrinsic motivation. Ullah et al. (2021) claimed that the transformational leadership style makes employees willing to maintain successful performance levels even when intrinsic motivation is absent.

Al-Mansoori and Koc (2019) conveyed that their study showed that even though participants showed very high intrinsic motivation, leaderships' acknowledgement and rewards were an essential motivational requirement for producing more than average outputs. A review of the literature revealed transformational leadership as a measurement and with a positive relationship to employee intrinsic motivation. (Al Harbi et al., 2019; Al-Mansoori & Koc, 2019; Jensen & Ladegaard Bro, 2018). Feng et al. (2018) conducted a study to investigate an ethical leadership style on employee intrinsic motivation and employee creativity. From sampling 258 employees and their leaders, Feng et al. (2018) concluded that employee creativity improved as ethical leadership increased from low to moderate levels but was mediated by a curvilinear relationship of employee intrinsic motivation. Feng et al. (2018) further claimed that ethical leadership can also increase employees' intrinsic motivation. Jensen and Ladegaard Bro (2018) claimed that findings from their study supported the argument that motivational effects of transformational leadership are not enough without employee intrinsic motivation. This construct is further supported by literature in the literature review section of this study. A positive link was found between this construct and maintaining employees' productivity in the federal government.

Employee Productivity

Another identified construct for this study is *employee productivity*. This study was intended to identify leadership styles and behaviors that are best practices to maintain employee productivity in a virtual environment for successful organizational performance. Furthermore, this study included determining the driving factors in employee productivity in the federal government while in a virtual environment and determine if there is a specific leadership style to help maintain productivity and organizational performance. This construct is related to the

specific problem of this study as this research included revealing how leadership can prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. Leadership style has the potential to either produce high employee productivity or low employee productivity (Gemeda & Lee, 2020).

The literature greatly correlated effective leadership as critical to maintain employee productivity in a virtual environment (Ashmi & Kumar, 2018; Bickle et al., 2019; Cole et al., 2019; Hill & Bartol, 2016; Kremer, et al., 2019; Maes & Weldy, 2018; Paliszkiewicz, 2019; Suhartanti& Prasetyanto, 2022;2021; Venus et al., 2019). Elyousfi et al. (2021) claimed that retaining employee productivity is another challenge associated with virtual leadership. Suhartanti and Prasetyanto, (2022) measured the effects of servant leadership on employee productivity and declared a positive and significant effect between servant leadership on employee innovation and productivity. According to Almaamari and Alaswad (2021), effective leadership skills links to higher productivity through influencing and motivating abilities. Almaamari and Alaswad argued that findings revealed that the democratic leadership style is the best approach to increase employee productivity. By maintaining employee productivity, leaders are in a better position to successfully build and sustain organizational performance.

Organizational Performance

Organizational performance is the fourth construct included in this study. Researchers explained that construct-to-construct causal relationships explain why observed effects occur (Calder et al., 2020). This construct relates to the specific problem of this study as it is the measurable outcome that was in question. A leader's social presence can be difficult to achieve in a virtual environment, and consequently creating challenges in maintaining successful organizational performance (Maduka et al., 2018). Bae et al. (2019) made a similar claim when

they argued that recent research showed that working from home affects employee motivation and organizational performance. Guhr et al. (2019) proclaimed that the transformational leadership style enables leaders to transform employees to successfully obtain and maintain organizational performance goals. Alrowwad et al. (2020) examined the mediating effect between transformational and transactional leadership and organizational performance. Alrowwad et al. (2020) concluded that transformational and transactional leadership positively relate to organizational performance and that an effective leadership style in general will motivate employees and lead to superior organizational performance. Fontoura and Coelho (2020) analyzed transformational leadership and employees' behaviors on shared value creation to achieve higher organizational performance and concluded that effective leadership positively impacts higher organizational performance. Para-Gonzalez et al. (2018) also conducted a study to measure the effects of transformational leadership and organizational performance. These authors offered that their study revealed that the transformational leadership style improves organizational performance when human resource management and learning and innovation are prevalent in an organization. This concept is further supported by literature in the literature review section of this study.

Virtual Environment

Lastly, the construct *virtual environment* identified in this study and is associated. This construct relates to the specific problem of this study as a virtual environment is the broad concept related to but distinguishing this research investigation into the possible failure of leaders within a federal government agency to maintain employee productivity. For organizations to effectively develop in a virtual environment, leadership must spread into and nurture their employees while motivating them to flourish (Pavez & Neves, 2021). Literature

reveals that virtual leadership has specific challenges not experienced in traditional face-to-face leader/employee working relationships (Azukas , 2022; Byrd, 2019; Cripe & Burleigh, 2022; Efimov et al., 2020; Steude, 2021). According to Byrd (2019), virtual working environments characterizes by a lack of physical cues and body language leading to a critical need for effective leadership styles to ensure organizational performance goals are met. Gentilin and Madrigal (2021) stated that in a virtual environment context, leadership becomes one of the main challenges to organizations and successful performance. Dazzi et al. (2021) noted that organizations will need good leadership to address complex situations that associate with virtual environments. From their study Dazzi et al. aimed at examining if leadership styles needed to change in a virtual environment, Dazzi et al. (2021) suggested that virtual leaders must make great effort to get to know their employees, encourage shared values, and use camera technology for communication that allows for body language and nonverbal cues regularly. According to Gentilin and Madrigal (2021) a review of the literature suggests that leaders in virtual environments should share experiences and the crucial factors with influences include team building honest communication and trust.

Relationships Between Concepts, Theories, Actors, and Constructs

The four identified concepts from a review of the literature relates to the findings of this study. These concepts include higher employee productivity in a virtual environment relates to effective leadership. Effective leadership relates to successful organizational performance. Effective communication from leaders leads to followers' shared values and a shared vision. Context is a major factor in the competencies required for effective leadership. According to Alkhayyal and Bajaba (2023), virtual leadership positively relates to e-work self-efficacy and job

performance. Onesti's (2023) study found that different leadership styles directly influence employees' mental well-being when working in a virtual environment.

Of the four theories from a review of the literature, all but one communicated by the participants. A direct positive correlation was not found between the goal setting theory and maintaining employees' productivity in the federal government population for this study. However, the goal setting theory indirectly related to this current study as this theory suggests that having clear and challenging goals increases motivation and the participants identified as successfully motivating their staff. Actors identified for this study are indirectly related to the findings of this study by their direct link to the participants and the only actors that took part in the study were government leaders.

All five constructs identified and utilized for this study proved to relate and occur relevant to this study. These constructs include leadership style, intrinsic motivation, employee productivity, organizational performance, and virtual environment. However, Klein et al. (2022) noted that a leadership construct might function differently in different environments and therefore influences the outcome of leadership research and may influence the validity of conclusions drawn. Therefore, when utilizing constructs and trying to establish their validity, it is important to be able to demonstrate the added value or distinctive nature of the construct in comparison to other conceptually related constructs (Francoeur-Marquis & Aube, 2021). The right constructs are essential to research and the development of strong theory may also assist in closing a gap in the research practice (Lindsay, 2018).

Summary of the Research Framework.

This section of this paper included a detailed discussion of the research framework which includes the concepts, theories, actors, and constructs associated with the specific problem

addressed by this study. The framework also featured four actors and five constructs which have identification and utilization for this research. The diagram provided a visualization of the relationship between all the elements included within the research framework. Additionally, the framework featured four concepts and four theories that linked to this research. Leadership theories combined with the right concepts in a study can aid the researcher in analyzing the complexity of leaders' actions (Jaser, 2021). Furthermore, the diagram shows the flow of information, actions, and ideas which lead to the outcomes of employees' motivation and organizational performance. This framework was a guide to move me through the right steps for the specific problem statement which led this study. Lastly, this framework provided a clear word and diagram picture of what the conditions are that are surrounding the phenomenon identified with the specific problem statement.

Based on the findings of this study, the relationships between concepts, theories, actors, presentation of the constructs occurred. All four identified concepts from a review of the literature were found to relate to this study. Of the four theories from a review of the literature, all but the goal setting theory received communication by the participants. All five constructs identified and utilized for this study proved to relate and relevant to this study. It is understood that the research framework is the structure that could support the foundation of a research study. Relying on a powerful and established framework from the literature and research questions, enables the researcher to appear guided and more focused (Risius & Spohrer, 2017).

Definition of Terms

Challenges: Anything that by its nature or character serves as a call to make a special effort, a demand to explain, justify, or difficulty in an undertaking that is stimulating to the one engaged in it (Baporikar, 2020).

Competencies: Epstein and Hundert established a common definition of professional competencies as encompassing habitual and judicious use of communication, knowledge, technical skills, reasoning, emotions, values, and reflection in daily practice (Kamp et al., 2021).

Context: Information that can characterize the situation of an entity (Hassani et al., 2019).

Contingency Theory: The contingency theory, a management theory, began as a theoretical framework that allowed for a more complex understanding of conflict or crisis management with the basic assertion that the environment in which an organization operates, and situational variables determine the best way for it to organize (Shonhadji & Maulidi, 2022).

Controlled Motivation: Performing an activity out of ego-involvement and/or external rewards and punishment (Gagne et al., 2020).

Cultural Elements: Cultural elements are the set of assumptions commonly held throughout an organization, rituals and routines, stories told by members, symbols, control systems, power structures, and formal and informal differentiation and integration of work tasks (Heinz, 2021).

Effective Communication: Effective communication is sharing information in a manner that informs, coordinates, and regulates; aligns individual goals with collective goals; and fosters innovation (Villa et al., 2017).

Effective Leadership: Leadership having the necessary qualities to achieve their objectives and to encourage the employees' achievements at an individual level (Nidadhavolu, 2018).

Goal Setting Theory: The Goal-setting theory describes that many factors that affect task performance and completion, or the process of achieving a goal. A goal must occur specific and difficult. Still, a balance between difficulty and directivity because if the goal is too easy,

performance will not increase, and if it is too difficult, it will be viewed as impossible (Miller, 2020).

Government: The body of individuals that forms the governing authority of a political unit or organization (Mas & Gomez, 2021).

Innovation: Innovation is a process of transforming organizational ideas into new or improved products, processes, or services to advance, compete, or distinguish successfully in the market (S. Singh & Aggarwal, 2022).

Leadership: Leadership is the skill of a leader to influence and enable others to contribute toward the effectiveness and success of the organization of which they are members (Nidadhavolu, 2018).

Inspirational Motivation: Leaders providing meaning and challenge to followers through vision and enthusiasm (Gagne et al., 2020,).

Organizational Environment: Is encompassed of contextual factors that are external and internal to the company in which the organization carries out its operations to attain certain organizational goals (Romero-Silva et al., 2018).

Organizational Performance: Organizational Performance is the system of value creation for the organization which produces a metric of change for its overall status and facilitates decision making by leaders; organizational performance also involves a complex relationship between the criteria of profit, productivity, effectiveness, efficiency, quality, innovation, and profitability (Possamai et al., 2017).

Remote Work: Remote work means the virtual performance of work tasks defined by working outside the location of the employer, its branch, representative office, or other structural

unit, as well as outside a fixed workplace territory or facility directly or indirectly under the control of the employer (Yankov, 2021).

Situational Leadership Theory: The Hersey and Blanchard's situational leadership theory suggests that a leader must be able to adapt and change their leadership approach to varied instances or to the situation at hand to be most successful (Bhasin, 2019).

Telework: Telework is work that occurs from different locations such as home, that enables workers access to their labor activities using information and communication technologies (Nakrosiene et al., 2019). Telework is an alternative way of organizing work by offering the possibility to work anywhere (Nakrosiene et al., 2019).

Transformational Leadership Theory: Transformational Leadership is a process where leaders promote the motivation of their followers to pursue and accomplish higher goals for the collective interest of the group by acting cooperatively with employees, by engaging in idealized influence to meet their crucial needs, by inspirational motivation and intellectual stimulation, and by encouraging them to move towards a particular direction (Nidadhavolu, 2018).

Unions: The description of a union is workers' organization constituted for the purpose of fostering and defending the interests of workers (Mas & Gomez, 2021).

Virtual Environment: In a virtual environment, leaders and followers are physically distant but connected through technology (Schmidt & Van Dellen, 2022).

Assumptions, Limitations, Delimitations

Research is an organized system of continuous learning (Harsoor et al., 2022). However, studies come with assumptions, limitations, and delimitations. Assumptions are facts considered true but not verified in the study, as where limitations refer to potential study weaknesses (Liberty University, 2020). Furthermore, delimitations are the scope conditions which are set by

the study such as only selecting a specific segment of leaders within the VA. For this section, assumptions, limitations, and delimitations of this study, which were currently received identification. A risk mitigation discussion occurred for each assumption. A description of how the limitations related to this study and what was done to mitigate the limitations received presentation. Lastly, a descriptive presentation occurred on the boundaries with an assessment of how they impacted this study.

Assumptions

The major assumption for this study was that there were enough willing participants who agreed to participate in this study. This study included purposeful sampling. This current study did not include a probability sample that would allow for statistical inferences to the population, rather purposeful sampling of an intentional sample group that can best inform the utilization of the (Creswell & Poth, 2018). Creswell and Poth (2018) suggested that 15-25 study participants will allow for data saturation. Another assumption was that the accessibility and the truthfulness of the participants would prevail during the interview procedures. Participants will exhibit trust in research when they perceive the adequacy around the processes for informed consent, privacy, and data use, when the researcher presents a trustworthy project, is transparently providing participants with necessary information, and when allowing participants control over their participation (Kennedy et al., 2021). The risk mitigation plan for these two assumptions was to have other potential study sights identified with amble time to gain approval to conduct this study at an alternative federal agency.

Additionally, an assumption was that many leaders within the VA are presented with challenges while leading in a virtual environment. Researchers revealed that virtual leadership has specific challenges not experienced in traditional face-to-face leader/employee working

relationships (Azukas, 2022; Byrd, 2019; Cripe & Burleigh, 2022; Efimov et al., 2020; Steude, 2021). The risk mitigation plan for this assumption was to have a large enough pool of participants to account for those that would ultimately decide they would not take part in the interview process or those who were no longer available to give of their time. Another assumption was that the chosen theories would guide the researcher study to create a better understanding of leadership styles and behaviors that are most effective for successfully leading in a virtual environment. Jaser (2021) claimed that leadership theories linked with the right concepts in a study can aid the researcher in analyzing the complexity of leaders' actions. The assumption that the selected methodology was the appropriate design for the needed exploration and uncovering of the desired knowledge. Bouncken et al. (2021) declared that qualitative studies can provide insights that can explain underlying mechanisms and processes. Finally, another assumption was that the case study qualitative research design would best allow for an accurate analysis of the influence that leaders can have to maintain employee productivity in a virtual environment resulting in successful organizational performance. A case study design is appropriate when the researcher wants to cover contextual conditions which they believe are relevant to the phenomenon under study (Cleland et al., 2021). For these final assumptions, the risk mitigation plan was to follow the guidelines of Liberty University and to incorporate the feedback from the Chair and other reviewers along the process.

Limitations

This research study had certain limitations. This study included only one government agency and may not reflect conclusions that could occur from multiple government agencies or private industries. Using multiple research sites was outside the scope of this study. To mitigate this limitation, this study used the method triangulation type and occurred from multiple data

sources. This study used multiple data analysis approaches. This study included data analysis conducted with both inductive and deductive approaches. Natow (2020) explained that the inductive approach draws findings and concepts out of the collected data, and the deductive method uses the research data to test existing theories and concepts. This study did not necessarily seek to develop new knowledge, rather sought to confirm what has already been proven surrounding the problem statement leading this research. To mitigate this limitation, the development of specific research questions and sub-questions occurred. Researchers us driving research questions to generate new insights and view situations in a different way (Mattick et al., 2018). The research questions and sub-questions had the potential to lead to original work and generate new insights. Additionally, Cleland et al. (2021) claimed that case study research can reveal the discovery of new meaning or confirm what is already known. Despite these limitations, this study added to the growing literature on leadership in a virtual environment by providing meaningful insight.

Delimitations

Delimitations relate to the study's theoretical background, research questions, variables under study, and the study sample, The researcher sets limitations which relates with boundaries or limits of their work so that their objectives do not become impossible to achieve (Theofanidis & Fountouki, 2018). This study only used a specific leadership group or department within the Veterans Affairs. The VA is a large organization with multiple departments, some of which were not easily accessible for this study. The group of leaders that selected as participants included a pool of over 55 leaders. Accordingly, this situation did not negatively affect this study as saturation was expected to be reached within 15 to 25 interviews. However, for this study, saturation reached within 14-17 interviews.

Significance of the Study

Virtual leadership comes with about day-to-day challenges for leaders and followers (Steude, 2021). Of these challenges, recent research showed that working from home affects the work motivation and organizational performance of employees (Bae et al., 2019). Critical factors that have important implications with effective leadership in a virtual environment have identified in the literature (Caligiuri et al., 2020). This study included the design to identify what leadership styles and behaviors are best practice to maintain employee productivity in a virtual environment for successful organizational performance. This study is significant as the findings from this study can serve as a resource and reference for future researchers. The results could assist individuals and leaders to understand and recognize practices leadership can use to maintain employee productivity in a virtual environment. Additionally, this study is significant and is important to the field of business administration.

Reduction of Gaps in the Literature

To determine any gaps in the literature, an in-depth review of the current literature occurred. In contrast to the abundant studies found on leadership, working within virtual environments, and leadership within virtual environments, the literature review did not reveal studies concerning federal government leaders in a virtual environment only. This study can add to the literature and could fill a gap or lead to further understanding in the field of leadership and identify best leadership practices and styles for successfully leading in a federal virtual environment by providing a broader understanding of the topic, and still develop. Furthermore, this study can fill in the gap or add understanding and effective practice of leadership by revealing competency most effective to lead in a virtual environment.

The literature revealed many competencies for high-quality leaders with some to include dignity and respect, decision making, reflection, ethics, enhancing task knowledge, evaluation consequences, empowerment, critical thinking, and relationship building (Citaku & Ramadani, 2020). However, neither of these competencies were identified as most effective specifically or mainly for leadership in virtual environments. Improvements of competence within organizations can contribute to an organization's successful performance. Researchers concluded that high-quality, competent leadership is imperative to the success of organizations (Citaku & Ramadani, 2020). Zeb et al. (2018) conducted a study to investigate gaps in the existing literature in relationship between the effectiveness of leadership and organizational performance. Zeb et al. (2018) claimed that these studies have overlooked contextual realities and cultural effects in the relationship between organizational performance and effective leadership resulting in limitations, difficulties, and unsolved problems associated with this relationship. This study adds to this gap in the literature and provides a deeper understanding of the contextual realities and cultural effects in the relationship between federal organizational performance and effective virtual leadership. This study addressed the relationship to the leadership as it is associated with managing human resources, quality management and productivity, and leading organizational change.

Implications for Biblical Integration

According to the Word, God has given us the necessary skills, talents, and favor to overcome the obstacles of this world. The Bible explains: "And I have filled him with the spirit of God, in wisdom, and in understanding, and in knowledge, and in all manner of workmanship" (*King James Bible*, 1769/2022, Exodus 31:3). As argued by Taylor (2019), the Bible presents a foundation that can enable researchers to conduct a study from a Biblical perspective. As

Christians, we must become a guided reflection from a Christ-centered, faith-based perspective to enhance learning, to foster civic responsibility, and to develop effective leaders (Lewing, 2018). God tells us to put Him first. Therefore, when we conduct business research from a Biblical perspective, we must honor God with our actions and with our communications. Effective communication is a critical practice for conducting business research from a Biblical perspective. The Apostle Paul tells us that: "And whatsoever ye do in word or in deed, do all in the name of the Lord Jesus, giving thanks to God and the Father by him" (*King James Bible*, 1769/2017, Colossians 3:17). This means we must conduct business research with truth, humbleness, and guided by the Spirit of God. When we bring this Biblical perspective into the process of conducting business research, it helps us to remain ethical, to maintain sound decision making, and to be successful in our performance. From a Biblical perspective, researchers can bring to their study rich resources of compassion, context, and an intrinsic notion of spiritual belief, commitment, and inspiration (Pardue, 2018). Furthermore, as a student researcher at Liberty University, it is a profound honor and blessing to be able to bring a Biblical perspective into the writing and research for this study.

This study was about serving our neighbors through our vocations just as God intended our work to do. We are to share our gifts and knowledge as we serve Jesus Christ and others. Thus, knowledge was gained by conducting business research and shared with others for their obtainment of understanding and transformation. A key contribution of the transformational leadership theory is the ability of leaders to take a situation that may deliver ordinary or poor results such as leading in a virtual environment to extraordinary results through inherently motivating followers (Kovach, 2018). The most effective style of communication occurred while conducting this study. "Let the word of Christ richly dwell within you as you teach and

admonish one another with all wisdom, and as you sing psalms, hymns, and spiritual songs with gratitude in your hearts" (*King James Bible*, 1769/2017, Colossians 3:16). This study occurred with the love of God dwelling in and from this researcher thus allowed the participants to be respected and treated with care.

Benefit to Business Practice and Relationship to Cognate

This study included addressing the relationship to the leadership cognate associated with managing human resources, quality management and productivity, and leading organizational change. This study can benefit business practice as it revealed an effective leadership style to utilize to be successful while leading in a virtual environment. The most effective and applicable leadership style matters for organizational success which is dependent on leaders maintaining productivity. Leaders who provide support, structure, role clarity, maintains cohesion, focus, and effective communication in virtual environments have typically received effective evaluation (Vercueil & Nicolaides, 2021). This study benefits business practice as it revealed the most effective manner of communication style to utilize leading to overcoming the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment. Vercueil and Nicolaides (2021) explained that leaders who talk to their staff with consistent, reliable fact-based communication, and inspirational motivation, and those could shift position into listening to understand, are highly favorable for success in virtual operations.

Additionally, this study benefits business practice as it uncovered effective methods for team development. Team development is a business practice that leads to employees having the ability to become more productive and having team success in virtual environments and face-to-face working arrangements. Eseryel et al. (2021) defined team success as teams achieving in the functions of both team performance and team development. Lastly, this study benefits business

practice as it identifies effective collaboration techniques by leadership and/or how some leaders are using performance management effectively. Darics (2020) presented several studies that recognized leaders that can promote collaboration in a virtual environment as being valued with a key quality for bringing about a positive influence on team members' having encouraging interactions with others. Furthermore, managing performance effectively can promote collaboration in a virtual environment as valuable with a key quality for bringing about a positive influence on team members' having encouraging interactions with others.

Summary of the Significance of the Study

The purpose of this study was to explore and to understand how to apply the most effective type of leadership style to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. This section on the significance of the study provided a discussion on how this study is noteworthy and filled gaps in the literature by adding to the understanding of effective practices of leadership within the federal government while leading in a virtual environment. In a virtual environment, leaders must understand the required competencies essential to maintaining employee productivity. Because virtual leadership occurs day-to-day challenges, this study is significant to the field of leadership as it shed some light on the most effective leadership styles and behaviors required in a virtual environment to maintain employee productivity in a federal government agency. By understanding government leadership traits and actions in a virtual environment as well as during a health crisis such as the COVID-19 pandemic, this study provides insights and a deeper understanding of these leaders. Implications for biblical integration occurred.

This section provided a discussion on how this study is a benefit to business practice and a relationship to the leadership cognate. This study was significant as the findings from this study

can serve as a resource and reference for future researchers. The results can assist individuals and leaders with understanding and practices they can use to maintain employee productivity in a virtual environment. Additionally, this study was a significant and important to the field of business administration.

A Review of the Professional and Academic Literature

Effective leadership has historically related to overall organizational effectiveness (Wilson et al., 2021). Furthermore, Wilson et al. explained that effective leadership has proven to support virtual employees by helping staff members to resolve conflict, ensuring effective communication, and by establishing clear roles and responsibilities (2021). Leadership is a multi-dimensional term that defines leaders, leader-follower relationships, followers, groups, and processes that occur at all levels in an organization and its context (Liu et al., 2018). As detailed by Mysirlaki and Paraskeva, there are many challenges associated with the leadership, coordination, and control of teams in a virtual environment due to the lack of physical face-to-face interaction (2020). This research study included identifying leadership styles and behaviors that are best practices to maintain employee productivity in a virtual environment and that can lead to overall success in organizational performance.

This section provides a review of the relevant literature with an overview of current business practices related to the general problem of this study into the investigation of possible challenges of federal government leaders to maintain employee productivity in a virtual environment. A review of the literature allows researchers to identify recent developments in research (King et al., 2020). According to the literature and several related studies, successfully leading in a virtual environment requires leaders to have key competencies (Azukas, 2022; Efimov et al., 2020; Steude, 2021). Furthermore, the literature includes an explanation,

description and explores various leadership theories or styles that may have effective practices in a virtual environment. This literature review also presents the concepts, theories, and constructs associated with this study. The right constructs are essential to research and the development of strong theory and may also assist in closing a gap in the research practice (Lindsay, 2018).

This literature review includes four concepts which relate higher employee productivity and motivation in a virtual environment that associates with effective leadership through communication and context. Several related studies identify within this literature review. These studies allowed me to determine any gaps in the literature and leading to a better understanding and knowledge of effective practices of leadership by revealing competencies most effective in a virtual environment. A review of the academic literature allowed for the identification of and recent developments of anticipated and discovered themes. The anticipated themes included: effective leadership is a critical factor for organizational success in a virtual environment; virtual leadership requires unique competencies. Virtual leaders face difficulties in building team cohesion and trust in leadership. Virtual leaders experience challenges with maintaining employee productivity; and communication and building trust are major challenges in a virtual environment. Literature reviews enable researchers to go beyond an analysis and synthesis of research findings into new insights and summarized knowledge about a subject at hand (Lubbe et al., 2020). The discovered themes will also include presentation and discussion. The literature includes an extensive list of competencies and business practices for dignified and high-quality leaders. The literature review includes decision making, reflection, ethics, enhancing task knowledge, evaluation consequences, empowerment, critical thinking, and relationship building (Citaku & Ramadani, 2020). Some of these competencies and business practices listed by Citaku and Ramadani (2020) are variables and conclusions associated with this current study. The

literature review includes an update on a detailed discussion on discovered themes found during data collection, triangulation, and coding. Themes discovered from the research findings include leading by example, servant leadership, effective communication, loss of socialization, and having integrity.

Business Practices

According to Kremer et al. (2019), organizations should implement business practices that promote employee motivation. Based on their review of existing empirical research, Kremer et al. offered several best-practice recommendations which included developing the right group norms. In addition, the best practices include, designing teams strategically, showing support as a leader, effectively using performance management, and displaying organizational support. Tremblay and Simard (2018) affirmed that leaders who utilized development enhancing practices primarily fostered perceived organizational support which generally results in employee improved motivation. The ideal business practices uncovered by this literature review in support of this study included the right leadership, effective communication, effective collaboration, teams, team development, and using performance management effectively. As explained by Gun (2021), the effectiveness of business practices relies on the effectiveness of the communication between leaders and their staff. At the same time, the literature reveals that leadership should be diffused, rotated, shared, and distributed and dispersed across an organization where anybody or everybody contributes to leadership, development of best business practices, and overall organizational success (Salovaara & Bathurst, 2018).

The Right Leadership. The most effective and applicable leadership style matters for organizational success, which is dependent on leaders maintaining productivity. The wrong kind of leadership has disastrous consequences for organizations in a virtual environment such as poor

performance and a lack of overall organizational goals success (Lekhanya et al., 2017). Paliszkiewicz (2019) studied the influence trust variables, to include trust-competence, trust-benevolence, and trust-integrity, have on leadership and organizational performance success. Having posited that leadership is about building a positive relationship among people within the workforce, effective leadership skills was linked to higher productivity through influencing and motivating and connected to organizations gaining a competitive advantage (Paliszkiewicz). Paliszkiewicz suggested that there are 15 characteristics found in the literature that are inherent to leadership and listed as leading change. In addition, the characteristics include, leading innovation, communication, motivation, values, and principles, listening, empowerment, and influence. The characteristics include flexibility, self-awareness, feedback, managing time, learning, individual differences, and building relationships. Paliszkiewicz did not elaborate on these claims or provide data for these results within the results section of this study. Similar claims were current in the literature review.

Vercueil and Nicolaides (2021) conducted a conceptual framework study to illustrate understanding on how leadership in a virtual environment is becoming critical as organizations are increasingly using virtual teams for continued business operations. Vercueil and Nicolaides claimed, that leaders who provide support, structure, role clarity, maintain cohesion and focus, and have effective communication in virtual environments have typically received effective evaluation. Amussah (2020) claimed that leaders with an authoritative leadership style have a negative relationship with employee performance without a distinction between a virtual and physical working environment. While conducting a study on leadership styles and their impact on employee performance, Amussah arrived at the conclusions and claimed that all but the authoritative leadership style has a significant and positive relationship with employee

performance. Amussah utilized a quantitative study with a random sampling technique and administered 164 structured questionnaires for data collection and analysis. Amussah claimed that all leadership styles had a significant and positive relationship with employee performance, except the authoritative leadership style, there is no evidence within the study that all leadership styles occurred as a measurement of the variables and constructs.

Effective Communication. Vercueil and Nicolaides explained that leaders who talk to their staff with consistent, reliable, fact-based communication to inspirational motivation, and those who can shift position into listening to understand, are highly favorable for success in virtual operations (2021). This claim that effective communication is a valuable business practice of leaders in a virtual environment is further supported in the literature. Roman et al. (2018) concluded from their study to develop and test an original model that focuses on virtual leadership and the competence of virtual communications. Roman et al. claimed that an effective virtual leader must communicate clearly, and that virtual communication is among the top six competencies which lead to effective virtual leadership. Other literature on effective communication shows that this business practice improves business operations through enhanced motivation and employee performance (Villa et al., 2017). Villa et al. conducted a study from using the communication theory to improve the understanding of the impact of effective communication on the performance of humanitarian organizations without a distinction between a virtual environment and face-to-face leadership. Based on lessons learned, their findings revealed a positive correlation between effective communication and enhanced business operations (Villa et al., 2017).

Venus et al. (2019) suggested that leader vision transmission is critically essential to effective leadership, and this was the subject of their study, specifically, the impact of leadership

self-identity and effective communication. Referencing the construal level theory, Venus et al. used an experienced sampling design across 16 consecutive workdays and survey data from 44 mid and high level managers to test their predictions on what prompts leaders to communicate a vision in the first place. Assumptions are that the literature reviewed for this study was directed towards vision communication being at the core of effective leadership, and somewhat dated. Venus et al.'s study is in harmony with the current study. Venus et al. claimed a positive connection between effective leadership and effective communication and maintaining productivity in a virtual environment. By studying the effects of leadership skills, behaviors, and effective communication against virtual project managers, Cripe and Burleigh (2022) concluded that virtual leaders are more likely to be successful with maintaining organizational success by sustaining cohesive team relationships to gain trust and confidence.

Effective Collaboration. Darics (2020) presented several studies that recognized leaders that can promote collaboration in a virtual environment, as being valued with a key quality for bringing about a positive influence on team members' having encouraging interactions with others. In a study of instant message conversations, Darics studied leadership in a virtual environment and their ability to create a sense of real and not virtual collaboration between team members and leaders. Daric's findings offer virtual leadership theories by exposing business practices from real-life cases and contributes to leadership literature by addressing communication practices. In contrast to the current study, Darics addressed nonverbal communication practices. However, this study is in harmony with the current study as Darics suggested that leaders use communication to pass on visions and values. Leaders must inspire and motivate, for the creation and maintenance of trust in teams. In addition to manage people towards successful performance and organizational goals. Mu et al. (2019) from their study using

negative binomial regression models, reiterated that virtual communication leads to collaborative innovation involving team members sharing their knowledge and skills and cooperating with one another to accomplish a common goal.

Related to the current study, Hill and Bartol (2016) conducted research related to virtual leadership, dispersed teams, and effective collaboration to maintain performance and productivity. Hill's and Bartol's study used procurement teams as their research participants. Having correlations among variables, virtual teamwork situational judgement (VT-SJ) and empowering leadership on team members were positively and significantly associated with virtual collaboration and individual team members' performance (Hill & Bartol, 2016). Cole et al. (2019) in their study utilizing the variable emotional intelligence, concluded that collaboration is an essential factor in leveraging team effectiveness and maintaining productivity in a virtual environment. Cole et al. presented electronic surveys to 308 professionals working both in face-to-face and virtual environments to investigate emotional intelligence and strengths, opportunities, aspirations, and results, as strategies to support collaboration. The reviewing of Cole et al. study contributed to the current study by revealing a discovered theme that is detailed in the 'discovered theme' section of this literature review.

Teams and Team Development. Team development is a business practice that leads to employees having the ability to become more productive and can lead to having team success in virtual environments as well as in face-to-face working arrangements. Eseryel et al. (2021) defined team success as teams achieving in the functions of both team performance and team development. This business practice relates to this study as working in teams is the workplace structure of the Veterans Affairs (VA). Maes and Weldy (2018) claimed that teams promote superiority in providing motivation and increased coordination, are better at problem-solving and

decision making, and have greater creativity and productivity. Ashmi and Kumar (2018) further suggested that teams must become effective if the organization is to succeed. This claim was a result of their hypothesized findings from analyzing a 68 item questionnaire with responses of 137 or 126 virtual team member employees. The true number of participants responses are unclear with Ashmi and Kumar's study as the article includes contradictory statements. However, Ashmi and Kumar's study strengthens the anticipated themes of the current research study in support of virtual teams and maintaining productivity. According to Ashmi and Kumar (2018), the two key components of team effectiveness are leadership communication competency and leadership support. Leadership support is not a specific concept of this study, it is a form of effective leadership, of transformational leadership, and is a variable of a leader's style in general. Therefore, the study is comparable in its conclusions. Salovaara and Bathurst (2018) indicated that leadership for performance management is the responsibility of a team, group, and organization capable of effective communication and is not just of an individual.

Using Performance Management Effectively. The skill of effectively managing performance is critically essential for leaders to maintain productivity in a virtual and nonvirtual environment. This business practice develops the organization's workforce, to promote knowledge sharing, to enhance intrinsic motivation, and to maintain productivity (Kremer et al., 2019). This practice is also positively related to effective communication and effective leadership as each are a vital component. Zhang et al. (2021) used authentic leadership and a claimed research gap concerning determination of which leadership style is most effective in developing virtual team performance, to address and to measure leadership's influence on team accomplishments in virtual teams. Using 90 virtual teams, 388 team members, and their 90 leaders, Zhang et al. tested their hypotheses and conclusions that authentic leadership positively

influences virtual team performance (Zhang et al., 2021). In support of the current study, Zhang et al. portrayed effective leadership as a key factor for improving and managing team performance successfully.

In a totally virtual environment, the wrong kind of leadership can have dire consequences for organizations such as poor performance, unmotivated staff members, and unsuccessfully meeting organizational goals. Brown et al. (2021) integrated the functional leadership theory to investigate the outcomes of different leadership behaviors and their influence on team performance. Brown et al. identified relationship-focused and task-focused leadership as the two most common variables studied in virtual team research. In Brown et al. study, the functional team leadership theory describes the role of leadership as doing or getting done whatever is not being adequately managed for successful group performance (Brown et al.,). Brown et al. concluded that task-focused leadership positively influences virtual team performance while relationship-focused leadership behaviors have less of an influence, as these types of behaviors may be harder for leaders to exhibit and team members to detect. Elyousfi et al. (2021) also studied the effect of various attributes of leadership and teams on virtual team performance in a public organization. Similarly, to this current study, Brown et al. and Elyousfi et al. were concerned with leadership and virtual team performance in public organizations. However, unlike this study, Elyousfi et al. (2021) used a quantitative method, specifically used PLS-SEM software. More will occur on this study in the following section.

The Problem

The general problem addressed was the challenges leaders face with maintaining employee productivity in a virtual environment resulting in the reduction of organizational performance. The specific problem addressed by this study was the possible challenges of

leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. For this specific problem, a qualitative research methodology was chosen to be the most applicable approach. This study was expected to identify leadership styles and behaviors that are best practices to maintain employee productivity in a virtual environment for successful organizational performance. The problem of maintaining employee productivity in the federal government received exploration through this literature review and through an in-depth study of employee productivity and its effect on organizational performance in the Veterans Affairs (VA).

Challenges to Maintain Employee Productivity in a Virtual Environment

Leading teams in a virtual environment can appear more challenging than leading in a traditional setting because of less interpersonal interaction and lower levels of relationships derived from a lack of face-to-face contact (Zhang et al., 2021). A lack of face-to-face contact results in virtual leaders having to devote much more time and effort to establish relationships and to promote team productivity (Liao, 2017). Steude (2021) stated that many organizational leaders in virtual environments struggle with motivating employees to meet performance goals. Saafein and Shaykhian (2016) claimed that virtual work environments cause some organizational challenges such as maintaining remote leadership, managing cultural differences, and developing trust relationships among the team members and leaders. Other challenges presented and identified as a threat to performance and productivity included handling of technological issues such as adaptation and regular use of communication tools and communication difficulties in general, decreased cohesion, and high levels of conflict among teams and leadership (Saafein & Shaykhian).

Efimov et al. (2020) concluded that characteristics of a virtual work environment not only change employees' motivation but pose special challenges for virtual leaders. Liao (2017) presented several great questions about leadership in a virtual environment. Some of these questions included: *Are there team processes that are unique to virtual context*? *How do the leaders build relationships with each individual member in virtual teams*? *How do leader's behaviors impact the follower's cognition, affection, and motivation*? *Are any other contextual factors that may strengthen, weaken, or nullify the effect of leadership in virtual teams*? In addition, the claimed purpose of Liao's study was to address gaps in the literature. Liao answered these questions by presenting 11 propositions and utilizing current literature to defend and support them. In answering the first question presented in this section, virtual collaboration, shared mental models, trust, virtual conflict, and shared leadership were the processes and emergent themes identified as being unique to virtual context. Providing answers to these questions beyond Liao's study with more recent literature was further integrated into the literature review.

The situation hypothesized inspirational motivation from a virtual leader that can compensate for a lack of inclusive group attitudes, and the positive effects of inspirational motivation are stronger than those of the management. (Lauring & Jonasson, 2018). These hypotheses were made in reference to Lauring and Jonasson's claim that a great challenge exists to achieve internal collaboration in virtual environments because of geographical, cultural, and linguistic barriers. The setting of Lauring & Jonasson study is a Danish manufacturing organization; Therefore, promoting studies on international virtual team challenges and identifying methods for overcoming some of them. Having focused on team members and leadership, 174 members and their 23 leaders in the research and development department

members were electronically surveyed. The results of the study found that inspirational

motivational leadership has a positive and direct effect on team member performance, and

beneficial results on inclusive attitudes discovered at the leadership and team member levels

(Lauring & Jonasson, 2018).

According to Mysirlaki and Paraskeva (2020), many challenges exist with leadership in a

virtual environment because of the low level of face-to-face relationships compared to

conventional teams. Therefore, leaders need a new skill set. As opposed to the current study

examining the overall construct of leadership style and its effective on employee motivation in a

virtual environment, this study included virtual team effectiveness specifically associated with

leader's emotional intelligence and a transformational leadership style (Mysirlaki & Paraskeva,).,

Mysirlaki and Paraskeva explained that team effectiveness characterizes with team performance,

viability, and team member satisfaction. Furthermore, the findings in this study concluded that a

significant predictive relationship exists between the perceived leader's emotional intelligence

and the virtual team effectiveness mediated by a transformational leadership style (Mysirlaki &

Paraskeva, 2020). Unlike previous literature reviewed for this current study, gender differences

emerged in the findings as making a difference in the perceptions of leaders' emotional

intelligence, transformational leadership, and virtual team effectiveness.

A Virtual Environment May Change Employees' Motivation

Efimov et al. (2020) claimed that characteristics of a virtual work environment not only

pose special challenges for virtual leaders but changes the employees' motivation. In contrast,

Rupietta and Beckmann (2018) presented contradictory claims in their study concerning the

effect virtual work has on employees. Positive claims made by these authors suggested that

virtual employees have a high autonomy in scheduling and organizing their work and assumed to

have a higher intrinsic motivation Rupietta and Beckmann expect working from home has a positive influence on employee motivations; and the frequency of working from home matters. Negative references made by Rupietta and Beckmann included virtual environments lowers leaders' possibility to monitor their employees; and employees have the incentive to abuse their authority by reducing their productivity. The questionnaire in the study could lead to bias and the participants not answering the questions truthfully because of a lack of motivationtn. The intent of my study is to understand employee motivation of virtual members that work 100 % remote. Hence, frequency has no similar bearing. Furthermore, government employees do have partial autonomy in scheduling and organizing their work. However, most of their work assignments and tasks are by reoccurring meetings and assignments, customer requests, and leadership. This knowledge has been obtained through more than 20 years of official federal experience. Through reviewing this literature, several discovered themes emerged. These include the job characteristics model by Hackman and Oldham (1976) and the self-determination theory by Deci and Ryan (1986). These motivation theories both claim that working in a job that has a high degree of autonomy as working remotely, increases employees' intrinsic motivation (Rupietta & Beckmann, 2018).

Mutha and Srivastava (2021) used a mixed method research approach that delved into an exploratory, cross-sectional study to decode the role of leadership and its impact on engaging in a virtual environment. Mutha and Srivastava used a qualitative research method consisting of 78 participants in ten different focus groups, leading into a second phase utilizing a quantitative questionnaire. The questionnaire reflected themes that emerged from the qualitative phase. Mutha and Srivastava concluded that leaders play a significant role in motivating virtual employees. Mutha and Srivastava issued the quantitative questionnaire to 300 respondents from

eight different industries utilizing purposive nonprobability sampling. Led by three research questions to guide Mutha and Srivastava study the conclusion was that the transformational leadership style, with its characteristics of inspirational motivation and idealized influence, positively engaged employees in virtual environments (Mutha & Srivastava, 2021). The research questions utilized for this study were as followed. RQ1. *How does influence and motivation of the leader impact the engagement of employees in virtual teams*? RQ2. *How does effective communication of leaders impact the engagement of employees in virtual teams*? RQ3. *Does trust between the team members enhance the employee engagement in virtual teams* (Mutha & Srivastava, 2021)? These research questions and the data they derived made Mutha and Srivastava research is relative to this current study. Mutha and Srivastava anticipated that the positive transformational leadership style would have a positive effect on motivating employees in a virtual setting. Mutha and Srivastava supported prior findings that leaders can become successful leading in virtual environments by putting in more effort, having effective communication, and by building trust. These are characteristics of a transformational leader. Transformational leaders are also assumed to maintain a positive social presence with their followers which poses another challenge with remote leadership (Hoption & Mary Han, 2021).

Leaders' Social Presence Can be Difficult to Achieve in a Virtual Environment

Maduka et al. (2018) claimed that a leader's social presence can become difficult to achieve in a virtual environment, and therefore create challenges in team integration, work coordination, and maintaining successful organizational performance. Bickle et al. (2019) utilized the social presence theory (SPT) and concluded that the level of social presence of leaders influences the quality of virtual interactions and productivity. Social presence theory is defined as the degree to which a person perceives a context such as leadership presence as real in

mediated communication (Lee et al., 2018). Bickle et al. further claimed that by designing virtual environments and business practices to increase social presence, this process could enhance employee development and outcomes within virtual teams. Similar to this current study, Bickle et al. (2019) additionally claimed that effective leadership in a virtual environment requires tools and business practices to facilitate collaboration and communication skills, and to achieve performance improvement.

Correlating group cohesion, group efficacy, and social presence with the social cognitive theory, Yoon, and Leem's (2021) sought to understand the role group cohesion plays and how significant that role is to performance in virtual learning environments. Social presence has been explained as a subjective measure of the presence of others and the degree of awareness of the participation of others in a communication context (Lee et al., 2018). A review of Yoon and Leem's (2021) literature is applicable to this current study as it defensibly claimed that people perform better by learning by observing others and that virtual environments limit social interaction. These claims support the proposed problem within this current study that the limits of leaders' social presence in a virtual environment pose challenges for effectively motivating employee. Though the lack of social presence presents a challenge for leaders, researchers have shown that with sufficient time, employees in virtual environments can adapt to their environments and having productive outcomes (Yoon & Leem).

Particularly relevant to the current study is Edwards' (2020) definition of social presence, defined as the degree to which a leader perceives as real in virtual communication. In this context, social presence closely relates to psychological perception of everyone, and as claimed by Edwards (2020), is based on leadership style or behavior. To evaluate factors leading to increased levels of attrition of online master students, Edwards measured perceived social

presence by utilizing a 10-item questionnaire offered to students enrolled online at a university in the United States. Edwards investigated the impact of perceived social presence., Edwards administered data from questionnaires using the online survey tool Survey Monkey and analyzed using a series of simple linear regressions. Edwards findings and practical implications indicated that perceived leadership social presence is a precursor for greater motivation from followers and that this perception can have a positive effect on values and productivity (Edwards). Two notable limitations of this study applied to a distinct sample of students enrolled in only one university in the United States. Most of the sample was female which limits the scope of the results (Edwards,). A lack of perceived social presence from effective leadership could lead to challenges in integration and work coordination.

Virtual Leadership Can Create Challenges in Integration and Work Coordination

Brown et al. (2021) presented evidence of researchers having highlighted leadership as a critical factor in helping virtual teams address challenges of work coordination and performance. By conducting a qualitative review of literature, researchers presented mixed results in existing research regarding how different types of leadership function in virtual teams (Bell et al., 2019; Brown et al., 2021). Elyousfi et al. (2021) presented several challenges with virtual leadership from their study. These challenges included: the demand for more coordination than face-to-face teams; poor cohesiveness and social relations or high autonomy. In addition, the challenges include interdependence. poor feedback; lack of emotions; lack of visual and audio communication. Invisibility and minimal contact because of o the nature of assignments, culture, language, and diversity; workers appear to perform less efficiently. a need for an increase in the role of managers to ensure employee engagement and accountability, The challenge to retain

employee productivity and cope with feelings of isolation from decreased interpersonal contact existed (Elyousfi et al., 2021).

According to the results of the phenomenological study conducted by Vaagaasar et al. (2020), leadership guides in work coordination, direction, action, and opinion and therefore, distinguishing leadership from management. Vaagaasaret et al. used the concept of leadership construct. Data collection occurred through interviewing project managers at two multination organizations in Norwegian. Vaagaasar et al concluded that virtual environments pose a challenge for project managers in the coordination of work and direction. Attempting   to avoid creating a confirmation bias, Vaagaasar et al. (2020) used maximum variety sampling to identify the most generic patterns of the phenomenon. The findings of Vaagaasar et al. study made two distinct claims. The first claim is that democratic and participative control leadership styles were most successful with work coordination and establishing commitment, transparency, relationships, and a learning culture. The second claim is work coordination efforts and projects benefited best from close collaboration of leaders at all levels (Vaagaasar et al., 2020). These conclusions can also apply to concepts claimed and found by current study, as effective work coordination in a virtual environment ideally would lead to higher employee productivity.

Concepts

As explained by Abendstern et al. (2019), concepts are frequently utilized by researchers to describe commonly held beliefs that are found in the literature and that are most important to their research problem. Laukka et al. (2021) introduced the process of concept analysis to this current study. Laukka et al. explained that concept analysis for their study consisted of the eight-step model by Walker and Avant (Laukka et al.,). Laukka et al. analysis included concept selection which is the process of characterizing a concept carefully by understanding and

examining its basic elements and core attributes and determining the characteristics of the concept (Laukka et al.,). That process was conducted for this current study. In this section of the literature review, the relevant concepts identified for this study are present and connected with existing literature. However, several of these concepts are present and linked to various literature in previous sections and therefore, will not receive visitation too extensively in this section.

Higher Employee Productivity in A Virtual Environment

This concept relates to the specific problem of this study as it can detail specific leadership styles that can motivate employees to maintain productivity in a virtual environment. The literature immensely linked effective leadership to the success of having higher employee productivity in a virtual environment (Ashmi & Kumar, 2018; Bickle et al., 2019; Cole et al., 2019; Hill & Bartol, 2016; Kremer, et al., 2019; Maes & Weldy, 2018; Paliszkiewicz, 2019; Venus et al., 2019). According to Paliszkiewicz (2019), effective leadership skills links to higher productivity through influencing and motivating connecting to organizations' performance (Paliszkiewicz, 2019). Vries et al. (2019) conducted a study to measure the benefits of teleworking in a Dutch public sector. By using a daily diary observation and mixed methodology with 5 hypotheses, Vries et al. goal was to determine the effects of teleworking on employee's organizational commitment, work engagement, and on their professional isolation. Vries et al. study concluded that working from home did not affect productivity; that higher leader-member exchange (LMX) reduced the impact of teleworking on professional isolation, and public workers experience negative effects from virtual environments including less organizational commitment. The sampling method of emailing all the organization's members as well as efforts made to encourage employees for this study possibly influenced the representation of the sample,

these findings support the findings of this current study as it suggests that leadership style matters for effectively maintaining employee productivity.

Effective Leadership. This concept relates to the specific problem of this study as leadership and leaders' behaviors are critical factors for organizational success (Lee, 2018). This study included uncovering to explain how leaders at a federal agency and in a virtual environment can motivate employees to maintain productivity, which associates with organizational performance and success. Highly relevant to the current study is the study conducted by Moon and Park (2019). Unlike this current study, Moon and Park sought out to measure the effects of the transformational and transactional leadership styles against US federal government employee turnover and the variable span of control. The literature revealed a positive correlation between transactional leadership and employee turnover and a negative relationship between transformation leadership and employee turnover (Moon & Park). As claimed by Moon and Park, a contributing factor in these outcomes is the degree of the span of control and leadership distance. These findings can apply to leadership in a virtual environment as distance would imply that face-to-face interaction is not the full or main style of communication or contact. This concept also associates with the literature in the business practice section and will receive further expanded on with literature in following sections of this literature review.

Effective Communication. This concept relates to the specific problem of this study as communication, values, and vision are cultural elements. Researchers can utilize these cultural elements in a virtual environment uniformly by federal government leaders to prevent the possible reduction of organizational performance. Communication is one of the most important factors impacting employee motivation in a virtual environment and it can enhance employee's

drive towards their productivity (Das & Banerjee, 2021). Das and Banerjee explained that the lack of communication brings demotivation and a reduction in employee productivity in a virtual environment (2021). This concept was presented and associated with the literature in the business practice section and literature concerning this concept will also occur in the related studies section of this literature review.

Context. Illustrated from a review of the literature, minimal research considered how organizational context might influence relationships between perceptions of leadership and motivation. Hassani, et al. (2019) defined context as evidence or data that can characterize the situation of an object. This concept is related to the specific problem of this study as this research sought to identify what possible leadership skills or behaviors are needed in a virtual environment that may not be the same as is for a face-to-face environment. Azukas (2022) referenced recent studies that found that leadership is highly contextual and that effective leaders can adapt their style and behavior to the immediate contextual factors and requirements. Kremer et al. (2019) explained that leaders must first stage organizational contexts that promotes employee motivation.

Visser and Scheepers (2022) suggested that contextual leadership is a significant predictor for improving performance and the subject of their study, specifically, the influence of contextual leadership on performance innovation. Including an extensive review of literature, Visser and Scheepers used a quantitative and a deductive explanatory approach to best evaluate their 5 hypotheses developed from their analyses of other studies. This study came from the approach of innovation being at the core of measuring effective leadership. Visser and Scheepers's (2022) in harmony with the current study's anticipated and discovered themes and the positive connection effective leadership and effective communication have on maintaining

productivity in a virtual environment. However, the setting of this study was South Africa, and findings may not totally transferable to a US organization or federal government virtual environment.

Over 500 researchers examined the impact of context on leadership, Oc (2018) suggested that a gap still exist in the literature of studies using a systematic approach of research and lacked agreement regarding what constitutes the context for effective leadership. Conducting a review of research using multiple databases, categorical frameworks and empirical findings, Oc sought to fully illustrate the leadership context and the associated impacts. Oc claimed that prior studies did not reveal universal traits or behaviors which could make some leaders more effective than others. This claim is in contrary to much of the literature reviewed for this current study. However, Oc's claim led the researcher to examine the situation or context in which leaders' function. In likeness of the contingency theory, which is also utilized for this current study. Consistent with the current study, Oc used context to define leadership, explaining that leadership is defined as an influencing process to achieve a common goal and is frequently explained by leaders' behaviors, followers' perception, and the context in which the influencing process occurs. Unlike the current study, Oc study did not make a distinction between virtual and nonvirtual environments. Interestingly, Oc's research listed context in the form of omnibus to include where who, and when, as well as in the form of discrete context identified as task, social, physical, temporal. These distinctions and variables will further apply and include analysis in this current study.

Theories

Deci and Ryan (2008) defined a theory as a set of information, principles, rationales, or data that can organize into a system to explain an observable fact. A tested theory can become

supportable and can form the basis for further analysis of a topic (Deci & Ryan,). The literature

revealed that researchers are increasingly seeking to develop, utilize, and apply theories that

explain underlying practices and processes whereby leadership exist (Tourish, 2018). Fan and

Stevenson (2018) reviewed from a qualitative study systematic literature of 345 studies

published between 2000 and 2016. Fan and Stevenson (2018) linked supply chain risk

management with research that included theory. Analyzing whether single or multiple theories

were used, which theories were used, and the number of key constructs included from each

theory, Fan and Stevenson coded studies found in the literature as informed by theory, applying

theory, testing theory, or building theory. Informed by theory is when no limited application

exists in a theoretical framework of construct. (Fan & Stevenson, 2018). Likewise, applying

theory and testing theory is when the constructs of a theoretical framework are measured and

tested: (Fan & Stevenson, 2018). For this current study, the assumption was that the chosen

theories would guide the research study to create a better understanding of the problem identified

for this research. Therefore, the anticipation was that the following theories would inform this

current research and apply to and tested from this study as well.

Transformational Leadership Theory

Transformational leadership revealed throughout this literature review as an effective trait

for successful leaders. Utilized by various researchers to improve communication, performance

through motivation, improves relationship development because of trust between the leader and

follower. The description of transformational leadership is leaders capable of elevating

motivation of followers for achieving and developing while also promoting advancements for the

organization (Bass & Avolio, 1990). Furthermore, Bass and Avolio claims were parallel to

current studies because of the importance of followers growing in confidence because of the transformational leaders.

Several studies included measuring the effectiveness of the transformation leadership style towards achieving team success (Eisenberg et al., 2019; Neubert et al., 2022; Paolucci et al., 2018). However, two of these studies did not distinguish between a virtual and nonvirtual working environment as some of the previous studies identified and discussed in this literature review. However, Eisenberg et al. studied the role of team communication and transformational leadership with team dispersion to include virtual and nonvirtual research. From their three Hypotheses and with H1 making a claim that "transformational leadership moderates the relationship between team dispersion and team performance, and with teams with low levels of geographic dispersion, transformational leadership will reduce the negative effects of dispersion on team performance to a greater extent than in highly dispersed teams including 53 teams of 543 individual team members as their sample (Eisenberg et al.,). The remaining two hypotheses proposed that effective communication from transformational leaders and team members better mediates effective team performance (Eisenberg et al.,). Acknowledging a 90% survey response, Eisenberg et al. concluded that their findings showed that transformational leadership does not always improve challenges associated with team member dispersion with highly geographically dispersed teams and associated this challenge to diminished communication. Highly dispersed teams would work together in a virtual environment. However, based on the results of the literature, it has been shown and anticipated with this current study, that transformational leadership and all its attributes, will become highly effective with overcoming the challenges that add from leading in a virtual environment.

Lim and Moon (2021) acknowledged that transformational leadership is a significant predictor of employee work behaviors. However, Lim and Moon claimed that questions remain concerning whether the effectiveness of transformational leadership is universally valid or contingent on context. Transformational leadership emerged in public organizations because it is considered effective in communicating and accomplishing the vision and goals through exhibiting idealized influence, inspirational motivation, intellectual stimulation, and individualized attention (Lim & Moon). This study presented an extensive review of literature which included various explanations and descriptions of transformational leadership. Guided by three hypotheses, Lim and Moon conducted a study with a participant sample of public employees from 63 government departments in South Korea (2021). With conclusions deriving from data collected by survey methods, Lim and Moon claimed results showing transformational leadership positively associated with employees' behavior, but negatively associated when moderated by centralization and formalization. However, neither centralization or formalization was found in the literature to be attributes of the transformational leadership style. Nonetheless, in several recent studies, transformational leadership linked to leaders having a positive effect on motivating employees in a virtual environment (Jensen et al., 2018; Kovach, 2018; Moon & Park, 2019; Mutha & Srivastava, 2021; Mysirlaki & Paraskeva, 2020).

The transformational leadership theory relates to the specific problem of this study since transformational leaders can transform employees to rise above self-interest by altering their ideals and motivating them to perform better to achieve organizational performance goals (Guhr et al., 2019). Hoption and Mary Han (2021) offered inspirational motivation through effective communication and idealized influence by modeling behaviors. In addition, Hoption and Mary Han studied, intellectual simulation by promoting critical thinking, and individualized

consideration by mentoring and coaching as the four behavioral dimensions of transformational leadership. Transformational leaders demonstrate a leadership style identified in the literature as an approach that allows leaders to transform employees through their modeling behavior to influence and motivate, and their effective communication skills to reference and build trust relationships (Kammerhoff et al., 2019). Ullah et al. (2021) claimed that the transformational leadership approach makes employees willing to successfully complete organizational objectives even when intrinsic motivation is lacking. A key contribution of the transformational leadership theory is the ability of leaders to take a situation that may deliver ordinary or poor results such as leading in a virtual environment to extraordinary results through inherently motivating followers (Kovach, 2018).

Goal Setting Theory. The transformational leadership theory is one of the most cited theories used to explain leaders' success in virtual environments. The goal setting theory is also relevant to and guiding this study. The goal setting theory introduced by Locke in 1968 relates to the specific problem of this study as the goal setting theory includes the suggestions that having clear and challenging goals increases motivation (Clements & Kamau, 2018). Consequently, leaders in a federal agency may consider more challenging tasks to maintain productivity in a virtual environment. As explained by Miller (2020), the Goal Setting Theory supports that there are various elements that affect performance and motivation and achieving organizational goals. The goal must first be specific, but also must have a balance between difficulty and directivity for the goal to be both not too easy and not too difficult at the same time (Miller).

Locke and Latham (2020) presented their article to discuss the development of the goal setting theory through induction and claimed this theory has withstood the test of time and research. Wang and Guan (2018) claimed that by building on the goal setting theory, motivated

employees enhance their competence and performance under specific and difficult goals exerted by authoritarian leadership. The goal setting theory is a contributing factor for measuring the effectiveness of authoritarian leadership which depicts as destructive by applying negative influence on employee performance and motivation, this study is relevant to the current study (Wang & Guan). The obvious relevancy was the use of the goal setting theory to better understand the effectiveness of a leadership style. In contrast to the current study, Wang and Guan's (2018) study did not factor in the effects of the goal setting theory with their study concerning leadership styles in a virtual environment. This current literature review did not uncover research studies with a subject or an identified and examined problem measuring the authoritarian leadership style and the effects it would have in a virtual environment. This study included referencing several studies that sought to measure the link between goal setting and leadership's ability to motivate employees towards better performance and commitment. The participants did not directly reference this theory.

Demirkol (2021) indicated that the precursor of police officers' job satisfaction within the goal-setting theory framework. Making key arguments concerning goal setting, Demirkol explained that based on the goal setting theory that goals regulate behaviors. Goals relates to task affect employees' performance and choices. Difficult goals and specific goals lead to higher performance and setting and reaching a goal led to employees feeling a sense of pride. A need for growth, and a desire for more responsibility and recognition exist. By testing stated hypotheses, Demirkol concluded that having goal specificity is a factor of the goal setting theory, a significant and positive predictor of job satisfaction. This study also concluded that findings indicated no significant relationship between goal difficulty is a factor of the goal setting theory,

and job satisfaction. However, similar to the anticipated themes of this current study, Demirkol (2021) determined that the goal setting theory could enhance employee job satisfaction.

Examining the connection between the achievement goal theory and the goal-setting theory, Miller (2020) conducted a study within a Spanish second language classroom. Miller's study does not concern leadership or a virtual environment. However, I reviewed Miller's study for this literature review because of clearly formulated definition and application of the goal setting theory. Similar to the current study, Miller sought out to understand what impacts performance and has a positive effect on maintaining motivation and productivity. With a 165 undergraduate student population, Miller used an experimental and controlled group to complete equivalent surveys and concluded that students with clearly set goals had a significant difference in higher final course grades than those that did not set goals. This literature review did not reveal the goal setting theory in correlation with leading in a virtual environment. The anticipation from the conclusion of literature reviewed, was the use of applications of this theory could positively contribute to government leadership's effectiveness with maintaining productivity in a virtual environment. However, the participants did not directly reference this theory. The assumption is that more research could prove this assumption and determine if this anticipated theme is situational and if so, what variables is the basis of this contingency.

Situational Leadership Theory. Walls (2019) defined Situational Leadership, developed by Dr. Paul Hersey and Kenneth Blanchard (1969), as the use of behavior modified for the current situation. The most common language to describe the situational leadership theory is using different patterns of behavior or leadership traits in certain situations (Negro & Mesia, 2020). Negro and Mesia explained that a leader can have a particular leadership style; however, an effective leader depends on the adaptation of the leader's particular situation to exercise

leadership styles according to the circumstances. The COVID pandemic caused many organizations included telework and a full-time virtual work environment. This theory relates to the specific problem of this study as results revealed that leaders could possibly use high directive behavior with followers that are failing to maintain productivity in a virtual environment. The leaders can move to a supportive leadership style once their productivity increases and is maintained sufficiently.

Searches conducted utilizing Liberty University's online Jerry Falwell Library's databases included key search terms situational leadership and virtual environment, to identify studies that could support or reject anticipated themes. Existing current literature appears limited. Lee-Kelley (2002) conducted a study to explore the project manager's leadership style in a virtual environment. However, after reviewing Lee-Kelley e study situational leadership was not a link in a virtual environment. Refining the literature to the situational leadership theory led to existing literature that shows a positive relationship with leaders who can adapt a behavior supportive relative of the situational leadership theory. In addition, leaders with the ability to be more effective at leading to achieve a common goal (Bhasin, 2019). Bhasin indicated that leaders must change their stye to diverse instances, such as a virtual environment, to become most productive and successful. To assess the leadership style of service managers and to evaluate the leadership style of managers against their nationality, Bhasin (2019) used a descriptive research design utilizing primary research and the Standardized Psychometric Questionnaire by Hersey and Blanchard. Bhasin (2019) included a population sample size of 39. Bhasin concluded that 16 participants revealed a selling leadership style, a behavior of selling their ideas and message to get group members to buy into the process. The results of Bhasin research may possibly be a biased result because of the participants being area service managers. The remaining participants

who had a participating leadership style, defined as a democratic leadership style with leaders functioning as a facilitator who simply induces, commands, orders, and makes assignments (Bhasin, 2019). Analyses made from this literature review indicates that the participating leadership style has not been shown to be most effective to promote productivity and organizational success in a virtual environment. The anticipation was that a leadership style if supportive of the situational theory, contingent on the environment and other factors, would become a more appropriate leadership theory to apply Effective government leadership would help maintain productivity in a virtual environment.

Contingency Theory. A review of the literature focusing on the contingency theory positions leadership and their adaptable and flexible decision-making ability and helps to explain leaders' decisions and actions contingent on factors in a particular situation that are most appropriate for the current circumstance (Childs et al., 2022). Childs et al. utilized a qualitative research method with in-depth interviews with 12 small retail leaders. Childs et al. concluded that contingent leaders seek to have a rational understanding of the current situation and will adjust their behavior accordingly to adopt a leadership style that is most appropriate for the present situation. Fiedler's (1972) Contingency Model emphasized that the leadership style which is effective in one situation may not become successful in others. The most common language revealed from literature to describe a contingency style of leadership is a style dependent on other contextual factors. This theory relates to the specific problem of this study as results may reveal that leading in a virtual environment requires adaptability and flexibility because of factors such as culture, communication barriers, and technology capabilities or limitations.

Shonhadji and Maulidi (2022) described contingency theory as a management concept that provides basic understanding of the situation of the organization and have many implications on employee productivity and motivation. This mixed method study to address the social phenomenon examined, integrated qualitative and quantitative data analysis. Data collection methods included in-depth interviews, followed by quantitative research to measure every construct proposed. Linking risk management with fraud and financial crime, Shonhadji and Maulidi concluded that the contingency approach has many implications on organizational performance and employee productivity, that the environment in which an organization operates determines the best way to lead, and this approach is on identifying situational variables that deter the achievement of organizational goals. Similar to the current study, Shonhadji and Maulidi sought to observe real life events as they were unfolding. Contrary to the current study, Shonhadji and Maulidi's research questions were mostly developed during individual interview sessions. Shonhadji and Maulidi did not account for the possibility of some participants to respond to questions that others were not asked and the bias or lack of validation and/or nonreliability that data collection method could include into the study. However, the conclusion is that this article is relevant to this current study from the measurement of contingency style leadership on the success of reaching organizational performance goals. The findings of this study show that the participants did not directly reference this theory. Conversely, based on the participants' claims of adjusting their leadership styles for success in a virtual environment, this theory indirectly relates to the findings of this study.

Constructs

A qualitative research methodology such as used by this current study has constructs that are distinct concepts essential to the research problem. Sage et al. (2019) noted that the

conceptual framework presumes the potential relationships between constructs and specific variables identified in the study help track what has been discovered and what requires further examination. Furthermore, constructs defined in a study in the anticipation that they will lead to the discovery of similar phenomena having been examined with findings presented (Sage et al., 2019). There were five constructs identified and utilized to guide this study. These constructs included leadership style, intrinsic motivation, employee productivity, organizational performance, and virtual environment. The five constructs identified and utilized for this study proved to relate and relevant to this study.

Leadership Style

This construct relates to the specific problem of this study as this research sought to uncover possible leadership styles that could prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. Jensen et al. (2018) suggested that transformational leaders are most effective when employing a motivation approach with face-to-face communication. Wilson et al. explained that the most effective leadership style has proven to become leaders who support virtual employees by helping staff members to resolve conflict and ensure effective communication. Campion and Campion (2019) supported this claim by suggesting that a key competency in virtual leadership effectiveness is excellent communication skills. According to Campion and Campion, leaders in a virtual environment need to adjust their style, and develop the mindset, attitudes, skills, and knowledge to work in this type of setting. Existing literature on leadership style and its parallel to this current study is present throughout this literature review. Further analyzed and applied to this study from the literature were studies that measured leadership style and effectiveness with employee intrinsic motivation.

Intrinsic Motivation. When a lack of external motivation factors exists, employees possibly separated by virtual environments will have a need for self-motivation or intrinsic motivation to maintain productivity (Broeck et al., 2021). The literature includes defining intrinsic motivation as a trait, a state, and a cognitive thought and behavioral process that motivates an individual to perform or complete an activity for inherent satisfaction such as wanting to learn new things or a desire to challenge (Legault, 2016). Legault claimed that research on intrinsic motivation began with the examination into how extrinsic rewards affected intrinsic motivation for an interesting task. This construct relates to the specific problem of this study as this research included revealing potential leadership styles or behaviors that may help motivate employees to maintain productivity in a virtual environment. Furthermore, this research includes seeking an understanding of if a certain type of leadership style exist that can present work assignments. The leadership is in a manner that will result in employees having intrinsic motivation and feelings of being challenged and in a learning situation. Referencing claims in the literature, extrinsic rewards tend to shift employees' reasons for performance from intrinsic motivation to reward seeking, therefore, changing the source of the motivation (Legault, 2016). This claim can lead to further examination into whether employees can effectively have and manage extrinsic and intrinsic motivations in a virtual environment.

Based on a claim of a gap in the literature to examine leadership style influences and different types of work motivation. Gagne et al. (2020) conducted a study measuring the transformational, transactional, and passive-avoidant leadership styles with autonomous motivation, controlled motivation, and amotivation results. Autonomous motivation is motivation orientated by interest and meaning, whereas controlled motivation is through rewards, sanctions, and ego (Gagne et al.,). Gagne et al. defined amotivation as a lack of having

or perceiving any reason to engage in an activity. Perceptions of transformational leadership links to increased autonomous and controlled motivation, while perceptions of transactional leadership connect to individual controlled motivation (Gagne et al.,).

Employee Productivity. Employee productivity describes the relationship between leadership's ability to motivate and that skill resulting in employees' performance (Gemeda & Lee, 2020). Existing literature on employee productivity shows how closely related employee productivity is to effective leadership and leadership style and documented throughout this literature review. According to Gemeda and Lee, leadership styles could generate high employee productivity or affect negatively towards low employee output. Leadership, according to the literature, also revealed that transformational leadership and trust in leaders lead to high employee motivation and productivity (Phong et al., 2018). Phong et al. explored the effect of transformational leadership and trust in leaders against knowledge gathering and knowledge sharing with data from 368 employees, Phong et al. identified knowledge management as a primary source and a mechanism for leaders to develop core competencies, improve employee productivity, create value, and attain organizational goals. In contrast to this current study, the research from Phong et al. did not make a distinction between a virtual or nonvirtual environment. Nonetheless, results found are paralleled to results found in other studies with a virtual environment setting that were also reviewed for this study. Therefore, this information makes the Phong et al. study relevant to the current study. This construct relates to the specific problem of this study as this research sought to uncover how leadership can prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment.

Literature on employee productivity as part of a concept, and studied throughout this literature review, has a positive association between leadership style, employee productivity, and organizational performance (Gabriela, 2020).

Organizational Performance. Gabriela (2020) related organizational performance as being dependent on leaders' skills to create a collaborative working environment and their ability to lead others. This construct depends on several unique factors associated with a federal organization., For this study, organizational performance identified and assessed as an outcome of effective leadership and employee productivity. Researchers explained that construct-to-construct causal relationships explain why observed effects occur (Calder et al., 2020). This construct relates to the specific problem of this study as it was the measurable outcome that was in question. Eaidgah et al. (2018) Conducted a study on a virtual team identified to have a range of situational challenges including different skill levels and high staff turnover. Eaidgah et al. (2018) concluded that an integrated approach to performance management, visual management, and continuous improvement was effective in improving virtual teams and performance. Existing literature revealed by this literature review revealed how closely associated organizational performance is to effective leadership (Gabriela, 2020).

Similar to the current study, Jing (2018) explored the relationship between leadership and organizational performance. Jing (2018) hypothesized that identified leadership paradigms will have varying direct effects on performance, and that visionary leaders will outperform transactional leadership on all their measures. According to Jing (2018), to reduce common-method biases, data derived from various levels to include managers, employees, and customers. Jing concluded that the findings supported all the study's hypotheses and results imply that leadership influences organizational performance on multiple criteria. For example,

measurements of financial performance, staff and customer satisfaction, productivity, and retention were all positively affected by leadership (Jing, 2018). As opposed to the current study, Jing examined small pharmacy businesses whose leadership was not conducted in a virtual environment.

Virtual Environment. The COVID-19 pandemic resulted in unparalleled changes to organizations, necessitating the immediate transformation of effectively leading in a virtual environment. A virtual environment defined in the literature as the essence of leading by means of technology and having no face-to-face interaction (Schmidt & Van Dellen 2022). The virtual environment construct has heavily incorporated into the research questions which guided this study. This construct relates to the specific problem of this study. A virtual environment is the broad concept related to but distinguishing this research investigation into the possible challenges of leaders within a federal government agency to maintain employee productivity. At the VA, for many leaders and employees, the virtual environment is the main workplace structure. The literature revealed leadership challenges that stems from leading in a virtual environment (Steude, 2021). I will review and analyze other leadership challenges already presented within this literature review in the following section of this paper.

Related Studies

Related studies can contribute to anticipated themes of the current study by acting as a reference for findings and business practices that have surfaced from previous research. Related studies can also contribute with the uncovering of discovered themes that can further guide and support this current study. Numerous related studies exist that are appropriate for this current study. Many of these studies already identified and detailed in previous sections and will also be illustrated in other sections of this study as well. This section will highlight various key related

studies utilized for this research study. While the related studies in this section reiterated the anticipated and discovered themes throughout the literature, other literature identified throughout this literature review contributed equally to this study.

Effectively Leading Remotely

A study by Azukas (2022) utilizing the theory of contextual leadership and a conceptual framework set out to develop an understanding of the competencies required for successful virtual school leadership. Azukas (2022) claimed that communication and engagement are drastically different and brings unique challenges in a virtual leadership environment. Of the virtual competencies identified from this study, several present insights into the proposed problem statement and general problem presented.

Efimov, et al. (2020) conducted a qualitative study to measure self-and employee leadership in virtual teams. Efimov et al.'s (2020) conducted the study to obtain findings on the use of health-oriented self and employee leadership in virtual teams from the viewpoint of virtual leaders. Efimov et al. (2020) argued that virtual leaders experience increased work demands, a loss of motivation, difficulties in building team cohesion, and challenges in employee coordination.

Challenges of Virtual Leadership and Organizational Performance. Steude (2021) investigated the challenges of remote leadership in a digitalized working world 4.0. Steude examined several studies which published in recent months to analyze the special conditions of remote leadership with employees who telework most of the time. The specific purpose for Stende's research was to examine what effects teleworking employees have on the company's productivity and innovation potential, and to identify the challenges this working structure posed to remote leadership.

McCann and Kohntopp (2019) examined and discussed the main features of virtual leadership in the manner of interaction and relationship between leaders and their followers. McCann &Kohntopp concluded that virtual managers need a broader or more augmented skill set than managers working in non-virtual settings. To motivate employees toward and produce performance and productivity, leading virtually requires leadership to change leadership styles and business practices used specifically for facilitating face-to-face interactions. Traditional styles of leadership have value to the success of an organization; however, a virtual environment requires an improved view of leadership (McCann & Kohntopp).

Maduka et al. (2018) analyzed competencies needed for effective virtual team leadership in building successful organizations. Maduka et al. utilized a case study methodology to understand the competencies needed for virtual leadership effectiveness. The findings identified virtual leaders having challenges with providing a social presence which they claimed is required for effective leadership in virtual teams to maintain or have team integration, member identification, and coordination.

Cripe and Burleigh (2022) examined leadership skills, behaviors, and effective communication for virtual IT project managers. The purpose of this study was to examine and discover the best practices used by virtual leaders need to determine what leadership skills, behaviors, communication tools and techniques to successfully lead and communicate in virtual environments. Cripe and Burleigh concluded that virtual leaders are more likely to be successful with maintaining organizational success by sustaining cohesive team relationships to gain trust and confidence through coaching, mentoring, and collaboration.

Maes and Weldy (2018) sought to determine what makes working with virtual teams more challenging for leaders and followers than traditional workplace team structures. Maes and

Weldy using questions as a guide determined what needs to happen to ensure the greatest virtual team productivity, and what makes leading virtual teams more challenging. Maes and Weldy claimed that similar concepts apply to leading virtual teams and traditional teams but questioned if the very nature of a virtual environment makes a difference in the way leaders and employees become cohesive and productive. Citing studies that revealed that leading virtual teams can improve productivity, it was claimed that this improvement was a result of extra efforts with effective communication (Maes & Weldy).

Higher Employee Motivation and Productivity. Eseryel et al. (2021) distinguished two types of leadership that can influence team member behavior toward successful accomplishment of shared goals while in a virtual environment. Claiming difficulty with virtual leadership because leaders are not easily able to observe virtual employees, functional leadership and visionary leadership were necessary (Eseryel et al., 2021). Eseryel et al. defined leadership as a process that results in the development, support, and progression of shared models and norms that influence others' behavior toward successfully accomplishing a shared goal., Eseryel et al. claimed that successful virtual teams require both functional leadership and visionary leadership.

Employees who virtually will lead to increased productivity (Eseryel et al. 2021)). Chamakiotis et al. (2021) addressed the need for virtual leadership on an international level. The purpose of Chamakiotis et al. study was to examine and discover from existing literature, knowledge on virtual teams over a period of two decades, and to determine if that knowledge can influence how leadership occur as a factor exercised in the COVID-19 aftermaths of fully virtual workplace structures. According to Chamakiotis et al. many studies exist on leadership. Researchers focused much effort on determining which leadership style is the best without a distinction of a virtual environment. Chamakiotis et al. conducted a semi-systematic literature

review approach to identify what can apply to leading in a virtual environment based on existing knowledge., Chamakiotis et al. discovered four themes of virtual leadership. These identified themes included technology advancements, engagement, trust development and relationship building, maintaining, or developing work-life boundaries, and innovative performance (Chamakiotis et al.,).

Anticipated and Discovered Themes

McVay et al. (2018) claimed that a purpose of defining and incorporating anticipated themes is to see if additional themes exist during the research study. The anticipated themes that had an instrumental role in guiding this current study include effective leadership is a critical factor for organizational success in a virtual environment. The themes also include virtual leadership requires unique competencies, virtual leaders face difficulties in building team cohesion and trust in leadership. Virtual leaders face challenges with maintaining employee productivity; and communication and building trust are major challenges in a virtual environment. On set discovered themes found and explored to have an instrumental role in this current study where effective leaders' emotional intelligence is a critical factor for organizational success in a virtual environment. In addition, the discovered themes included virtual leadership that requires leaders to have the ability to motivation employees with various forms of motivation approaches.

I selected five anticipated themes believed to associate with or most relevant to the problem of this current study. This study could include several anticipated themes and literature review. For government leadership to maintain productivity in a virtual environment, I anticipated certain themes to emerge during this study. The anticipation was that effective leadership with unique competencies will be able to overcome the challenges associated with

leading in a virtual environment. Another anticipation was that effective communication from leadership is a major contributing factor to overcoming these identified and associated challenges.

Effective Leadership is a Critical Factor for Organizational Success in a Virtual Environment

Several studies included supporting this theme (Azukas, 2022; Caligiuri et al., 2020; Cripe & Burleigh, 2022; Efimov et al., 2020; Steude, 2021. The anticipation was that leaders must have the most effective leadership style for the situation. The anticipation was that leaders must successfully lead in a virtual environment with the most ideal leadership style anticipated from transformational leadership.

Virtual Leadership Requires Unique Competencies. This theme highlighted in the study conducted by Azukas (2022). Some unique competencies that were offered included (a) e-communication skills, (b) e-social skills, (c) e-team building skills, (d) e-change management skills, and (e) e-trustworthiness. Advances in technology aided in ensuring successful virtual communication and collaboration between leaders to followers, followers to leaders, and team member to team member (Azukas).

Virtual Leaders Face Difficulties in Building Team Cohesion and Trust in Leadership. This theme was found in several related studies including the studies conducted by Darics (2020) and Lauring and Jonasson (2018). Darics (2020) suggested that leaders use communication to share visions and values, to inspire and motivate, for the making and preservation of trust in teams. This theme included supervision of work and employees toward successful performance and meeting organizational goals. According to Lauring and Jonasson, (2018) inspirational motivation leadership has a positive and direct effect on team member cohesion, performance, and trust in leadership.

Virtual Leaders Face Challenges with Maintaining Employee Productivity. The anticipation theme was to become a result of the current study and has also been discovered in the study conducted by Steude (2021). This theme supports and guides the research questions for this study. The most common language found in the literature illustrating challenges with maintaining employee productivity and methods for overcoming these challenges included findings, conclusions, and suggestions to apply a transformational leadership style (Jensen et al., 2018).

Communication and Building Trust are Major Challenges in a Virtual Environment. Leaders who consistently provide support, structure, and inspirational motivation via effective communications have evaluated as effective with meeting organizational goals (Vercueil & Nicolaides, 2021). Several studies support this theme and conclusions related to this study (Azukas, 2022; Cripe & Burleigh, 2022; Efimov, et al., 2020; Schmidt & Van Dellen, 2022; Steude, 2021). Virtual leaders are more likely successful with maintaining organizational success by sustaining cohesive leader and follower relationships. The goal is to gain trust and confidence through effective communication, coaching, mentoring, and through collaboration (Cripe & Burleigh, 2022). Villa et al. (2017) defined effective communication as the sharing of information in a manner that informs, coordinates, and regulates, communication that aligns individual goals with collective goals, and communication that fosters innovation.

Discovered Themes

McVay et al. (2018) explained that discovered themes add to future studies and viewpoints. The two themes discovered prior to the findings from this research and based on the problem identified in this current study included *effective leaders' emotional intelligence is a critical factor for organizational success in a virtual environment*, and *virtual leadership*

requires the ability to motivation employees with various forms of motivation approaches. The literature has identified Emotional Intelligence as being an important characteristic required of leaders to maintain productivity in a virtual environment (Mysirlaki & Paraskeva, 2020). Cole et al. (2019) concluded that EI is an essential leadership skill for leveraging team effectiveness and maintaining productivity in a virtual environment. The literature revealed that there is a significant predictive relationship between perceived leader emotional intelligence and virtual team effectiveness mediated by a transformational leadership style (Mysirlaki & Paraskeva, 2020). Gagne et al. (2020) explained that leaders who utilize autonomous motivation and controlled motivation methods can result in greater employee productivity levels. Similar claims concern extrinsic and intrinsic motivation factors. These themes provided further insight into methods, skills, and characteristics of a leader that positively associate with the effectiveness of government leaders to maintain productivity in a virtual environment. Nonetheless, it was extremely anticipated that themes would be discovered during the data collection and coding phases.

The positive link found between leading by example and maintaining employees' productivity represents results found within the literature (Eva et al., 2019; Neubert et al., 2022; Suhartanti & Prasetyanto, 2022). Researchers measured the effects of servant leadership on employee productivity and pronounced a positive and significant effect between servant leadership on employee innovation and productivity (Suhartanti & Prasetyanto). Servant leaders influence their staff by modeling virtuous character that is learned and replicated by followers and becomes the principal perception of what is accepted and sustained (Neubert et al., 2022). Transformational Leadership (TL) has a positive correlation to being a role model to followers (Kehr, 2019). Transformational Leadership inspires public servants to perform beyond

expectations and embrace necessary change (Molines et al., 2022). Furthermore, according to the literature, servant leadership promotes positive outcomes by being distinctively oriented in emphasizing follower growth and development as well as modeling concern for others (Eva et al., 2019; Neubert et al., 2022).

The findings also reveal a positive connection found between having and maintaining effective communication and maintaining employees' productivity, which also mirrors results found throughout the literature (Cripe & Burleigh, 2022; Roman et al., 2018; Venus et al., 2019). Leaders who communicate with their staff with consistent, reliable fact-based communication, and inspirational motivation, and those that could shift position into listening to understand, are highly favorable for success in virtual operations (Vercueil & Nicolaides, 2021). A positive association between a loss of social presence while leading virtually, and this represents results that have been found throughout the literature. Maduka et al. (2018) claimed that a leader's social presence can be difficult to achieve in a virtual environment, and therefore, creating challenges in team integration, work coordination, and maintaining successful organizational performance.

Leaders' having integrity and honesty as a key trait for virtual leadership success was also a discovered theme. According to Sagar et al. (2023), integrity of the leader enables followers to believe in the leader but also in each other. Kashive et al. (2022) concluded that the greater the staff's perception of the leader's performance with mentoring, facilitating, monitoring, and coordinating, the greater the trust and integrity as perceived by the staff. Furthermore, Huberts (2018) argued that integrity is a crucial concept for an understanding of leadership.

Summary of the Literature Review

Research showed that working from home affects the work motivation and organizational performance of employees (Bae et al., 2019). The purpose of this literature review was to compare, analyze, and possibly apply viewpoints and study findings and claims that support this current research study. The literature review described the business practices which provided insight into the study. These include effective leadership, effective communication, effective collaboration, teams, and team development., and using performance management effectively. The literature helped to gain a better understanding of the identified business practices, the stated problem, concepts, constructs, theories, and anticipated and discovered themes. Searches utilizing Liberty University's online Jerry Falwell Library's databases linked the problem with key words. The literature review revealed that the authentic and transformation leadership styles positively influence virtual team performance. Based on the information claimed in this literature review, organizations need transformational leaders that can adapt to situations with contingency efforts. In addition, effectively communicate, and that can motivate employees to ensure effective performance in a virtual environment are effective leaders. In review of the literature, little is in dispute that effective leadership could maintain productivity in a virtual environment. The discovery of five themes occurred based on the findings of this study. The discovery of the theme leading by example or being a model to their staff occurred from 8 or 53% of participant responses received during the one-on-one interview process. Four participants identified themselves as servant leaders. The 15 participants revealed they believe that effective communication is essential to successfully lead in a virtual environment. The theme related to a loss of socialization was discovered from 9 participant responses or 60% of all participant responses received during the one-on-one interview process. Eight participants equaling 53.3%

of the participants responded in a manner that identified and reflected on having integrity as a key personal trait and a trait required of their staff if the government is to be successful working in a full-time virtual environment. Future studies regarding the effectiveness of government leadership to maintain productivity in a virtual environment can evaluate the effectiveness of different leadership styles, other theories, including other concepts and constructs. Numerous factors and scenarios associate with leading in a virtual environment.

Summary of Section 1 and Transition

Section 1, the foundation of the study included an introduction into the study as well as a background of the problem supported by recent scholarly literature. The specific problem addressed by this study was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. This study included a flexible design method using a single case study design, utilizing a qualitative research method. Section 1 presented the research questions with a detailed discussion of how each question directly addressed an element of the problem studied, and how taken together, they completely address the specific problem examined. Section 1 also presented a comprehensive discussion of the primary research paradigms, the research study design, and the appropriateness of the chosen design for this research study. A detailed discussion of the research method and a discussion of triangulation was also provided. Furthermore, this study included a definition of terms section defining key words or phrases which associate with this study, and which came from professional and scholarly sources. Assumptions, limitations, and delimitations were also presented. Lastly, Section 1 explained the significance of this study and provided a review of the professional and academic literature. Many challenges associate with the leadership, coordination, and control of teams in a virtual

environment because of the low level of face-to-face relationships as compared to conventional teams. The researcher's anticipated and discovered themes were also presented.

Following Section 1 is Section 2, The Project. Section 2 began in course BUSI 988. Section 2 includes the purpose statement, a discussion on the role of the researcher, the research methodology to include the participants, population, and sampling. Section 2 also includes a discussion on data collection and information on the organization. Section 2 includes a data analysis and a discussion on reliability and validity. Task 12, the research proposal, proposal defense, and another IRB submission were also completed during the Section 2 phase of this study. Task 12 included a 30 minute power point presentation of the research project which was presented to the dissertation chair and committee member. This presentation was followed by a 15 minute question and answer section. Section 2 expanded to include updates to the data collection and data analysis sections and updates to the participants and sample sections based on the findings of this study.

Section 2: The Project

The general problem addressed was the challenges leaders face with maintaining employee productivity in a virtual environment resulting in the reduction of organizational performance. The specific problem addressed by this study was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. Mysirlaki and Paraskeva (2020) explained that many challenges associate with the leadership, coordination, and control of employees in a virtual environment because of low level of face-to-face relationships. Section 2 presents a detailed discussion on the role of the researcher. This discussion includes a presentation on bracketing to avoid personal bias and other actions I

planned to take while conducting the study. Section 2 also presents a comprehensive discussion of the research method utilized for this study. A detailed discussion of the research method and a discussion on the appropriateness of a flexible design and the appropriateness of the chosen methods for triangulation for this study are also illustrated.

This section also presents an explanation of the participants for this study and ethical assurances. A discussion on population and sampling to include size and characteristics of the eligible population and why they are appropriate for this study is also offered. The population for this study is federal government leaders at the Veterans Affairs (VA). The sample used for this study is virtual leaders within a procurement division with the VA. Furthermore, Section 2 includes explaining the sampling method and how I obtained the sample and, the sample frame. Section 2 includes a discussion on the desired sample size to include why it is appropriate and how the researcher reaches saturation. Lastly, Section 2 presents a comprehensive discussion on data collection and organization, data analysis, as well as reliability and validity.

Purpose Statement

The purpose of this flexible design single case study was to add or expand the understanding or reasons behind the potential challenges of federal government leaders with maintaining employee productivity in a virtual environment. I sought to determine the driving factors in employee productivity in the federal government while in a virtual environment. In addition, the driving factor and to determine if there was a specific leadership style to help maintain productivity and organizational performance. The larger problem of maintaining employee productivity in the federal government explored through an in-depth study of employee productivity and its effect on organizational performance in the Veterans Affairs (VA). Additionally, this study was to add to the body of knowledge by studying the effects of virtual

leadership styles in the VA. The VA is the nation's largest healthcare system with more than 371,000 health care professionals and support staff and 1,321 health care facilities (Administration, 2008).

Role of the Researcher

Collins and Stockton (2022) maintained that distinct complexities exist in the role of the researcher. Further, t the researcher is an instrument, and a role of the researcher is to engage in instinctive opportunities (Collins & Stockton, 2022). Hunziker and Blankenagel (2021) suggested that the researcher should start their study by first thinking about the type of conclusions they would like to draw from the study. In addition, the research should include what kind of statement they would like to present in the conclusion section at the end of the research study. Jimenez, et al. (2022) described the role of the researcher as examining positionality; to continue to consider prevalent bias. Researchers may unintentionally reproduce bias to continue to consider ways to make processes and methods more contextually relevant. Similarly, Hagues (2021) indicated that the role of the researcher is to represent participants well, check biases, be thoughtful and focused, and fight through positionality. Hagues (2021) also suggested that a researcher should leave lasting benefits with participants. Researchers have the role of valuing and respecting participants, recognizing diversity, and being transparent (Hawke et al., 2018). According to Attia and Edge (2017), researchers have a responsibility of consciously stepping back from activities to theorize what is unfolding and stepping up and being an active part of that contextualized action. Andersson and Korp (2021) explained that a researcher, tries to prevent criticism of credibility by protecting identified research case or interest from external influences during the ongoing examination process. However, the entire research relies on other researchers with distinct accepted actions.

Actions Taken by the Researcher

Researcher must accept fundamental and standards actions. Some of acceptations include selecting the most appropriate research method, formulating the right research questions to successfully guide the study. In addition, the actions include explaining the study, selecting the ideal participants, and gaining participants. Organizational permission to conduct the study, maintaining an ethical character, and conducting and documenting the study in necessary. Hunziker and Blankenagel acknowledged identifying the research design properly, checking the reliability and validity of the research, producing good results that are defendable, and choosing the proper analysis method(s). In addition, having the right research question(s), checking the consistency and feasibility of the study., Conducting the study by data collection methods and evaluations as well as suppressing biases. The researcher must write up the study report as necessary actions. Adikaram et al. (2022) suggested that the role of the researcher is to carefully select participants that have a common interest and relationship to the study and is to document their interactions and experiences within their findings. Furthermore, Hawke et al. (2018), that researchers must plan the study through completion. In addition, the researchers should not conduct the research to include jargon. The researcher should conduct interpretation and knowledge translation processes and disseminate the findings. Hawke et al. (2018) presented actions the researcher should not take which included not steering participants towards the response they want and not privileging forms of knowledge over another.

Bracketing to Avoid Personal Bias

Bracketing is the conscious efforts of refraining from making judgement and avoiding customary ways of seeing things or opening and changing a person's mind or perspective (Weatherford & Maitra, 2019). However, Weatherford and Maitra quoted that completely

abstaining from any judgement is not only impossible but also undesirable and that crafting bracketing requires practice overtime, feedback from others. Janak (2018) explained that because of potential biases and the possible evolution, researchers must remain reflexive in their efforts to undergo a continual process of self-examination. Janak further suggested that bracketing in any form is no less than an ethical mandate). Bracketing is a qualitative research technique used by researchers to access levels of consciousness, which includes hidden emotions and experiences (Janak, 2018). Esmene and Kirsop-Taylor (2021) suggested that bracketing is an approach researchers can use to avoid uncovering and acting on their biases.

Bracketing involves capturing biases, abstract pledges, and life experiences as they unfold within the phenomenological institution (Gregory, 2019). Gregory recommended that bracketing should occur at the earliest stages of the research process rather than holding off until the analysis stage. Bracketing reduces the impact of the beliefs on facts obtained and analyzed. In addition, bracketing expands the focus of reliability of the study, which, can apply through the data and during the analysis of the findings. Bracketing is a way to keep individual experiences away from the data gathered (Weatherford & Maitra, 2019). Yin (2014) proposed that the researcher would benefit from keeping a journal of personal biases regarding the study and suggested that the researcher refer to that journal periodically to recall what biases exist to keep them out of the research study. The plan for bracketing for this study included identifying and laying aside assumptions, identify personal experiences, cultural views, and beliefs. In addition, bracketing is maintaining nonjudgmental efforts, and preserving integrity and honesty to the data and findings exclusively of personal biases. This planning proved valuable during data collection, analysis, and coding of the findings.

Ethical Assurances

Ethical assurances a part of the role of the researcher because the researcher' is responsible for principles responsibility to include principles that guide the study. Ethical principles guide research and emphasize communication with participants and the importance of reducing harm (Bhatia et al., 2021). These principles include voluntary participation from informed consent, maintaining anonymity and confidentiality, utilizing effective communication, and doing no harm (Bhatia et al., 2021). The principles described in The Belmont Report includes a regulations and rights for human subjects in the US. (Bhatia et al., 2021). Furthermore, Hardicre (2014) acknowledged that it is important that risks are minimized and that researchers do not compromise the dignity, rights, safety, and wellbeing of the participants for the study. Hardicre defined research ethics as a set of moral principles informing and guiding research studies and suggested that these principles include conducting high standard research; planning and revising research with ethical integrity and soundness; ensuring transparency; and protecting the participants. Additionally, Grady (2019) claimed seven major ethical issues in research involving human includes the moral justification for nontherapeutic research; research design; risk and benefit analysis. In addition, the major issues include the selection of participants; informed consent; the societal control of research; and the compensation of injured research participants. For this current study, I was guided by and maintained these principles.

Research Methodology

Research methods includes the characteristics of observational techniques (Abutabenjeh & Jaradat, 2018). Hunziker and Blankenagel (2021) explained that the quality of a research design predicates on the study's validity and its ability to make the desired type of argument. This study included qualitative methods specifically, a single case study with a flexible design

method. This study also included triangulation by drawing from multiple data sources. The data collection methods used for triangulation within this study included surveys, interviews, and observations. For triangulation purposes, data derived from one-on-one interviews with the study's participants, surveys presented to the participants electronically, and direct participant observation from researcher interactions from prolonged immersion with leaders in a virtual environment.

Discussion of Flexible Design

Flexible design applies to qualitative research that includes open ended questions rather than quantitative variables (Robson & McCartan, 2016). Abutabenjeh and Jaradat (2018) claimed that selecting the appropriate design is possibly the most important decision a researcher makes following identifying the research topic and formulating the research questions. Furthermore, a research design is the plan that a researcher uses to guide decisions about when and how often to collect data, what data to gather, and how to collect and analyze the data (Abutabenjeh & Jaradat, 2018). Three meaningful factors exist for choosing the research design. The factors include, (a) experience with the subject matter, (b) knowledge of theoretical studies that identify relevant variables, and (c) the level of ambition regarding identifying relationships (Sallis et al., 2021,).

This study included a flexible design method using qualitative methods. A single case study method was appropriate. This design was the appropriate methodology for this study as qualitative studies include insights to underlying mechanisms and processes (Bouncken et al., 2021). According to Andersson and Korp (2021) case studies are appropriate for empirical in-depth examination of context specific phenomena that are of direct interest to researchers. Uncovering underlying processes, structures, or systems can reveal various cultural elements

such as values, traditions, regulations, forms of communication, and other cultural components in a virtual environment that positions federal organizations to maintain organizational performance successfully. As explained by Sallis et al. (2021), the research design details how the entire study process addresses the research questions, and of particular importance is knowing what types of data are appropriate and how to obtain and analyze the data. Additionally, Sallis et al claimed that the choice of design selection depends on how much information is available about an area and what ambitions the researcher has in analyzing and explaining relationships. This process is relevant for the study as this methodology could possibly uncover processes that can indicate the failure of leaders within the Veterans Affairs (VA). Therefore, by employing these qualitative methods, answers to research questions could possibly emerge. For this complete qualitative research study, based on the explanations presented, fixed designed and mixed method designs were not the appropriate approach.

Discussion of Qualitative Research Method

Qualitative research is appropriate to answer *how, why, and what* questions and tries to reveal the perspectives of the participants that the research questions regard (Haven & Grootel, 2019). According to Rutberg and Bouikidis (2018), qualitative research includes the social aspect of research with open ended questions to interview subjects. Furthermore, qualitative research includes a process to understand human perspectives and lived experiences, circumstances, and the underlying meaning shaping perspectives (Phoenix et al., 2018). Additionally, Crick (2021) explained that qualitative research can generate in depth and subjective findings to build a theory to develop interpretive meanings explaining a phenomenon by scholars. Qualitative research continues until saturation occurs within the data until no new insight emerges (Denny & Weckesser, 2022).

Qualitative research serves a powerful role in the creation of knowledge (Pratt et al., 2019). The situation is logical and procedural as qualitative researchers are continually making decisions and those decision making processes are by the preceding steps in the research process (Tomaszewski et al., 2020). Qualitative research, when conducted thoroughly, is consistent, accurate, and helps researchers answer important questions about subjects and their lived experiences. Alam (2021) proclaimed that qualitative research and the case study methodology together allows the researcher to explore the answers of *what*, *why*, and *how* questions about a phenomenon. For the specific problem explored, a qualitative research methodology was the most appropriate approach. A qualitative research design aligned for an accurate analysis of the influence that leaders can have to maintain employee productivity in a virtual environment.

Appropriateness of Single Case Study Methodology

Case study research is a qualitative method that includes multiple sources of data to obtain accounts of complex phenomena in real-life contexts (Morgan et al., 2017; Yin, 2014). Furthermore, case study researcher seeks to develop an in depth understanding of a specific phenomenon (Tomaszewski et al., 2020). Cleland et al. (2021) claimed that case study research is appropriate in real life settings and can reveal the discovery of new meaning or confirm information. Additionally, a case study design should occur when the intent of the research is to answer *why* and *how* questions and when the researcher wants to cover contextual conditions relevant to the phenomenon (Cleland et al., 2021). This approach was the appropriate methodology for the study as qualitative studies can include insights that can lead a researcher in underlying mechanisms and processes (Bouncken et al., 2021). The case study qualitative research design allowed me to determine a truthful analysis of the influence that leaders can have

to maintain employee productivity in a virtual environment resulting in successful organizational performance.

Discussion of Method for Triangulation

Triangulation is a method in research to strengthen the study to increase the ability to interpret and analysis true findings (Renz et al., 2018). Moon (2019) described triangulation as a research strategy that uses multiple data sources, theories, or research methods to ensure the data, analysis, and findings of a study are as accurate. Moon explained that triangulation methods help to ensure that the information we derive from research data accurately reflects the truth about the study. In qualitative research, triangulation with multiple approaches can expose common viewpoints and experiences without making theory-of-knowledge claims regarding the determined 'truth' of the findings (Campbell et al., 2020). Creswell and Poth (2018) defined comparing and contrasting literature to the data collected during the study as a method of validation through triangulation. This triangulation method is appropriate for this current study.

Natow (2020) explained that the inductive approach relates to findings and concepts out of the collected data, and the deductive method uses the research data to test existing theories and concepts. Data triangulation and theoretical triangulation were included in this study. Theory triangulation uses more than one theory to help guide the research design, implementation, and interpretation of the data (Moon, 2019). Data triangulation method prevailed in this current study because I am directly connected to the organization. Data triangulation allowed for easier access to the data and participants. This study also included a multiple data analysis approach. This included data analysis conducted with both inductive and deductive approaches. These triangulation methods were appropriate because of increase validity, reliability, and legitimation,

which incorporates credibility, dependability, confirmability, and transferability of study findings (Moon, 2019).

Summary of Research Methodology

This section of this paper presented a detailed discussion of the qualitative research methodology for this study. Furthermore, this study included a discussion on the appropriateness of a flexible design and the appropriateness of the chosen method. A discussion on triangulation was also presented. As documented, this study was conducted with a qualitative flexible design method as a single case study utilizing a leadership survey. In addition, this study included interviews, and observations for triangulation of the data. Qualitative research begins with one or more research questions and tries to reveal the perspectives of the participants that the research questions regard (Denny & Weckesser, 2022).

Participants

When selecting participants, researchers have been directed to the following three approaches: random sampling, convenience sampling, and a population study (Lu & Franklin, 2018). The eligible participants included for this study were leaders responsible for the supervision of others, at a procurement division within the Veterans Affairs (VA. The selection method included purposive sampling. Alam (2021) indicated that the purposive sampling method allows researchers to select the most appropriate participants based on their knowledge and ability to present data that can provide answers to the study research questions. The participants varied across geographical locations within the United States. Gender, age, and ethnicity were not factors, but the selection of the participants included leaders within the Procurement Division of the VA and lead in a virtual environment. Participants were on a voluntary basis because I gained informed consent.

Informed consent is the foundation of research ethics with the intent to allow participants to partake in research studies voluntarily with an understanding of what their participation means and details (Xu et al., 2020). The determination of eligibility participants was by focusing on those who have been leaders for at least 12 months while in a full-time virtual environment. Understanding what leadership styles leaders apply was significant to this study. The justification for the 12 month duration was to give leaders appropriate time to apply their leadership skills and allow time for analysis and reflection with a better chance that the participants would openly and thoughtfully answer interview questions. The cause for the criteria of participants having led in a full-time virtual environment was this study seeking to determine the driving factors in employee productivity at the VA while in a virtual environment and determine if there is a specific leadership style to help maintain productivity and successful organizational performance.

Population and Sampling

Asiamah et al. (2017) indicated that participants belong to the research population which is further defined as the group of individuals having one or more characteristics of interest. Interestingly, Asiamah et al. further explained that research findings attributes to the population by linking them to participants. The population can influence research credibility; and population is conceivably of most importance to the study. The population for this study is federal government leaders at the Veterans Affairs (VA). This section of the research will include a discussion on the population for this current study. A description of the characteristics of the eligible population and an explanation of why they were appropriate for this study, and an account of the eligible size of the population is necessary. This section will also focus on the sampling method and present a discussion on the chosen sampling technique and detail why it

was considered appropriate for this study. Lastly, a discussion on sample frame, the desired sample, sample size, and data saturation is also detailed in this section.

Discussion of Population

Researchers have the responsibility to accurately understand and clearly define their population at the appropriate stage in the research study (Asiamah et al., 2017). Robinson (2014) defined population as a sample universe and further explained that population is the totality of individuals from which participants can legitimately sample in a qualitative study. Additionally, Robinson explained that researchers should have an inclusive and exclusion criterion specifying an attribute that each participant must or must not have. As detailed, the population for this study is federal government leaders at the Veterans Affairs (VA). This procurement division provides acquisition services for business units of the Veterans Affairs (VA).

The selection of the population for this study predicated on various factors including target and accessibility. Having accessibility of the population is convenient but also claimed can lead to higher response rates at lower cost to the researcher (Lu & Franklin, 2018). The selection of the population for this study was also predicated on the researcher's quest for knowledge of effective leadership styles for leading in a virtual environment. The characteristic of the population for this study is a representation of leadership at the federal government, Veterans Affairs (VA). This characteristic was a single attribute of interest that included various levels of leadership ranging from entry level to senior levels. The basic principle behind these characteristics of the eligible population was the assumption that the population would have knowledgeable information to allow the researcher to answer the research questions. In addition, to the characteristics provides insight into this phenomenal with each different prevalence and with the least number of participants necessary for saturation (Malterud et al., 2016). This

population was appropriate for this study because I have a better understanding of how leaders are or can maintain employee productivity in a virtual environment resulting in successful organizational performance. The size of the population was approximately 55 accessible leaders at the Veterans Affairs (VA).

Discussion of Sampling

The VA has countless leaders therefore within the population for this study, the sample was leaders within a procurement division of the Veteran Affairs (VA). Researchers use samples to collect data and are relatively a small part of the population (Sallis et al., 2021). Weber and Hoo (2018) claimed that in every study, the researcher is using a sample to make inferences about a much larger target population. This fact is prevalent in case studies. Unfortunately, Weber and Hoo (2018) suggested that researchers do not know if their sample is truly representative of the entire population. Purposive and snowballing sampling were appropriate for this study because of my access to the study sample. Snowball sampling is where individuals from the target population connect the researcher with others in their population and network (Denny & Weckesser, 2022). Kirchherr and Charles (2018) described snowball sampling as a commonly employed sampling method in qualitative research. Staetsky (2019) suggested that researchers can carefully control the snowballing process through monitoring and correcting the sample composition to match the study's identified sample. Ames et al. (2019) defended the idea that purposive sampling is one way of achieving a manageable and appropriate amount of data. Palinkas et al. (2015) defined these sampling methods as a technique of purposeful sampling. Additionally, purposeful sampling is commonly used in qualitative research for the uncovering and findings of data-rich instances related to the phenomenon of concern (Palinkas et al., 2015).

Palinkas et al. suggested that the combining of sampling strategies may appear appropriate for certain research methods. This study included purposive sampling techniques.

Sampling Method

The sampling method for this study, was purposive sampling. With purposive sampling, the reasoning includes the researchers' selection of what participants are most appropriate for the type of data (Moser & Korstjens, 2018). Purposive sampling was an appropriate sampling method for this study because I am a leader with similar experiences as the sample group and fully aware that the participants would account for their experiences with leading in a virtual environment. Hunziker and Blankenagel (2021) explained that because of the choice of the sample, the resulting data might become inherently biased. This choice was considered by identifying any possible biases associated with this study. The additional sampling technique utilized within this study was snowballing sampling. Snowball sampling is a non-probability sampling technique where existing participants recruit other participants from among the population and amongst their acquaintances (Sharma, 2017). This technique was appropriate for this study participants' referral, the positive experiences future participants would also have during their interview and observations. This sampling method was also appropriate for this study because it assisted in recruiting an adequate number of participants.

Sample Frame

Sample frame is the list of all individuals in a population illustrated in a sampling plan (Turner, 2020). Turner explained, the sample frame is the group of individuals selected from the target population given the sampling process used in the study (Martinez-Mesa et al., 2016). Turner further claimed that when researchers does not reveal a sampling strategy the readers will

not know why they were chosen. Additionally, a sample frame identifies discrete participants along with their contact information (Arora et al., 2021).

This study included a sample frame that included selecting participants for data collection through survey responses, interviews, and observation. This sample frame included individual leaders from a procurement division in the Veterans Affairs (VA). These individuals are leaders either in the form of a manager or supervisor by title. These individuals are also leading or have led in a full-time virtual environment during and after the peak years of the COVID-19 pandemic. Including this sampling frame was appropriate to because part of the current case study allowed me to have a better understanding of how leaders are or can maintain employee productivity in a virtual environment resulting in successful organizational performance. Researchers can lead this process by understanding participants' leadership experiences that were effective and ineffective.

Desired Sample and Sample Size

This study included a Single Case Study design. Case study research is an in-depth analysis of a small non-random sample (Hunziker & Blankenagel, 2021). Researchers use sampling is analytically select a comparatively smaller number of participants from a pre-specified population. Researchers observe participants as part of the study (Sharma, 2017). The sample used for this study included virtual leaders within a procurement division in the Veterans Affairs (VA). The sample was the desired appropriate because it could lead to possibly understanding and clarifying how virtual environments contribute to challenges with leaders' ability to maintain employee productivity. Successful organizational performance and challenges overcame. The sample was desirable because the participants were conveniently accessed. The cases included leading in a virtual environment, and leaders have the ability and experiences to

provide insight into the phenomenon of the study. If I was unable to access participants in the identified sample and at an effect sample size, I would need to abolish or refocus because of the importance of obtaining information.

The desired sample size for this study was 15 to 25 interviews or until data saturation reached. A total of 17 participants participated in this study. This sample size is appropriate because of the consideration of the maximum acceptable observation error value in the study. According to Martinez-Mesa et al. (2016), researchers should become aware that the smaller the desired error, the larger the required sample size. My assumption was that I receive a true account of each leader's experiences leading in a virtual environment. An appropriate sample size adds credibility and dependability to qualitative research (Rijnsoever, 2017). A consideration in this study was that saturation would reach at 15 to 25 interviews. However, data collection and analysis continued until the point at which no new data emerged (Rijnsoever, 2017). Moser and Korstjens (2018) claimed that data saturation is different for every study. The determination of sample size is by the size of the effect the researcher is looking for, variation in the population, and the level of statistical significance (Weber & Hoo, 2018). Access to this sample gained by first receiving site approval at the director's level to conduct the study and approval to access the population, sample, and participants. Access to this sample was virtual through email explaining the study and their participation. In addition, accessing the sample occurred through Skype, Zoom, Teams, and telephone to conduct interviews, follow-up interviews, and to answer any further questions. The size of the current population was approximately 55 accessible leaders at the Veterans Administration. The belief was that I would have an accessible sample of 15 to 25 voluntary participants to interview. However, in the event I was unable to reach saturation from the selected sample, permission would have been sought to

expand the sample within the current population of federal government leaders. This process could accomplish by utilizing the chosen study site but expanding the sample beyond just a procurement division and into other accessible units which also have leaders leading in a virtual environment within the Veterans Administration.

Summary of Population and Sampling

This section of this study included a detailed discussion of the participants for this study. Furthermore, this section included a discussion on population and sampling as relevant for this study. A population is the sum of all the study participants (Sallis et al., 2021). A discussion on characteristics of the eligible population and the sampling method were also present. Additionally, a discussion on sample frame, the desired sample and size, and an explanation of how this sample size allowed me to reach saturation was also detailed. Martinez-Mesa et al. (2016) defined the sample frame as the group of individuals that can come from the target population. Moser and Korstjens (2018) indicated that saturation involves collecting enough qualitative data to the point where there is a sense of closure because of new data coming in, yielding redundant information. Saturation reached with the 17 participants interviewed and surveyed for this study.

Data Collection & Organization

This study included identifying leadership styles and behaviors that are best practices to maintain employee productivity in a virtual environment for successful organizational performance. Iivari (2018) indicated that qualitative research involves an interpretive, naturalistic approach to the world, therefore, making the world visible and transforming. This section presents a detailed discussion of data collection and data analysis pertaining to this study. Details included are an overview of planned data collection and the collection of data for this research.

Other details included in this section consist of a discussion on instruments for data collection and a description of the data organization plan. Furthermore, this section included an explanation on how I planned to organize gathered data from this study. The data analysis section presents a discussion on emergent ideas, coding, interpretations, and data representation, triangulation, reliability, and validity. This study's findings incorporate within this section. Themes discovered during the data collection and analysis phase include leading by example is an effective leadership style utilized while leading in a virtual environment. In addition, the themes include, virtual leaders associate servant leadership with successfully leading in virtual environments and effective communication is essential to successfully lead in a virtual environment., A loss of socialization when leading in a virtual environment, and virtual leaders associate having integrity or honesty with successfully leading in virtual environments are present.

Data Collection Plan

The theories which guided data collection and analysis included transformational leadership, situational leadership, the contingency theory, and the goal setting theory. Stake (2010) explained that; qualitative studies seek data that represent personal experience in a particular condition. Researchers use numerical data, photographs, interviews, surveys, observation, texting, reviewing of documents and other artifacts. Other methods to collect data, and methods for gathering data are dependent on fitting the research questions and the style preferred by the researcher. Virtual data collection is the collection of data through the telephone, by utilizing a virtual platform, and with the participants and researcher physically distanced (Hensen et al., 2021). Virtual communication offers greater flexibility in time and location of data collection and described as a highly socialized form of interaction (Lobe et al., 2020). Many researchers are choosing to shift from standard face to face data collection methods to remote

data collection in support of continued research (Hensen et al., 2021). Lobe et al. (2020) warned against the risk of confidentiality and security breaches, participants possibly not having equipment such as a computer or smartphone, in addition, the researcher overlooking the considerations and special needed attention to ethical issues when using virtual methods to collect research data is a risk. Nevertheless, virtual data collection provides an opportunity for more efficient data collection that is less expensive and time consuming than face to face data collection. Some participants may prefer this method who may also have more time for participation (Hensen et al., 2021). Lobe et al. (2020) suggested video-based virtual methods because they are more comparable to face to face than voice or text options only. Video-based virtual methods, have greater flexibility in time and location of data collection because of types of access the researcher has with the participants., Ethical and security precautions are at essential for this research., Data collection plan by virtual means was appropriate for this study. The virtual data collection plan was also appropriate for this study because the population consisted of individuals capable of being a participant. Responding to the interview and survey questions based on participants experience leading in a virtual environment as they relate to the phenomenon in the study.

Data collection involves gaining permissions, conducting a qualitative sampling strategy, planning for means of recording information, responding to issues that may arise from the fieldwork, and storing the data securely (Creswell & Poth, 2018). The data collection plan for this study was virtual data collection through 45 minutes scheduled video interviews and 20 minutes scheduled for follow-up interviews using Microsoft Teams or the Zoom platform and observations of participants during the video interviews. Recoding of the interviews did not occur. However, I planned to use a portable voice recorder if given permission by the Veterans

Affairs (VA) and each participant. I also had the Interview Guide (See Appendix B) and the

Observation Protocol (See Appendix C) for observational fieldnotes. The researcher develops

procedures for recording the information and testing the forms for recording the data (Creswell

& Poth, 2018). To insure I had enough information for data saturation I interviewed participants

by phone who did not agree to an interview through these virtual platforms.

The data collection for this study focused on interviewing 15 to 25. Data was only

collected after I obtained required permissions including Institutional Review Board (IRB)

approval. The data collection did not involve sensitive information involving vulnerable

populations. Therefore, a plan for collecting, maintaining, safeguarding, and the proper disposal

of such data was not included. The data collection plan did include contacting the population

sample by email to explain the purpose of the research. A permission letter was sent prior to

contacting the participants requesting consent to conduct the study prior to reaching out to

individuals that eventually were participants of the study. I obtained consent from participants to

participate and honestly answering the interview questions prior to gathering data. Before the

start of the research the researcher should include a plan detailing the data collection, the method

for data collection, and the timeline of when the collection will start and end (Dawson, 2019).

The plan for data collection for this study was in the form of a survey (See Appendix D).

According to Braun et al. (2021), surveys used in qualitative studies can produce the rich and

complex accounts of the phenomena. The 15 survey questions focused on aspects of

transformational leadership which was one of this study's leading and guiding theories. With

case study research, survey responses, documents, records, interviews, and observation are the

various types of information typically collected (Creswell & Poth, 2018). The data collected in

this study included participant interview responses to the interview and survey questions

generated guided by the research questions in based on their experiences of leading in a virtual environment. Data collected was also by observation of participants as they respond to the interview questions. Lastly, data collection occurred by conclusions drawn by the researcher based on observations, extensive literature review and final comments made from member checking during the one-on-one interviews.

Member Checking

Member checking (Lincoln & Guba, 1985) is most used to validate or assess the trustworthiness of qualitative results as interpretated by the researcher in response to data collection (Motulsky, 2021). Member checking is when a researcher ensures accuracy by the participants checking the interviews for interpretation of the data, therefore adding credibility to qualitative studies (Candela, 2019). Candela (2019) explained that member checking is an integral part of creating trustworthiness in qualitative research and asserted that member checking is commonly used to maintain validity. Candela (2019) detailed member checking as a process where researchers ask participants of the study to check the accuracy of their report. Brear (2019) detailed member checking as a process of providing participants with opportunities to check the accuracy of, add to, amend, and comment on research conclusions. Motulsky (2021) claimed that if member checking is not included in the study design, Institutional Review Board (IRB) and dissertation advisors may assume that threats to validity are not being adequately addressed. Member checking planned for this study consisted of me soliciting feedback from study participants concerning the interpretations made from the interview data. Member checking for this study involved the desired level of 10 participants to increase the transferability and accuracy of the findings. Member checking occurred during the one-on-one interviews for clarification before moving on with the interview questions and process. Iivari (2018) indicated

that member checking enables more participatory interpretive practices. Member checking occurred during follow-up interviews. However, member checking occurred during initial interviews following the first interview. The plan for member checking changed as I struggled to get an appropriate number of participants to volunteer for the study.

Follow-up Interviews

Researchers use qualitative research to gain an in-depth exploration of participant experiences through interviews (McGrath et al., 2019). Follow up interviews could occur after conducting initial interviews with participants. Follow-up interviews provide accuracy in capturing participants' responses (Creswell & Poth, 2018). Brear (2019) argued that follow-up interviews can occur as a method for member checking. Furthermore, McGrath et al. (2019) suggested that by adjusting the questions after the initial interviews, allows enough flexibility to work through any potential misunderstood or irrelevant research questions. I planned 20 minutes scheduled video or telephone follow-up interviews for member checking and for further clarification. Follow-up interviews are necessary because of new interview questions, or for additional data. Any miscommunications would also result in a follow-up interview. For this study, there was no misunderstandings. All responses from the leaders were clear and concise; therefore, there were no need for follow-up interviews.

Instruments

Finding and optimizing the most suitable and useful qualitative data collection instrument can become challenging (Scheffelaar et al., 2018). Nonetheless, there are a vast amount of scholarly and academic writings (Bhattacharya, 2017; Creswell & Poth, 2018; Leavy, 2020; Yin, 2014) explaining the various qualitative data collection instruments and methods with insight into selecting the ideal instrument(s) for a study. Scheffelaar et al. (2018) posited that the

selection of a promising instrument and evaluating it with a fraction of study participants for adopting the ideal data collection. In this study, the instruments included, (a) the researcher with an interview guide, and interview questions; (b) an observation protocol (c) a recording device, a virtual platform; and (d) a survey with a Likert scale. The researcher as an instrument is common in qualitative studies, and a major tool playing an important role in the data collection, interpretation, and presentation (Yoon & Uliassi, 2022). The instruments used for the data collection process should pass the reliability and validity assessment before consideration as a dependable device (Yeong et al., 2018).

According to Hart (2021), interviewing is considered an invaluable tool in qualitative research used for gathering facts and feelings. McGrath et al. (2019) suggested researchers must, (a) identify interviews appropriate for the study, (b) develop an interview guide and test the interview questions, (c) consider cultural and power dimensions, and (5) build a rapport. In addition, the researcher needs to, (a) remember they are the analyst, (b) listen more, (c) remain flexible, (d) manage emotions, (e) avoid delay transcribing information, (f) check the data thoroughly, and (g) start analysis early. Twinning et al. (2017) explained that researchers, as the data collection instrument, must collect and analyzing data concurrently to question what they are hearing and seeing in the moment. The instruments for this study received approval for use by the dissertation academic reviewers and advisors prior to conducting the study. For the study, I was a key tool for the data collection and analysis. The research received guidance by the dissertation academic reviewers, advisors, and the extensive reviewing of the literature.

Interview Guides

An interview guide is appropriate to collect data and to safeguard consistency based on the research questions and literature review (Azungah, 2018). The interview guide for this study

was in connection with the problem statement and the research questions (See Appendix B). Open ended semi structured 45 minutes interviews were appropriate for each participant by way of a virtual conferencing or telephone contact. I began the interviews by providing the participants with a summary of the purpose and asking each participant's professional background information concerning their leadership and their tenure as a virtual leader. These preliminary questions followed with the main interview which consisted of 13 open ended questions. The following is a discussion of how each interview question aligned with the research question (s). The interview questions except for questions 11, 12, and 13 related to RQ1 and RQ2 combined. Interview questions 11, 12, and 13 were appropriate for RQ3 as these interview questions helped me to uncover values, traditions, customs, or practices participants felt strongly from their experiences leading in a virtual environment. Interview questions 5 and 6 relate to RQ1 and the remaining interview questions included in both RQ1 and RQ2.

RQ1 included aspects of the specific problem statement with the potential to answer the *why* of the problem statement.

Answering the *why* could possibly lead to answers on how to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. This research question included aspects of the resulting consequences from the specific problem statement to answer the *why* to on how to prevent or overcome a possible reduction of organizational performance. RQ2 included aspects of the specific problem statement as it had the potential to uncover root causes and possibly answer aspects of the *how*. If the *how* is answered, it could possibly lead to answers on how to apply the best type of leadership to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. This research question addressed aspects of the

resulting consequences of the specific problem statement. This situation had the potential to uncover root causes that could lead to answers that could possibly prevent the reduction of organizational performance from the potential failure of federal government leaders with maintaining employee productivity.

Surveys

Surveys are an effective method for data collection. Braun et al. (2021) explained that the purpose of qualitative surveys is to collect qualitative data through a series of open-ended questions developed by the researcher focusing on a particular phenomenon. Braun et al. (2021) argued that because participants respond by typing or writing in their own words their experiences, narratives, methods, positions, and discourses, qualitative surveys can produce the rich and complex accounts of the study. Nonetheless, the situation is critical that the researcher ensures that survey development and implementation progress through a well-planned course of improvement and revisions (Kelley-Quon, 2018). Survey data was in this research study.

For this study, a transformational leadership survey served the data collection purpose (See Appendix D). Moreover, several studies emphasized the influence of transformational leadership in support of employee productivity (Azizah et al., 2021; Barhate et al.; Supriadi et al., 2020). This 15-question survey included using SurveyMonkey. A Likert scale included the 15 questions with suggestions for the scale provided by SurveyMonkey personal. Surveys are typically in the form of an interview or a questionnaire (Creswell & Poth, 2018). For this study, the survey was in the form of a questionnaire. Creswell and Poth (2018) acknowledged that qualitative survey scales improved through the development of the Likert scale. The participants received the survey link at the start of that stage of the data collection process. However, I allotted 15 minutes right before the start of the interview to allow the participants to complete the

survey for those who had not done so at that point in the data collection process. With a paid

subscription to SurveyMonkey, I was able to provide participants with either a link directly to the

survey by way of the SurveyMonkey platform or could email the survey as an attached document

for the participants to complete and email back directly to me. Instruments used for data

collection should pass the reliability and validity test before being considered as a reliable tool

(Yeong et al., 2018). The SurveyMonkey used by other researchers has been approved for

dissertation use prior to this current study. By using both interview data and survey data, these

triangulation methods helped increase validity, reliability, and legitimation. Also, by purchasing

the SurveyMonkey subscription, established proof of permission to use the tool. Lastly, the

SurveyMonkey tool allowed for easily display of survey results in graph and other forms by

either the participants' direct input or the entering of the collected data into the system.

The 15 questions came from the suggestions for effective leadership survey questions

provided as a service with the SurveyMonkey subscription and from other published

dissertations focusing on aspects of leadership (Burrell, 2022; Crawford, 2022). The 15 survey

questions relate to this study as transformational leadership was one of the guiding theories

utilized. Transformational leadership plays a critical role in creating opportunities for employees

to be productive (Sayyadi, 2019). Additionally, each of the 15 questions relate to this study as

they provided data on a leader's current leadership style while leading in a virtual environment.

Survey questions 1, 3, 5, 6, 7, 8, 12, and 14 corresponded to RQ1. Survey questions 1, 4, 6, 7, 9,

10, and 12 corresponded to RQ2. Lastly, survey questions 2, 11, 13, and 15 corresponded to

RQ3. Data was also collected from interviews and observations. The inclusion of interviews was

served in combination with surveys as I believed that this was a more welcoming method for the

targeted sample. Data collection was by virtual or phone communication. This data collection

method also helped me to have a more direct relationship with the interviewees. Jain (2021) explained that unlike surveys, an interview is an interactive form of data collection that offers a more personalized exchange of information.

Archive Data

Archived data are collectively composed repositories of documentary evidence from a time in the past and involves researchers intelligently reusing existing data to investigate their current research questions (Tully & Carr, 2021). Tully and Carr (2021) explained that archived data becomes transformed into data by the researcher in the collection process. Furthermore, Haynes and Jones (2012) explained that archived data provides an opportunity for further examination of significance of context within the interpretative process of qualitative data. However, this study did not use archived data.

Data Organization Plan

Hardy et al. (2016) posited that researchers who conduct in-dept interviews with field notes have the potential to produce deeply personal and contextual information. The researcher must organize and manage the data. Stake (2010) suggested that researchers keep multiple journals for data and records keeping and for better organization of the data. An overarching guide for organizing the data my commitment to the safety of participant data. This commitment included a plan on how organize the data gathered for this study. Abduldayan et al. (2021) warned that poor research data organization or management practice can lead to irrecoverable data loss, a lack of data to support research findings, and loss of trust in the research process. This commitment also included maintaining virus protection with security software active and running on my private and password protected personal computer. Nourani et al. (2022) indicated that information technology can help facilitate the data organization processes.

Commercially available data storage media was not used as a part of this data organization plan. The backup method for data storage included a password protected thumb drive maintained in a locked safe kept in my home. I maintained and preserved the data. Abduldayan et al. (2021) indicated that self-preservation is adequate for academic research.

Data Organization Plan for this Current Study

A thorough data organization plan is vital for the protection of participants and the ability for researchers to share results with the public (Hardy et al., 2016). The data organization plan for this current study included instructions on identifying and coding themes and how to recognize emergent ideas, data interpretations, data representation, and an analysis for triangulation. Hardy et al. (2016) explained that once the data is complete, the researcher must preserve anonymity by not including demographic details or participants' identifiable information. This researcher employed both deductive and inductive approaches to analyze the data. The deductive method included an organized framework consisting of themes for the coding process., The inductive approach involves working with participants with experiences that drive the analysis completely and that derive emergent ideas and themes (Azungah, 2018).

The Appropriateness of the Data Organization Plan

Developing a data organization plan allows researchers to map out and illustrate how they will store, preserve, and secure collected data (Abduldayan et al., 2021). The data organization plan included the use of the researcher's computer organizing collected data and compiling it into files with a file naming system This data organization plan was appropriate for this study because of standard, ethical, and identified methods to use for management and organization of data. Data management are settings and policies required to collect, control, protect, present, and enhance the value of data and information assets in qualitative research

(Nourani et al. 2022). This data organization plan details how the data gathered for this study received management and organization.

Summary of Data Collection & Organization

Creswell and Poth (2018) indicated that researchers must anticipate issues with data collection called field issues and may include inadequate data, needing to prematurely leave the field or study site, or the loss of information. This section of the study detailed an overview of the plan for data collection and the type of data collected. This section included details from the association of the findings on data collection, data analysis, the participants, and sample. Academic researchers must adhere to federal and institutional guidelines which include IRBs and the completion of Collaborative Institutional Training Initiative (CITI) required Responsible Conduct of Research (RCR) training (Hardy et al., 2016). This section included a discussion on the process conducted for member checking, the instruments used for data collection, and the overall data collection and data organization plan for this study. A lack of appropriate planning for data collection and organization may negatively influence achieving the desired study results (Nourani et al., 2022). This planning proved valuable during data collection, analysis, and coding of the findings. Also presented was the interview guide (See Appendix B), the observation protocol guide (See Appendix C), and the transformational leadership survey (See Appendix D).

Data Analysis

Quality data analysis begins with the initial planning of the study and continues until the research is ready for publication (Gilgun, 2020). Saldana (2020) claimed that researchers must become improvisational by acting, reacting, and interacting with data on a moment-by-moment basis, and that data analysis is concurrent with data collection and management. Researchers must also foresee with qualitative data analysis to reflect beforehand on what forms of data will

most likely occur for collection. This procedure determines the types of data analysis strategies to anticipate using (Saldana, 2020). By using participant interviews as a data collection method for this study, suggests that all or relevant portions of the recordings would transcribe, and the transcriptions and the recordings would be a source for data analysis (Saldana, 2020). For example, Saldana (2020) claimed that after researchers interview the participants the interviews receive transcription. The field notes received sorting, and I filed the documents. The researcher selects data to highlight and set as reminders to follow-up regarding the phenomena. The study involved a thematic analysis of qualitative data collected to get a better understanding of the effectiveness of government leadership to maintain productivity in a virtual environment. NVivo was the data analysis tool for the study. NVivo is a qualitative data analysis software tool can produce meaningful findings by assisting the researcher with collecting, organizing, analyzing, visualizing, and reporting data findings (Dhakal, 2022). I used inductive and deductive approaches to analyze the data. The identification of five themes occurred. The following paragraphs includes an explanation of the process of data analysis for this current study.

Emergent Ideas

Researchers can reformulate interviews research questions and formulate new ones and develop new insights into the meanings of the data to allow emergent ideas to help explain study results (Gilgun, 2020). To understand the mutual experiences of the participants and the heart of the issue, the researcher will isolate clusters of similar data across interviews and categorized repetitive themes and structured descriptions (Kahsay et al., 2019). For this study, I listed and analyzed emergent ideas with reflective notes and connections made with the research questions. When ideas emerged, I checked against the transcripts from the interview recordings and fieldnotes to make sure the connections supported the actual words of the participants. This study

included the process for memoing emergent ideas. Memoing is the cycling back and forth between data, existing theories, and emerging themes and is a key tool that helps researchers to record insights and directs further data collection until data saturation (Conlon et al., 2020). Conlon et al. argued that the steps for data analysis includes data gathering, coding, and memoing emergent ideas.

Based on the findings of this study, emergent ideas emerge as themes occur. Themes discovered during the data collection and analysis phase include leading by example is an effective leadership style utilized while leading in a virtual environment, and virtual leaders associate servant leadership with successfully leading in virtual environments. In addition, themes include effective communication is essential to successfully lead in a virtual environment, there is a loss of socialization when leading in a virtual environment, and virtual leaders associate having integrity or honesty with successfully leading in virtual environments. These themes derived from the coding of participants' responses to the interview questions. These themes echoed themes and concepts discovered from a review of the literature.

Coding Themes

Identification of themes represents a powerful way of data reduction and in many cases, more information from these themes can often become extracted (Onwuegbuzie, 2003). Steps taken by Yorgason et al. (2021) for the coding of themes included starting with conducting checks of data accuracy with participants at the conclusions of focus group sessions. In addition, identified potential major categories and themes, then themes and categories were refined and compared, and lastly themes analyzed. Yorgason et al. (2021) also used transcripts and fieldnotes and researcher observations along with expressions of participants to continually challenge and shape themes and utilized fieldnotes to confirm the main themes. These steps represented coding

of themes for this study. The coding of themes began after conducting checks of data accuracy with participants at the conclusions of each interview.

Thematic analysis is a qualitative method for analyzing data. Thematic analysis entails searching across a data set to identify, analyze, and report repeated themes (Kiger & Varpio, 2020). Kiger and Varpio (2020) indicated that the process for describing and classifying codes into themes to include coding to organize data at a granular and specific level. In addition, part of the process is taking notes on potential data items of interest, questions, connections between data items and other preliminary emergent ideas. Examining coded and collected data extracts to uncover potential themes of broader significance; analyzing themes by looking at coded data within each theme to ensure a proper fit is necessary. Lastly, creating a definition and narrative description of each theme to include why it is important to the study questions, and writing up the final analysis and description findings. Castleberry and Nolen (2018) illustrated how to perform rigorous thematic analyses on collected data to draw interpretations from the data for data analysis.

Interpretations

Interpretation of qualitative data involves developing narratives about the ways the researcher is co-forming meaning with participants and involves organizing and analyzing data, identifying analytical insights, and reflecting on those insights (Bhattacharya, 2017). With practical emergent ideas and core concepts and rich data, and with compelling descriptive data, excerpts from interviews, field notes, various types of documents, and researcher's paraphrasing of the data, researchers are positioned to present their study's findings in a that is memorable and interesting (Gilgun, 2020). Gilgun (2020) explained that interpretations should include accounts of participants' lived experiences from multiple points of view and multiple data collection

methods such as interviews, observations, and document analysis. Gilgun (2020) claimed that it

is good practice to utilize related research and theory when writing the study findings. The

literature helps with interpretation when findings have associations with other research, and

when findings are facets of a larger issue.

Interpretation is the quest for meaning of a phenomenon that involves researchers

engaging with the meaning of narrative, interview materials, images, and documents (Gabriel,

2018). Interpretation begins with the development of codes and the formation of themes from the

codes (Creswell & Poth, 2018). While conducting data analysis, I kept a journal to reflect on

subjectivities, emotions, questions, hunches, and ways in which sense was being made of the

data in association with theoretical, methodological, analytical framework and the research

purpose and questions. Creswell and Poth (2018) explained that strategies to locate patterns and

develop stories, summaries, or statements are processes for developing and accessing

interpretations. This process was also used for interpretation of the participants' responses to the

interview questions and survey replies. I also sought feedback on interpretations and surprising

or unexpected information and any information unusual to the participants' responses.

Data Representation

Adikaram et al. (2022) claimed that the role of the researcher is to carefully document

their interactions and experiences within their findings. I used Microsoft Word and Excel as the

primary data representation method. This software has been proven to result in the development

and fine-tuning of analysis by allowing researchers to begin with the raw data from transcripts.

In addition, the software generates tangible products such as tables, graphs, presentations, and

final reports (Watkins, 2017). Key reports and graphs produced by Survey Monkey because of

the responses to the survey represented in this study. This study used tables with rows and

columns, figures, and graphs to enhance trustworthiness in the data. According to Cloutier and Ravasi (2021), tables help researchers bring order and make sense of data and communicate research findings and theoretical insights in an illustrative, easy to understand and convincing manner. Lastly, the data for this study illustrated the information derived from the use of the NVivo qualitative analysis software.

Data representation for this study is in Section 3. That section focuses on the representation of the experiences of the participants as they connected to the research questions, conceptual framework, anticipated themes, literature, and the research problem. The representation and visualization of the data represents the data observed and retrieved in the research study by creating a visual image of the data. NVivo assisted in aligning the data to obtain the response percentages for each survey question response. NVivo assisted to query and determine response percentages based on the 17 surveys completed and collected from participants. Table 2 provides an illustration of the researcher's analysis of the responses to the survey questions, illustrating questions with the highest positive response to those with what could perceive as the greatest negative or outlier response, and lastly the one question with more of a neutral response on the Likert scale. Figures 3-17 represents the participants' responses to the 15 survey questions provided in the Appendix.

Analysis for Triangulation

To ensure rigor, it is suggested that triangulation on data, method, and theory be performed (Vogler, 2022). Vogler (2022) argued that triangulation involves looking at one specific position from various viewpoints to limit biases and validate the research questions or phenomenon. Triangulation is a method used in research to strengthen the study to increase the ability to interpret and analysis true findings (Renz et al., 2018). Moon (2019) described

triangulation as a research strategy that uses multiple data sources, theories, or research methods to ensure the data, analysis, and findings of a study are as accurate as possible. Moon further explained that triangulation methods help to ensure that the information we derive from research data accurately reflects the truth about the. In qualitative research, triangulation with multiple approaches can expose common viewpoints and experiences without making theory of knowledge claims regarding the determined 'truth' of the findings (Campbell et al., 2020). Leavy (2020) defined comparing and contrasting literature to the data collected during the study as a method of validation through triangulation. This triangulation method was appropriate for this current study. Natow (2020) explained that the inductive approach draws findings and concepts out of the collected data. The deductive method uses the research data to test existing theories and concepts. Both data triangulation and theoretical triangulation were used for this current study. Theory triangulation uses numerous theories to help guide the research design, implementation, and interpretation of the data (Moon, 2019).

The data triangulation method for this current study occurred because I am directly connected to the organization in the study. This method allowed for easier access to the data and participants. This study included a multiple data analysis approach. The study included interview data analysis conducted with member checking and bracketing. Triangulation for this study consisted of evaluating the interview data analysis against the data analysis of the survey results. Rooshenas et al. (2019) concluded that each data source can confirm or contradict findings from another, and that this triangulation approach will provide better confidence in the findings or inspire further sampling, data collection, and analysis. Rooshenas et al. (2019) explained that triangulation of data source against data source includes comparing quantitative data with other types of quantitative data or a combination of qualitative and quantitative analyzed data. Except

for using quantitative data, these triangulation methods were appropriate as they helped increase validity, reliability, and legitimation, which incorporates credibility, dependability, confirmability, and transferability of study findings (Moon, 2019). This study did not utilize quantitative data, instead uses a survey instrument. Braun et al. (2021) explained that surveys are a qualitative research tool. Jansen (2010) described qualitative surveys as a tool that analyses the diversity of sample characteristics within a population and explained that survey refers to the study of a population through the observation of its participants. Lastly, Jansen claimed that qualitative surveys do not establish frequencies, means or other parameters as with quantitative data collection. Qualitative surveys determine the multiplicity of some phenomena of interest within a given population.

Summary of Data Analysis

This section of the study presented a discussion on data analysis. Qualitative data analysis plays a crucial role in research because it provides deeper examinations and realizations of the participants' experiences (Watkins, 2017). According to Castleberry and Nolen (2018), quality data analysis includes five steps which consist of compiling, disassembling, reassembling, interpreting, and concluding. Additionally, this section presented a discussion on emergent ideas, coding themes, interpretations, and data representation. Successful interpretation led to the development of an experience of exceptional insight and discovered themes. Lastly, this section included a discussion on analysis for triangulation and an updated discussion on data collection and analysis to reflect actual data collection and analysis. All leaders support leading fulltime in a virtual environment. I used NVivo to query and determine response percentages based on the 17 surveys completed and collected from participants. As the researcher anticipated, the interview and survey results revealed similar findings.

Reliability and Validity

Triangulation is one of the most important methods for data analysis and for guaranteeing validity and reliability of the findings (Bellido-Garcia et al., 2022). Triangulation is a research tool that helps ensure validity in the findings because this method allows perspectives on the same phenomenon for comparison (Bellido-Garcia et al., 2022). Facchinetti et al. (2021) made the following claims. Researchers use strategies such as triangulation to ensure the trustworthiness of the study in terms of credibility, transferability, dependability, and confirmability. Credibility concerns whether the study's findings represent credible and theoretical interpretation of the original data. Dependability concerns the consistency of the data collection and analysis processes, and safeguarding confirmability details ensuring the data collection supports study's findings (Facchinetti et al., 2021). For this current study, participant data analyzed in the same manner for validity and reliability of the data, and data collection occurred until the point of saturation.

Reliability

I ensured the reliability and validity of the data collected through rigor. Belotto (2018) explained that reliability can achieve by the researcher conducting multiple rounds of consistency checks. To assess researcher's analysis of the data, interrater reliability is necessary. To establish trust and confidence in the findings, rigor confirmed the consistency of the study methods (Belotto, 2018). I avoided incorporating personal bias by including bracketing and triangulation techniques. I used several methods to collect data and conduct analysis for triangulation and credibility of the findings. Confirmation was made by comparing the interview data with the survey data and observations from the researcher's emergence into the data collection process. Confirmation is the process of comparing data gathered from multiple sources

to explore the extent to which the study findings can verify (Houghton et al., 2013). I used a descriptive method. Belotto (2018) posited a descriptive method is coding used to create labels that convey the essence of what is heard during participant interviews.

Credibility and Transferability

Leavy (2020) described credibility and transferability as the researcher applying rigor to qualitative research. Katz and Tener (2021) stated that to achieve transferability of the study's findings, the researcher must provide a detailed description of their methodology with a focus on the sample characteristics, selection, and the protocol. According to Belotto (2018), credibility of the study's findings achieves by further exploring experiences that appear contradictory to the emerging themes. However, Darawsheh (2014) claimed that credibility is better increased using mixed-methods research that incorporates quantitative and qualitative methods. Cypress (2017) argued that the ultimate purpose of triangulation is to establish trustworthiness and accuracy of the study's findings and establishes legitimation by credibility. Trustworthiness is certain by taking steps to ensure transferability (Katz & Tener, 2021). Twining et al. (2017) offered data triangulation, method triangulation, participant checking, investigator triangulation, and theoretical triangulation as methods researchers can use to enhance credibility and trustworthiness. For this study, triangulation, member checking, and observation were methods that established credibility and reliability of the data and study's findings. Thematic analysis ensured transferability. DeCino and Waalkes (2018) posited that member checking can strengthen credibility in qualitative research by helping researchers increase accuracy of their findings.

Dependability and Confirmability

Dependability and confirmability are among the quality and trustworthiness criterions for all qualitative research (Janis, 2022). Dependability is the stability of findings over time and involves participants evaluating the findings and is achieved when interpretations and recommendations of the study are supported by the data (Moser & Korstjens, 2018). To achieve dependability, the researcher objectively analyzed the data. Additionally, from accurate transcriptions and coded interview and fieldnote data, and with member checking and other reliability and validity methods, I was able to ensure interpretations match the shared experiences of the participants. Janis (2022) explained that to overcome inconsistencies in the data collection and data analysis, researchers can use the strategies of method, source, and data triangulation as well as coding and meaning saturation. Moser and Korstjens (2018) explained that confirmability is the degree to which the study's findings could confirm by other researchers. By reviewing the literature, and to achieve confirmability, I was able to evaluate the findings of this study and analyze any contradictory findings by further analysis of the study's collected and coded data. Katz and Tener (2021) acknowledged that dependability achieves by the researcher ensuring limitations of biases and researcher's subjectivity. Furthermore, Katz and Tener (2021) suggested that confirmability relates to the researcher's understanding and efforts to maintain objectivity. Objectivity was taken into consideration for this study and the awareness allowed me to maintain an open mind and to remain critical of preconceived judgements and biases.

Validity

Assessing reliability and validity in qualitative research is important for internal and external validity. In addition, qualitative research includes reliability and objectivity (N. Singh et al., 2021). For this study, qualitative data collection methods consisted of researcher observations

during interviews, field notes and voice recording of one-on-one interviews with leaders, a survey, and a literature review to increase the credibility and validity of the findings. Moon (2019) recommended the use of triangulation to strengthen the validity of a research study. Furthermore, the researcher should collect multiple styles of data to increase the credibility and validity of the findings (Moser & Korstjens, 2018). These methods, includes data saturation to ensure validity of this current study. Data saturation is the collection of data where a sense of closure attains because all additional data yields redundant information. Data saturation occurs when no new analytical information arises, and the study provides maximum information on the phenomenon (Moser & Korstjens). Triangulation and bracketing ensured validity of the study's findings. Moon (2019) described triangulation as a research strategy that uses multiple data sources, theories, or research methods to ensure the data, analysis, and findings of a study are as accurate as possible.

Bracketing

Weatherford and Maitra (2019) defined bracketing as the conscious efforts of refraining from judgement and avoiding our customary ways of seeing things or opening an individual's mind and perspective. Bracketing reduces the impact of the beliefs on facts obtained and analyzed. Bracketing expands the focus of reliability of the study and can apply through the data and during the analysis of the findings and is a way to keep individual experiences away from the gathered data (Weatherford & Maitra, 2019). Gregory (2019) explained that bracketing involves capturing biases, abstract pledges, and life experiences as they unfold within the study. Bracketing should occur at the earliest stages of the research process rather than holding off until the data analysis stage. Dorfler and Stierand (2021) described bracketing as a theoretical construct and one of the most central philosophical constructs of phenomenology.

Phenomenological research requires the researcher and the participants to maintain their penetrating focus on the phenomenon without moving off target and starting to try and account for its existence (McNarry et al., 2019). Gregory (2019) clarified that bracketing involves encapsulating researcher's preconceptions and theoretical commitments as they unfold. Gregory (2019) explained that bracketing is a way in which the researcher separates their own experiences from the study. The plan for bracketing for this study included identifying and laying aside assumptions, identify personal experiences, cultural views, and beliefs. In addition, bracketing maintains non-judgmental efforts and preserving integrity and honesty to the data and findings exclusively of personal biases. Bracketing occurred by reading other related research studies and discussions with participants. However, Chan et al. (2013) cautioned against reviewing the literature prematurely before data collection and analysis so that the researcher does not phrase research and interview questions or analyze data for themes that they know already exist in the literature. This process was taken into consideration for this study and the awareness allowed me to maintain an open mind and to be critical of the data findings. Sundler et al. (2019) explained that any themes derived from the data analysis were data driven. Finally, the plan for bracketing included standing back and maintaining a critical perspective on assumed theories and other assumptions and from familiar ways of thinking, doing, and interpreting, replaced with reflexivity (McNarry et al. 2019).

Summary of Reliability and Validity

This section of the study included a discussion on reliability and validity. This section included a discussion on how I planned and ensured reliability and validity for this current study. These methods included credibility, transferability, dependability, and confirmability, bracketing, triangulation, and saturation. Houghton et al. (2013) explained that triangulation

credibility uses several methods to study phenomenon and to confirm data and ensure data are complete. For this current study, I analyzed participant data in the same manner for validity and reliability of the data. The data was collection occurred until the point of saturation. I ensured the reliability and validity of the data collected through rigor. I also avoided incorporating personal bias by including bracketing and triangulation techniques. This section included a discussion on specific bracketing techniques used in this study and the researcher 'process for addressing biases.

Summary of Section 2 and Transition

Section 2, the Project included a detailed discussion on the research methodology, the role of the researcher and the purpose statement supporting this study. The purpose of this research was to understand and clarify how virtual environments contribute to challenges with leaders' ability to maintain employee productivity for organizational performance and success. The specific problem addressed by this study was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. The role of the researcher is instrumental to prepare, engage in reflexive opportunities, and to understand the limits in communication between the researcher and the participants (Collins & Stockton, 2022). Section 2 included a discussion on bracketing to illustrate how the researcher planned to avoid personal bias. In addition, section 2 Included a detailed discussion of the participants, population, and sampling as they pertain to the research based on the findings. Lastly, section 2 included a discussion on the sampling method, sample frame, the desired sample, and sample size for saturation based on the findings of the research. As detailed, for the specific problem, a qualitative research methodology was the most appropriate approach. The study was intended to identify leadership

styles and behaviors that are the best practices to maintain employee productivity in a virtual environment. Following section 2, section 3 includes the application to professional practice. Section 3 will begin in the course BUSI 989 with task 15. Section 3 is the last section for the dissertation program. Section 3 will conclude prior to the final BUSI 990 dissertation section.

Section 3: Application to Professional Practice and Implications for Change

The section includes an overview of the study and information of the findings and discussions on the application to professional practice. This section includes the data from the surveys and interviews conducted for the research study. In addition, in this section are recommendations for further study, a reflection of personal and professional growth, and a biblical perspective detailing the business functions explored related to a Christian worldview.

Overview of the Study

The purpose of this qualitative study was to add or expand the understanding behind potential challenges of the federal government leaders with maintaining employee productivity in a virtual environment. I sought to determine the driving factors in employee productivity in the federal government while in a virtual environment and observed if a specific leadership style exists to help maintain productivity and organizational performance. Additionally, the study was appropriate for additional knowledge by studying the effects of the virtual leadership styles in the Veterans Affairs.

The anticipated themes include the following: The effective leadership which is a critical factor for organizational success in a virtual environment. The virtual leadership with unique competencies, virtual leaders who face difficulties in building team cohesion, and trust in leadership. In addition, virtual leaders face challenges with maintaining employee productivity, communication and building trust in a virtual environment. The plan of the research study was to

contract 15 to 25 participants in a virtual leadership role. Seventeen leaders leading in a virtual environment participated and were included in this study. I employed inductive and deductive approaches to analyze the data. As a result, 5 themes emerged with the use of coding and NVivo. The themes occurred during the data collection and analysis phase. The emergent themes, (a) leading by example is an effective style, (b) servant leadership and effective communication is essential. (c) a loss of socialization exists when leading in a virtual environment, (d) and leaders must show integrity. The following includes information of the application to professional practice, recommendations for further study, and a section of reflections with a Biblical perspective.

Presentation of the Findings

The study involved a thematic analysis of qualitative data to get a better understanding of the effectiveness of government leadership to maintain productivity in a virtual environment. This section presents the data and findings from the surveys and interviews from this research study. This presentation of the findings addresses the research questions, reviews, and analyzes the data collected. The analysis of the data relates to the findings on the effectiveness and successfulness of leaders to maintain employee productivity in a virtual environment for organizational success to the literature. This section presents the themes discovered and anticipated as well as an interpretation of these themes. Within this section is a final discussion on the conceptual framework, the current and applied literature, and a summary of the findings as they relate to the identified problem for this study. The interview guide and survey questions can be found in (Appendix B and D).

The plan of the research study was to get at least 15 to 25 participants in a virtual leadership role to interview. Seventeen leaders leading in a virtual environment participated in

this study. Those 17 participants make up a sample size of 31% of the total population.

Seventeen participants completed 15 interviews and 17 surveys. This interview process is

suitable for saturation and compiling significant data (Creswell & Poth, 2018). All interviews

conducted with the participants at the Veterans Affairs utilized teams the standard conference

platform used by the federal government. I devised the 15 question survey utilizing

SurveyMonkey. SurveyMonkey personal assisted me with adding the question on a Likert scale.

The participants emailed the survey responses to. I used NVivo 14 (2022) software to organize

the survey answers and interview transcripts and emergent themes for coding. NVivo is a

qualitative data analysis software tool that produces meaningful findings by supporting the

researcher with collecting, organizing, analyzing, visualizing, and reporting data findings

(Dhakal, 2022). I employed both inductive and deductive approaches to analyze the data. Five

themes emerged with the use of coding and NVivo. The five themes included leading by

example, having effective communication, a loss of socialization, and having integrity. The

participants coding process included a letter representing a researcher-given pseudonym and the

letter 'M' or 'F' to identify the leader as a male or female. The identification of male or female

was only for coding of responses received.

The comprised of 13 open-ended questions with the intention to provide rich, holistic

perceptions into participant's views and actions. All interview questions except for questions 11,

12, and 13 corresponded to RQ1 or RQ1 and RQ2 combined. Interview questions 11, 12, and 13

addressed RQ3 as these interview questions were seeking to uncover values, traditions, customs,

or practices participants feel strongly about or that associates with their experiences leading in a

virtual environment. Interview questions 5 and 6 directly relates to RQ1, and all the remaining

interview questions address both RQ1 and RQ2. The following presents the interviews and

surveys of the 17 participants, examines whether the research questions included answering by the study, and provides an association to the current literature.

Themes Discovered

The COVID-19 pandemic resulted in extraordinary changes to organizations, involving the immediate transformation to effectively lead in a virtual environment. Leading in a virtual environment influences leaders to rely exclusively on virtual communication to motivate their employees. Organizational leaders in virtual environments find it difficult to keep employees motivated to meet performance goals because of communication challenges (Steude, 2021). Efimov et al. (2020) concluded that characteristics of a virtual work environment changes employees' motivation, and present special challenges for virtual leaders. Maduka et al. (2018) claimed that classic leadership concepts applied in face-to-face work formations cannot straightforwardly transfer to virtual leadership. In a virtual environment, leaders lose the physical face to face interaction and communication with their employees. Byrd (2019) also argued that virtual working environments characterize by lack of physical cues and body language with fewer face to face opportunities to collaborate with co-workers and the risk of isolation (Byrd, 2019).

The purpose of this qualitative study was to add or expand the understanding or reasons behind the potential challenges of federal government leaders with maintaining employee productivity in a virtual environment. I sought to determine the driving factors in employee productivity in the federal government while in a virtual environment. In addition, I observed if there is a specific leadership style to help maintain productivity and organizational performance. Additionally, this study is to add to the body of knowledge by studying the effects of virtual leadership styles in the VA. The anticipated themes included: effective leadership is a critical

factor for organizational success in a virtual environment; virtual leadership requires unique competencies; virtual leaders face difficulties in building team cohesion and trust in leadership. In addition, the themes included virtual leaders face challenges with maintaining employee productivity; and communication and building trust are major challenges in a virtual environment.

Themes discovered during the data collection and analysis phase include leading by example is an effective leadership style utilized while leading in a virtual environment, virtual leaders associate servant leadership with successfully leading in virtual environments; and effective communication is essential to successfully lead in a virtual environment. In addition, the theme included, there is a loss of socialization when leading in a virtual environment, and virtual leaders associate having integrity or honesty with successfully leading in virtual environments. These themes derived from the coding of participants' responses to the interview questions. These themes echoed themes and concepts discovered from a review of the literature. Participants in this study frequently used terms such as "treat my staff the way I want to be treated" as a form of their leadership style. I used Teams to conduct the fifteen interviews. NVivo assisted with transcribing and importing the. using NVivo decreased the manual duties of finding frequency of key words and phrases used for coding and allowed the researcher supportive evidence of initial analysis conducted while transcribing. Following is a presentation and discussion of the themes, and an interpretation of each theme.

Table 1

Themes Discovered from the Research Findings

Theme One	Leading by Example
Theme Two	Servant Leadership
Theme Three	Effective Communication
Theme Four	Loss of Socialization
Theme Five	Having Integrity/Honesty

Theme 1: Leading by Example is an Effective Leadership Style for Successfully Leading in a Virtual Environment

The theme leading by example or being a model to their staff emerged from 8 or 53% of participant responses received during the interview process. Leadership failure within the federal government added to the outcome of lowered productivity, employee turnover, and poor organizational culture (Moon & Park, 2019). This statement was the practical experiences of the study's population except lowered productivity was not a finding of this research. The positive link found between leading by example and maintaining employees' productivity mimics results that found within the literature (Neubert et al., 2022; Eva et al., 2019; Sudarmo et al., 2021).

Leading by example or being a model were responses to interview question one with five participants responding with this theme. This theme was also a response to interview question nine with two participants responding with leading by example, and question 12 with one participant responding that they lead by example as well. Participant DF responded to question one stating "I lead by example". "I model the type of behavior that I expect out of my staff." Alternatively, Participant MF responded to this question with "I am a servant leader". I believe

in developing my team members and working hard to ensure their success." Participants said they use leading by example to maintain or increase employee productivity while leading virtually. Specifically, Participant LF1 replied: "I coach more, and I lead by example."

Researchers measured the effects of servant leadership on employee productivity and pronounced a positive and significant effect between servant leadership on employee innovation and productivity (Sudarmo et al., 2021). Servant leaders influence their staff by modeling learned and replicated by followers. These virtuous characteristics becomes the principal perception of acceptable and sustained leadership (Neubert et al., 2022). For this study, considering my leadership style, servant leadership was not among the theories included in the conceptual framework. In addition, this leadership style was not a guiding principle but listed within the 'themes discovered' section of this study. The theories guiding data collection and analysis include transformational leadership, situational leadership, the contingency theory, and the goal setting theory. Accordingly, and as with moving to a full-time virtual environment, transformational leadership inspires public servants to perform beyond expectations and embrace needed change (Molines et al., 2022).

Within the literature, transformational leadership (TL) have a positive correlation to being a role model to followers (Kehr, 2019). Kehr. (2019) details indicated that a positive connection with the transformational leadership theory and followers' influence, and categories TL as a motivation theory. Accordingly, the dimension of providing an appropriate role model was significantly positively related to dimensions of transformational leadership (Greimel et al., 2023). Five participants, or 33.33% of participants identified themselves as transformational leaders (LF, CM, SF, JM, & JF). Particularly, LF responded, "I am transparent". I am also a transformational leader as I like to train and mentor."

Theme 2: Virtual Leaders Associate Servant Leadership with Successfully Leading in Virtual Environments

Four participants identified themselves as servant leaders (CM, SF, JM, & MF). Participant JM identified their leadership style as a servant leader, transformational leader, and a situational leader. Other direct quotes and references occurred in Theme 1 of the 'Themes Discovered' section of this paper. According to a recent study, servant leadership promotes positive outcomes by being distinctively oriented in emphasizing follower growth and development and modeling concern for others (Neubert et al., 2022; Eva et al., 2019). Neubert et al. (2022) claimed that leaders shape the work climate and culture by influencing others. When leaders are servant leaders who demonstrate virtues in their leadership style, employees who witness and experience virtuous leadership are more likely to model this behavior.

Theme 3 Effective Communication is Essential to Successfully Lead in a Virtual Environment

The 15 participants revealed they believe that effective communication is essential to successfully lead in a virtual environment. The positive connection between having and maintaining effective communication and maintaining employees' productivity mirrors results that have been found throughout the literature (Cripe & Burleigh, 2022; Roman et al., 2018; Venus et al., 2019). Effective communication is also identified as a concept for this study. Precisely, the concept is *effective communication from leaders leads to followers' shared values and a shared vision*. Many researchers sought to understand the positive leadership relationship between effective communication and performance outcomes (Kim et al., 2018; Liu et al., 2018; Newman et al., 2020; Stratone et al., 2022; Vercueil & Nicolaides, 2021). Vercueil and Nicolaides explained that leaders who communicate with their staff consistent, reliable fact-

based communication, and inspirational motivation are favorable for success in virtual operations. In addition, leaders and that could shift position into listening to understanding, are also highly favorable for success in virtual operations. When inquired how is it different leading virtually as opposed to face to face during the interviews, SF responded, "It means we must have effective communication." When asked if they had encountered challenges specifically to leading in a virtual environment, BM stated, "just with communication styles." OF stated:

> I have encountered a lack of communication between myself and my followers. What I realized is there are times when communication becomes lacking, and this is when the employee/follower has something going on that is causing them to distance themselves. This is a concern as in a virtual environment the limitations of direct contact can cause a delay in identifying a problem exists.

Theme 4: There is a Loss of Socialization When Leading in a Virtual Environment

The theme related to a loss of socialization emerged from 9 participant responses or 60% of all participant responses received during the interview process. The positive association between a loss of social presence while leading virtually represents results found throughout the literature. Maduka et al. (2018) claimed that a leader's social presence can become difficult to achieve in a virtual environment., Creating challenges in team integration, work coordination, and maintaining successful organizational performance can also present challenges. Efimov et al. (2020) explained that virtual leadership requires specific skills from leaders. These e-skills (a) includes social, (b)communication, (c)building, (d) change management and (e) trustworthiness. Several participants voiced a concern about the loss and lack of a social connection with their staff. Participant JF detailed that this loss of socialization has led to her not having a personal work relationship with her entire team. When asked how it is different leading virtually versus

face to face, Participant SF2 stated, "time saving, stress saving, same job just less time spent being sociable. Similarly, one participant, Participant CM state, "I am not a really sociable person so virtual works great for me". "Being a virtual leader just means all my communication is conducted by phone, email, or computer conference."

Theme 5: Virtual Leaders Associate Having Integrity or Honesty with Successfully Leading in Virtual Environments

According to Sedrine et al. (2021), leadership in virtual environments is more challenging than in face-to-face arrangements and building trust and forming shared values require extra efforts than it does in traditional settings. Furthermore, it is claimed that the integrity of the leader enables other team members to believe in each other including the leader (Sagar et al., 2023). Eight participants (LF, LF2, DM, MF, DF, OF, JM, JF) equaling 53.3% of the participants, responded in a manner that identified and reflected on having integrity as a key personal trait and a trait required of their staff if the government is successful working in a full-time virtual environment. LF explained that integrity is an organizational value of most importance. DF shared when asked interview question 11 concerning most important organizational values, "Integrity, empathy, and competence". "Integrity because it builds trust within the organization." Participants also entwiningly used honesty with integrity as a key organizational value needed for successfully leading in a virtual environment. Participant JF who identified her leadership style as being transformational stated, "good ethics, honesty, value, respect, hardworking" when asked about organizational values of most importance. The positive link between leaders having integrity and being successful leading in virtual environments represents results been found within the literature. Mutha and Srivastava (2021) associated having integrity with a trait of a transformational leader.

Figure 2

Theme Four Responses Representation

Having Integrity is Required with Successfully Leading in Virtual Environments

■ Yes ■ No ■ Neutral

Interpretation of the Themes

From the coding process, discovered themes were found and identified in the previous section. NVivo assisted with identifying, consolidation and coding the themes, therefore e I could interpret the data more easily. The interpretation of these themes is: to maintain effective leadership in a federal government virtual environment, leadership should work to provide a clear and a good balance of the frequency. In addition, interpretation included communication style to maintain employee productivity in a virtual environment and to maintain organizational performance. This section of the study includes an exhaustive interpretation of the themes presented in the findings and how these findings relate to the problem, the literature, the conceptual framework, and the research questions.

Representation and Visualization of the Data

This section included focusing on the representation of the experiences of the participants as they were connected to the research questions, conceptual framework, anticipated themes, literature, and the research problem. Qualitative research findings can expose new research findings, raise awareness of issues of importance, create reasons for debate and further study, and become educational and student evaluation (Bekker & Clark, 2018). Creswell and Poth (2018) explained that the representation and visualization of the data represents some or all the

data observed or retrieved in the research study by creating a visual image of the data. I used

NVivo to align the data to obtain the response percentages for each survey question response. A

visualization of this data is in this section. Table 2 provides an illustration of my analysis of the

responses to the survey questions, illustrating questions with the highest positive response to

those with what could be perceived as the greatest negative or outlier response, and lastly the one

question with more of a neutral response on the Likert scale. Figures 3-17 represents the

participants' responses to the 15 survey questions provided in the Appendix. The orange line

within each graph is the Pareto Line. The Pareto Line represents the Pareto 80/20 rule used for

analysis. According to this Rule, 80% of outputs come from 20% of inputs or causes (Loan &

Mushtaq, 2023). Some examples of the Pareto 80/20 Rule are: 80% of a business's sales come

from 20% of their products; most software takes 80% of the time to run 20% of the programs,

and frequently, downloaded journals only accounted for 20% of the total journals while

producing 80% of the total downloads (Loan & Mushtaq, 2023). The 15 survey questions

focused on aspects of transformational leadership which is a guiding theory in. All leaders

support leading fulltime in a virtual environment. I used NVivo to query and determine response

percentages based on the 17 surveys completed and collected from participants. As anticipated,

the interview and survey results reveal similar findings.

Table 2

Analysis of Responses to Survey Questions

#1 Participant Survey Questions Response Rate	Question 3 16 Participants responded with 'Always'	Question 5 15 Participants responded with 'Always'	Question 6 All Participants responded with 'Always'	✕	✕
#2 Participant Survey Questions Response Rate	Question 1 13 Participants responded with 'Always'	Question 4 10 Participants responded with 'Always'	Question 10 11 Participants responded with 'Always'	Question 12 13 Participants responded with 'Always'	Question 14 13 Participants responded with 'Always'
#3 Participant Survey Questions Response Rate	Question 2 8 Participants responded with 'Often'	Question 7 9 Participants responded with 'Often'	Question 15 8 Participants responded with 'Often'	✕	✕
Participant Survey Questions w/ Outlier Responses	Question 9 7 Participants responded with 'Sometimes'	Question 11 1 Participant responded with 'Rarely'	Question 13 1 Participant responded with 'Never'	✕	✕
Neutral Participant Survey Questions Response Rate	Question 8 This is the only question that did not fall into any other category listed in column 1	✕	✕	✕	✕

Figure 3

Survey Question 1

Survey Question One
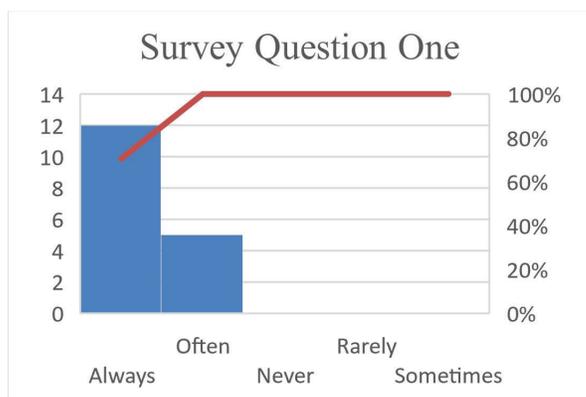
Note: Figure 3 is a visualization showing participants' response percentage to survey question 1.

The survey question was an attempt to answer research questions 1 and 2. The graph represents a visual representation of how participant leaders believe they provide their staff with clear responsibilities and allow their employees to determine how to achieve them. This response illustrates leadership style and effective communication in a virtual environment. The participant leaders provided explanations and lived experiences documented in the transcripts. As anticipated, interview questions 1 and 2 and this survey question results revealed similar findings.

Figure 4

Survey Question 2
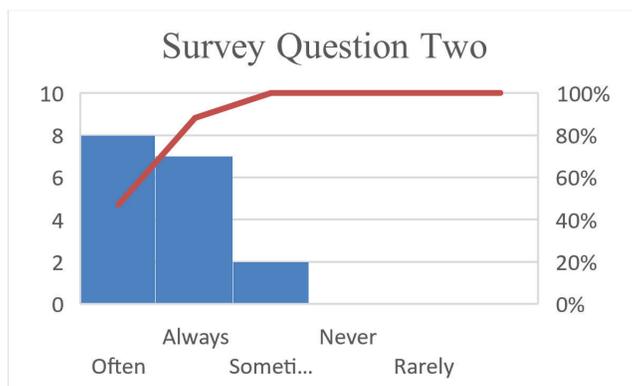
Note: Figure 4 is a visualization showing participants' response percentage to survey question 2.

The survey question was an attempt to answer research question 3. The graph represents a visual representation of how many participant leaders believe they make sure employees are aware of and understand all organizational policies and procedures. This survey question links to effective communication. The participant leaders provided explanations and lived experiences documented in the transcripts. Participant DF responded to interview question 10 in the following manner. "I allow the employee to discuss issues that are important to them, and I share

organizational policy updates and feedback to their performance." As the researcher anticipated, interview question 3 and this survey question results revealed similar findings.

Figure 5

Survey Question 3
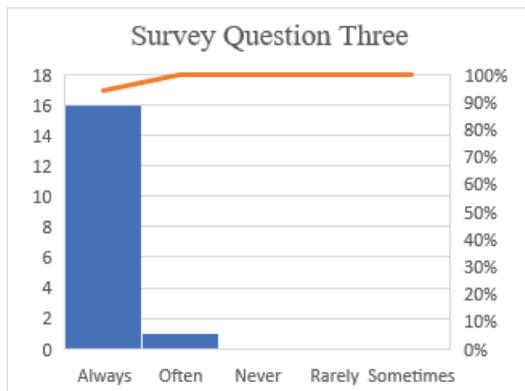
Note: Figure 5 is a visualization showing participants' response percentage to survey question 3.

The survey question was an attempt to answer research question 1. The graph represents a visual representation of how all participant leaders responded that they do, at least sometimes recognize employees' achievements with encouragement and support. This survey question can link to leadership style and effective communication. According to other researchers, effective leadership communication facilitates achievement of both personal and organizational goals. These same researchers also claimed that a review of the literature suggests leadership style or leadership behavior as precursor to staff performance achievements (Mutha & Srivastava, 2021). The participant leaders provided explanations and lived experiences documented in the transcripts. As I, interview question 1 and this survey question results revealed similar findings.

Figure 6

Survey Question 4
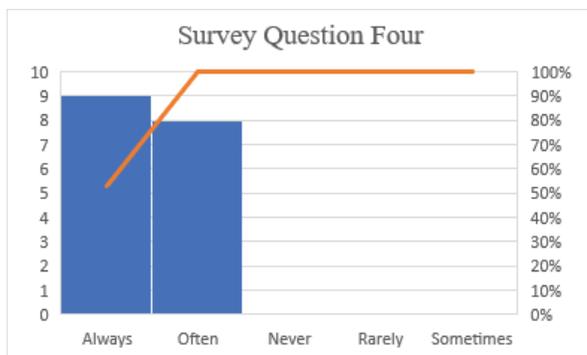
Note: Figure 6 is a visualization showing participants' response percentage to survey question 4.

The survey question was an attempt to answer research question 2. The graph visually represents how all participant leaders responded in only one of two ratings. This survey question link to leadership style and effective communication. The participant leaders provided explanations and lived experiences documented in the transcripts. As anticipated, interview question 2 and this survey question results revealed similar findings.

Figure 7

Survey Question 5
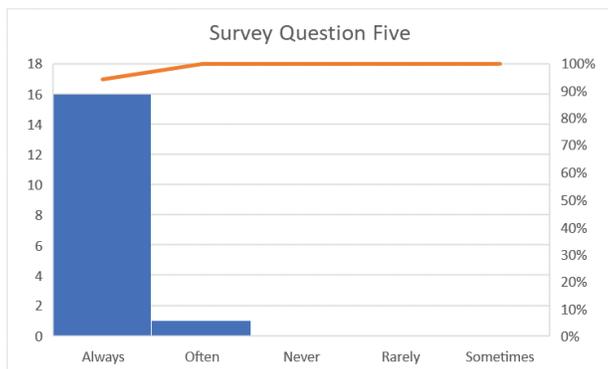
Note: Figure 7 is an image showing participants' response percentage to survey question 5.

The survey question was my attempt to answer research question 1. Therefore, this survey question can link to leadership styles. The graph visually represents how most participant leaders responded to always when asked about avoiding making premature evaluation of their staff's performance. The responses are typical of the federal governmental leaders with their strict

ethical policies and union presence. The participant leaders provided explanations from lived

experiences documented in the transcripts. As anticipated, interview question 1 results revealed

similar findings.

Figure 8

Survey Question 6
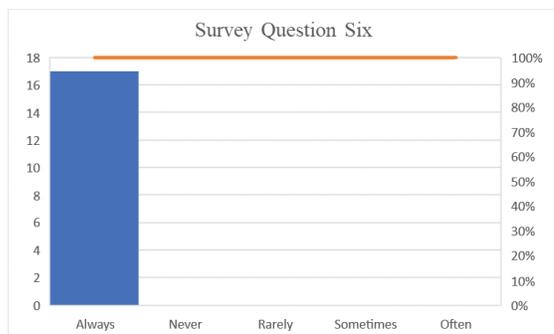
Note: Figure 8 is an image showing participants' response percentage to survey question 6.

The survey question was an attempt to answer research questions one and two. The

survey question can reflect to leadership style and effective communication. The graph

demonstrates the unanimous positive response to survey question 6 with a response of *always.*

When inquired *I establish or identify performance standards for each aspect of my employee's*

job. Participant JM responded to interview question 13 by stating that the government act

successful with leading in a virtual environment because "we have to for performance standards

and ratings for promotions." As anticipated, interview questions one and two and this survey

question results revealed similar findings.

Figure 9

Survey Question 7
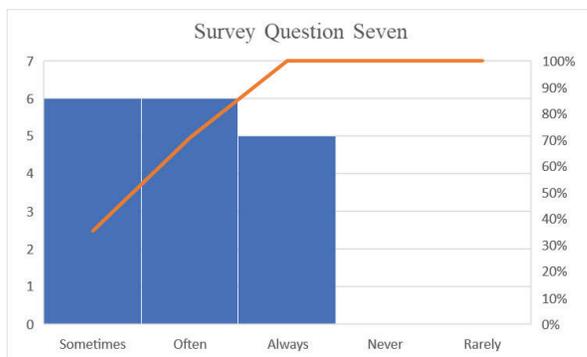
Note: Figure 9 shows participants' response percentage to survey question 7.

The survey question was an attempt to answer research questions one and two. The graph visually represents how an equal amount of participant leaders report that they *sometimes* and *often* work with their staff to develop long term career goals and plans. However, 5 participants responded as having performed this leadership action as *always*. As anticipated, interview questions one and two and the survey question results revealed similar findings.

Figure 10

Survey Question 8
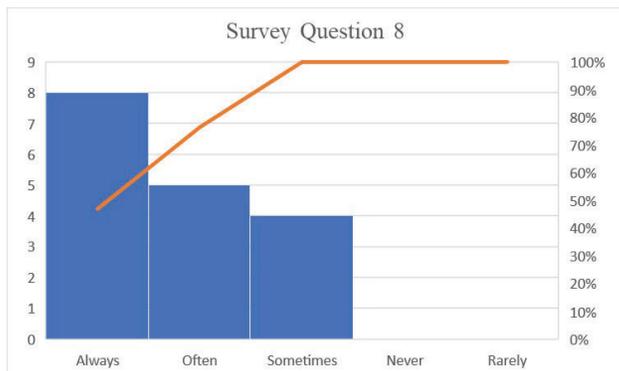
Note: Figure 10 shows participants' response percentage to survey question 8.

The survey question was an attempt to answer research questions one and two. Consequently, this survey question can link to leadership style and effective communication. As anticipated, interview question 1 and 2 and this survey question results revealed similar findings.

Figure 11

Survey Question 9
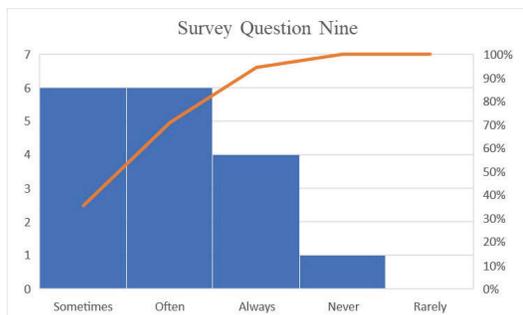
Note: Figure 11 is a visualization showing participants' response percentage to survey question 9.

The survey question was an attempt to answer research question two. When asked what does being a virtual leader mean in contrast to face-to-face leadership, Participant MF responded "Virtual leaders really must work harder to get to know their staff. A lot of trust is necessary in the virtual environment, accountability is paramount. Virtual leadership means coming up with ideas to increase a sense of belonging on your team and fostering team morale in creative ways." As the researcher anticipated, interview question two and this survey question results revealed similar findings.

Figure 12

Survey Question 10
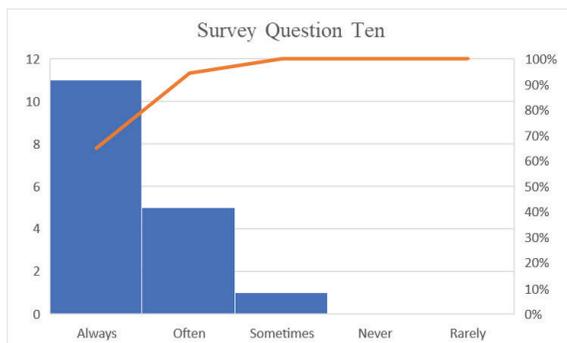
Note: Figure 12 is an image showing participants' response percentage to survey question 10.

The survey question was an attempt to answer research question two. The graph represents a visual representation of how one participant leader responded to "sometimes" when asked about holding regular meetings with their staff. No participant leader responded in a manner that could perceive as having an issue with effectively communicating in a virtual environment. As anticipated, interview question two and this survey question results revealed similar findings.

Figure 13

Survey Question 11
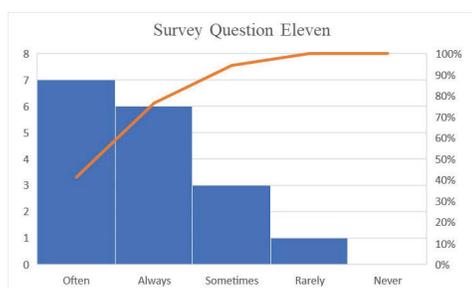
Note: Figure 13 is a visualization showing participants' response percentage to survey question 11.

This survey question was an attempt to answer research question three. This survey question can be link to leadership style. As anticipated, interview question three and the survey question results revealed similar findings.

Figure 14

Survey Question 12
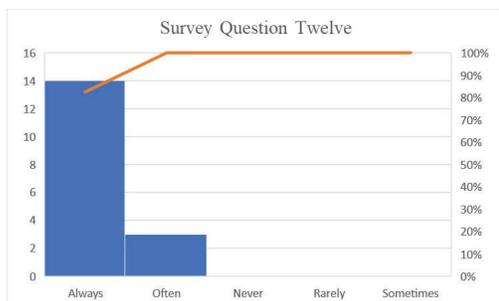
Note: Figure 14 is a visualization showing participants' response percentage to survey question 12.

The survey question was an attempt to answer research questions one and two. The graph visually represents how most participant leaders responded that they always check on their employee's work on a regular basis to assess their progress and development. The leadership responsibility is a federal leader's mandatory performance element. Leaders within federal government are heavily appraised on their performance against how effectively they are reviewing and providing feedback on the quality and timeliness of their staff's work. The participant leaders provided explanations and lived experiences documented in the transcripts. As the researcher anticipated, interview questions one and two and this survey question results revealed similar findings.

Figure 15

Survey Question 13
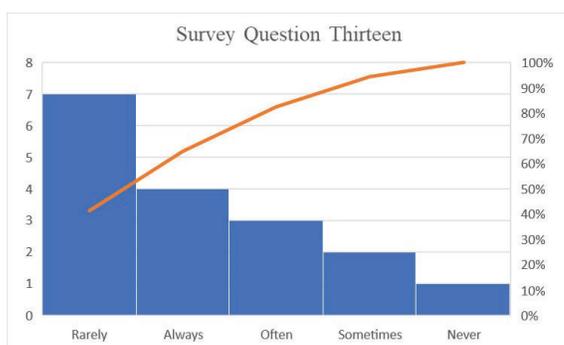
Note: Figure 15 is a visualization showing participants' response percentage to survey question 13.

The survey question was an attempt to answer research question three. The diagram represents how one participant leader reported to having never discussed their organization's strategic mission with their employees. Mission is a cultural element. Accordingly, this survey question links to interview question 13 as well as to leadership style. Nguyen et al. (2018) explained that federal leaders use public values-focused transactional leadership to explain mission to their staff. As anticipated, interview question three and this survey question results revealed similar findings.

Figure 16

Survey Question 14
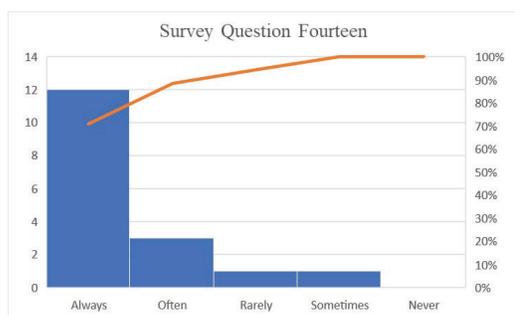
Note: Figure 16 is a visualization showing participants' response percentage to survey question 14.

This survey question was an attempt to answer research question one and can link to leadership style and effective communication. Participant MM responded with 'quality' as an organizational value most important and with modeling quality as a tradition and practice in a virtual environment. As the researcher anticipated, interview question one and this survey question results revealed similar findings.

Figure 17

Survey Question 15
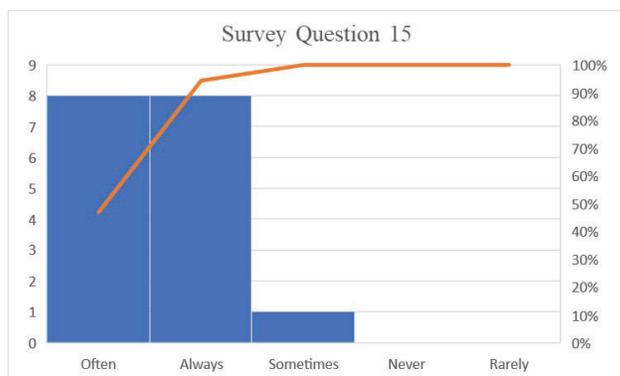
Note: Figure 17 is a visualization showing participants' response percentage to survey question 15.

This survey question was an attempt to answer research question three and can also illustrate leadership style and characteristics. The graph visually represents how most participant leaders ensure that information systems are timely and accurate, and that information provided to their employees directly. As anticipated, interview question three and this survey question result revealed similar findings.

Relationship of the Findings

This section will present a discussion on how the findings from the interviews and survey responses related to the study's research questions, conceptual framework, anticipated themes, the literature, and the problem. The anticipated themes developed based on the findings from an initial literature review focusing on studies researching similar problems. The discovered themes developed from the findings from triangulation and coding and as by relating this study's findings with studies that focused on leading in a virtual environment and leadership within the federal government. This study included participants that work as virtual leaders at the Veterans Affairs, VA Capitol Health Care Network 5 (VISN 5) as summarized below in Table 3. The

minimum age for participants was 18 years with no maximum age limit set. Participants were both male and female and have been leading fulltime virtually for at least 12 months. Interview responses were initially analyzed by manually transcribing each interview session and by analyzing the field notes. Subsequently, it was determined that I received enough data to get what was needed for the study and saturation of the data. There was no need for follow-up interviews. Denny and Weckesser (2022) explained that qualitative research continues with data collection until saturation with data being collected until emergent concepts have been explored and no new insight produced.

Table 3

Participant in a Virtual Leadership Position

Pseudonym		Gender	Position	Years as a Virtual Leader
DF		Female	Director	5
DM		Male	Deputy Director	3
OF		Female	Second Line Supervisor	4
MM		Male	Second Line Supervisor	2
SF		Female	Second Line Supervisor	2
SF2		Female	First Line Supervisor	3
MF		Female	First Line Supervisor	3

LF		Female	First Line Supervisor	1
LF2		Female	First Line Supervisor	2
LF3		Female	First Line Supervisor	1
JM		Male	First Line Supervisor	2
JF		Female	First Line Supervisor	3
CM		Male	First Line Supervisor	1
CF		Female	First Line Supervisor	3
BM		Male	First Line Supervisor	3

The Research Questions

   RQ1: What are the experiences of VA leaders in maintaining employee productivity in a virtual environment? This research question addresses aspects of the specific problem statement as it has the potential to answer the "why" of the problem statement. If the "why" is answered, it could possibly lead to answers on how to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. According to each of the participants in this study, VA leaders are fully successful with maintaining employee productivity while in a virtual environment.

   RQ1.a: What leadership styles or behaviors may possibly contribute to failure to maintain employee productivity in a virtual environment? This research sub-question addresses aspects of the specific problem statement as it has the potential of providing answers to what the possible cause for the challenges of federal government leaders with is maintaining employee productivity in a virtual environment. According to participants of this study, leadership styles that may contribute to failure to maintain employee productivity in a virtual environment would

be leadership styles that do not have a direct focus on leading by example as well as a leadership style that does not fully support a social relationship with followers.

RQ1.b: What leadership styles or behaviors contribute to success in maintaining employee productivity in a virtual environment? This research sub-question addresses aspects of the specific problem statement as it has the potential of identifying direct leadership styles or behaviors that could possibly prevent the failure of federal government leaders with maintaining employee productivity in a virtual environment. The most prevalent leadership styles or behaviors which contribute to success in maintaining employee productivity in a virtual environment revealed from this study include leading by example and being a transformational leader.

RQ2: In what way is leadership in a virtual environment different from leadership in a face-to-face environment? This research question addresses aspects of the specific problem statement as it has the potential to uncover root causes and possibly answer aspects of the *how*. If the *how* is answered, it could possibly lead to answers on how to apply the best type of leadership to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. The findings of this study illustrate a total understanding that leaders are still facing communication challenges from leading in a virtual environment but are finding successful styles and methods to successfully overcome these challenges.

RQ3: What cultural elements are present in a virtual environment that position a federal agency for success in maintaining organizational performance? This research question addresses aspects of the resulting consequences of the specific problem statement as it has the potential to uncover possible cultural elements such as leadership styles, values, and traditions that could

become utilized uniformly by federal government leaders to prevent the possible reduction of organizational performance. The cultural elements found from the sample for this study include integrity, being a role model, trust, and honesty.

The Conceptual Framework

The Conceptual Framework for the study addressed the problem under focus and is used to help track discoveries and what requires further examination (Sage et al., 2019). Depending on an influential and established framework from the literature and research questions enables the researcher to be guided and more focused (Risius & Spohrer, 2017). Several identified concepts and theories provided the framework for this study. Likewise, this study included presenting and discussing how the findings relate to each of the elements in the research framework. The discussion of the framework is in terms of its ability to understand the constructs and actors that drive the problem under focus. The concepts of the study revealed an interrelation to the findings presented and within the literature.

Concepts

Concepts guide researchers of a study towards theory and research (Bogna et al., 2020). Classic leadership concepts applied in face-to-face work structures cannot simply transfer to virtual leadership (Maduka et al., 2018). Subsequently, this study included inductive and deductive approaches to draw findings and concepts out of the collected data. The concepts that guided relates to this research study, been found in the literature, and presented below with a discussion on how the findings of this research relate to these concepts.

Higher Employee Productivity in a Virtual Environment is Related to Effective Leadership. This concept observed from this study's findings and within the literature. The literature greatly linked effective leadership to the success of having higher employee

productivity in a virtual environment (Ashmi & Kumar, 2018; Bickle et al., 2019; Cole et al., 2019; Hill & Bartol, 2016; Kremer et al., 2019; Maes and Weldy, 2018; Paliszkiewicz, 2019; Purvanova & Kenda, 2022; Turesky et al., 2020; Venus et al., 2019). Furthermore, the literature linked effective leadership to the success of having higher employee productivity in face-to-face leader/employee work arrangements as well (Sayyadi, 2019; Wijayaningtyas & Lukiyanto, 2019). According to Toniolo-Barrios and Pitt (2021), a key responsibility of organizational leadership is to ensure employees sustain productivity while maintaining well-being in a virtual environment. Katou et al. (2021) claimed that a vigorously changing environment has a higher impact on productivity and that leaders' social intelligence has a positive impact on productivity. Participant OF stated "Aligning my expectations with their ability allows my style of leadership to stay constant". I've learned over time that leaders manage personality and expectations and if done correctly production will sustain. In the words of Participant MF: "Work productivity in acquisitions has gone up, customers are happy with the work we are doing". We have been offered numerous leadership trainings on leading in a virtual environment". I do believe it would be a good thing if some of the leadership training was mandates as opposed to offered."

Effective Leadership is Related to Successful Organizational Performance. This concept occurred from the findings from this study and within the literature. Ahmad and Karadas conducted research to test the impact of effective leadership in improving organizational performance (2021). This study concluded with a improving a positive association with organizational performance being successful when there is the presence of effective leadership (Ahmad & Karadas, 2021). Further, Ahmad and Karadas (2021) claimed that their research is a contribution to the literature by indicating that effective leadership "through dimension – leading

organization, people, and self – indirectly improves organizational performance. Sayyadi (2019) concluded that transformational leadership influences knowledge management to improve employee productivity and organizational performance. Participant MF who identified as a servant leader, responded when asked if they believed the organizational performance is or has remained a success in a virtual environment with; "work productivity in acquisitions has gone up, customers are happy with the work we are doing."

Effective Communication From Leaders Leads to Followers' Shared Values and a Shared Vision. This concept, not reported by the participants, was observed from the findings from this study and within the literature. I observed shared values and vision only in association with maintaining productivity and organizational success in a virtual environment. Participant MM responded that the organizational values most important to him are "honest, respect, hard work, and quality" and further stated "I work with my employees to model the right behavior, quality, production, and to show that I am a working part of the team." CF described herself as being a great communicator, fair, and honest and that hard honest work is the organizational value of most importance. Virtual leadership brings new and unexpected challenges and leaders must have skills, trained, and experienced in facilitating communication. Leaders must communicate understanding and common goals among employees, must include all employees in the day-to-day activities by using proper communication methods, and must apply strategies for effective decision making (Stratone et al., 2022). Leader and employee relationships with mutual trust leads to a willingness to engage in more open and effective communication which in turn enables employees to understand shared values and goals and achieve higher task performance (T. Kim et al., 2018).

Context is a Major Factor in the Competencies Required for Effective Leadership.

This concept was not reported by the participants as being a major factor for successfully leading in a virtual environment but was observed from findings of studies within the literature. Vaagaasar et al. (2020) concluded that the way leadership leads are contingent on the context where leadership performs. Azukas (2022) referenced recent studies that concluded that leadership is highly contextual and that effective leaders can adapt their style and behavior to the immediate contextual factors and requirements. minimal research has systematically analyzed the potential role of contextual factors in team studies, and therefore limiting the organization's ability to provide contextual conditions that would foster employee performance effectiveness (Francoeur-Marquis & Aube, 2021). Recurring concepts that arose from this study include trust, integrity, accountability, role model, respect, and flexibility. The concepts discovered from the findings of this study, found in the literature, presents below with a discussion on how these findings relate to this study. Participant leaders responded that: (a) trust in leadership, (b) leadership and employees having integrity and accountability, and (c) an effective leader that leads by example are associated concepts to address possible challenges with leading in a virtual environment and maintaining employee productivity.

Trust in Leadership. Participant OF responded with "Trust is critical for the relationship to lead in a virtual environment." Employees will be willing to take a chance when they trust you even if they feel uncomfortable. Also, no false promises. Honesty will go a long way even when the expectations are not met, the employee will be understanding. Participant MF reported that "There is a lot of trust needed in the virtual environment, accountability is paramount." One participant suggested that integrity is the organizational value most important to her because integrity builds trust with the organization. Furumo (2018) conducted a study on virtual teams

and claimed that findings show that virtual teams led by a supportive leader had higher levels of trust among staff than teams led by an authoritative leader.

Leadership and Employees' Integrity. Having integrity identified as a discovered theme and discussed in the discovered themes section of this study. Sagar et al. (2023) claimed that the integrity of the leader enables other team members to believe in each other, including the leader. Kashive et al. (2022) conducted a study that focused on understanding the factors for better team performance in virtual work environments. Kashive et al.'s concluded that the quality of communication is a partial mediator for the relationship between leader and follower trust factors. Kashive et al. (2022) concluded that the greater the staff's perception of the leader's performance with mentoring, facilitating, monitoring, and coordinating, the greater the trust and integrity as perceived by the staff. Several participants associated having integrity or honesty with successfully leading in virtual environments. Fifty-three and three tenths' percent of the participants responded by identifying and reflecting on having integrity. The participants suggested that integrity is s a key personal trait and a trait required of their staff if the government seeks success working in a full-time virtual environment. Participant DF offered integrity as the most important organizational value of a leader.

Leadership and Employees' Accountability. Participant MF stated that "there is a lot of trust needed and accountability is paramount for successfully leading in a virtual environment." According to Participant BM, he holds himself and his staff accountable while also claiming to be firm and fair. Participant CF responded to interview questions 10 and 11 explaining the presence of holding self and staff accountable and recognizing this concept as an organizational value most important to her leadership style. Elyousfi et al. (2021) presented accountability as a challenge with virtual leadership. Accountability was also identified as a challenge and critical to

maintain with virtual leadership, because of a study conducted by Sandberg et al. (2022). Pavez and Neves (2021) concluded that helping the team connect to a shared mission and value, generating shared accountability, and establishing common standards and practices are a required step to develop virtual teams.

Role Model as a Leadership Style. Leading by example or being a role model identified as a discovered theme for this study and discussed in the discovered themes section of this study. The theme leading by example or being a model to their staff was discovered from 8 or 53% of participant responses received during the one-on-one interview process. Participants said they used leading by example to maintain or increase employee productivity while leading virtually. Participant LF1 replied: "I coach more, and I lead by example." Participant DF responded to question one stating "I lead by example. I model the type of behavior that I expect out of my staff." Effective leaders role model virtuous character that contributes to employee productivity and organizational success (Neubert et al., 2022). Kehr (2019) connected 'role model' as a positive trait of a transformational leader.

Theories

Several identified theories provided the framework for this study. This study included research questions with the connection to existing theories and previous findings within the literature. Further, this study included theoretical triangulation, which is using multiple theories highlighted in a study (Campbell et al., 2020). The theories that relate to this research, included in the literature, are present below with a discussion on how the findings of this research relate to these theories.

Transformational Leadership Theory

The findings of this research relate to the transformational leadership theory. Participants LF, CM, SF, JM, and JF all self-identified as transformational leaders. Participant JM responded with "I am a servant, transformational, and situational leader." Similarly, Participant SF self-identified as a servant leader and a transformational leader. Participant SF supported effective communication as a means for successfully leading in a virtual environment. Participant CM reported: "I am a Servant leader all times." I am also a transformational leader most times but at times I must be more authoritative." As stated by Loyless (2023), contemporary transformational leadership should produce a renewed focus on leader competency through the lens of virtual communication. Lim and Moon (2021) argued that a critical role of leadership is to direct staff towards achieving a collective vision and goals and shape behaviors and working relationships. This leadership responsibility is a component or trait of a transformational leader (Lim & Moon, 2021). Gagne et al. (2020) indicated that transformational leadership is leadership style with strengths to motivating followers and increased collective self-sufficiency.

Goal Setting Theory

The goal setting theory is not prevalent in the study however, it relates to the findings of this study. The goal setting theory relates to the current study because this theory suggests that having clear and challenging goals increases motivation. I believed that this type of leadership style necessary for maintaining successful production levels and overall organizational performance in a virtual environment. Findings from this study included the suggestion that leaders are using other forms of intrinsic motivation, and extrinsic factors motivate employees. Participant OF responded with 'goal' on four occasions during their interview. Only two participants or 13% of participants voiced goals, goals setting, or goals attainment as part of their

interview responses and actions of their virtual leadership. Participant SF2 stated: "we have a mission and goals we must obtain and maintain. Participant SF2 also believes that she has not encountered challenges specific to leading in a virtual environment nor that there has been a drop in productivity from being a virtual leader. No studies contradicted the value from utilizing the goal setting theory to influence or measure its association with effective leadership, productivity, and performance. However, numerous studies within the literature that emphasized the influence of the goal setting theory in support of employee productivity and effective leadership (Aarts, 2019; Clements & Kamau, 2018; Demirkol, 2021; Locke & Latham, 2020; Wang & Guan, 2018).

Situational Leadership Theory

The situational leadership theory relates to the findings of this study. Thirty three percent of participants responded as being a situational leader when describing their leadership style. The situational leadership theory relates to this current study as this theory suggests that an effective leader is contingent on the adaptation of the leader's ability to use different models of behavior or leadership traits in certain situations (Negro & Mesia, 2020). The literature emphasized the influence of the situational leadership theory in support of employee productivity and effective leadership (Bhasin, 2019; Dhamija et al., 2021; Negro & Mesia, 2020; Princes & Said, 2022). I posited that this type of leadership style would necessitate for successful production levels and overall organizational performance in a virtual environment. Findings from this study suggest that leaders are using other forms of leadership at a higher percentage level.

Contingency Theory

The contingency theory is when leadership is flexible and adaptive decision-making that helps to explain leaders' decisions and actions contingent on determinants in a particular

situation that are most appropriate for the present condition (Childs et al., 2022). Furthermore, literature revealed several studies that have emphasized the influence of the contingency theory in support of employee productivity and effective leadership (Childs et al., 2022; Kundu & Mondal, 2019; Madlock, 2018; Popp & Hadwich, 2018; Shonhadji & Maulidi, 2022; Vidal et al., 2017). The contingency theory was not spoken during the interviews however, the contingency theory relates to the findings of this study. The contingency theory related to this current study because this theory recognized leaders who are capable of being flexible with adaptive decision-making skills and helps to explain leaders' decisions and actions contingent on determinants in a particular situation appropriate for the present condition (Childs et al., 2022). I believed that this type of leadership style would necessitate for successful production levels and overall organizational performance in a virtual environment. Findings from this study included suggesting that leaders are using other forms of leadership styles and do not relate their leadership style or virtual environment as contingent.

Actors

The framework includes a discussion in terms of its ability to understand the actors that drive the problem under focus. The specific problem addressed with this study is the possible challenges of leaders within Veterans Affairs to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. The actors identified as the government agency, government leadership and their staff, and unions governing government employees, therefore governing leaders. The actors that related to this research study, also found in the literature, are present below with a discussion on how the findings of this research relate to these actors.

Government Agency. For this study, the government agency is the Department of Veterans Affairs. This actor related to the specific problem of this study since this research is designed to specifically address the possible failure of leaders within a federal government agency to maintain employee productivity in a virtual environment. I obtained approvals prior to conducting the study and prior to reaching out to the participants. This actor s addressed in research question two. Elnaghi et al. (2019) explained that federal agencies must have a strong leadership with vision and the need for comprehensive strategic planning and implementation to become successful in a virtual environment. As illustrated in the research framework diagram, each theory has a flow of information or communication and actions from the leaders to the employees. The process results in actions flowing between the employees and the leaders and to the government agency from each theory. The findings of this research relate to the findings of other studies within the literature. This study concluded that the participant leaders have a strong leadership and presence even while leading in a virtual environment.

Government Leadership & Government Employees. The participants for the study are government leaders, all who lead and supervise government employees at the Department of Veterans Affairs. A total of 17 participants that responded to the survey questions and 15 participants allowed me to conduct the interviews. Follow-up interviews did not occur because the participants were very articulate and thoroughly responded to each interview question.

Unions Governing Government Employees. For this study, governing unions were not an issue, or a factor spoken of during data collection. Lee (2018) explained federal government agencies have a strong characteristic of bureaucracy and union presence and mostly rely on the design of formal systems of rules and regulations for coordination and control.

Constructs

In a study, the framework also included a discussion in terms of its ability to understand the constructs. Francoeur-Marquis and Aube (2021) claimed that when utilizing constructs and trying to establish their validity, it is important to be able to demonstrate the added value or distinctive nature of the construct in comparison to other conceptually related constructs. The right constructs are essential to research and the development of strong theory and may also assist in closing a gap in the research practice (Lindsay, 2018). The constructs that relate to this research study, also found in the literature, are present below with a discussion on how the findings of this research relate to these constructs.

Leadership Style. This construct relates to the specific problem of this study because I sought to uncover possible leadership styles that could be utilized to prevent or overcome the potential failure of federal government leaders with maintaining employee productivity in a virtual environment. The findings of this study, also found in the literature, reveals the importance of leadership style both on an organizational success level and on a personal leader's point of view. Sedrine et al. (2021) concluded that leadership style has a positive impact in virtual environments and that to be effective, the leader must have the skill to recognize which style is best at any given situation.

Intrinsic Motivation. The current study focused on the effects of intrinsic motivation, and similarly, research anticipated that intrinsic motivation may have a more significant influence on employee motivation (Kuvaas et al., 2017). Al Harbi et al. (2019) discovered a positive correlation between transformational leadership with employees' intrinsic motivation. For this study, five participants consider themselves transformational leaders. The findings of

this study included the suggestion that the federal government leaders use intrinsic motivation to maintain productivity levels and organizational success.

Employee Productivity. The findings of this study showed that the federal government agency is not experiencing a loss in productivity after moving into a fulltime virtual environment. This conclusion follows the findings of studies within the literature. Gemeda and Lee (2020) maintained that leadership style has the potential to either produce high employee productivity or low employee productivity. Literature has also revealed several studies that emphasized the influence of the situational leadership theory in support of employee productivity and effective leadership (Bhasin, 2019; Negro & Mesia, 2020; Thompson & Glaso, 2018; Walls, 2019). Thirty three percent of participants responded by describing their leadership style as being situational leader.

Organizational Performance. The findings of this study showed that the federal government agency leaders overall organizational performance level of employees remain stable in a fulltime virtual environment. More research will likely reveal more information. However, in the conclusion of the study leadership remains constant.

Virtual Environment. The findings of this study show that the participants are experiencing success while leading in a virtual environment. Furthermore, the findings of this study show that the participants have accepted their new work environment. In addition, the finding shows that participants adapted to their new work environment.

Anticipated Themes

This section showed how the findings relate to the anticipated themes. This section also focuses on any differences, unanticipated themes, or missing themes. The anticipated themes include effective leadership is a critical factor for organizational success in a virtual

environment. In addition, the themes include virtual leadership requires unique competencies, virtual leaders face difficulties in building team cohesion and trust in leadership. In addition, the themes included, virtual leaders face challenges with maintaining employee productivity; and communication and building trust are major challenges in a virtual environment. The results of this study confirmed that the anticipated themes are well established and identified and presented and discussed throughout the literature. The anticipated themes that relate to this research study, also found in the literature, are present below with a discussion on how the findings of this research relate to these themes.

Effective Leadership as a Critical Factor For Success in a Virtual Environment

The findings of this study show that the federal government agency leaders understand critical success for effective leadership in a virtual environment. The federal government leaders are experiencing effective leadership to maintain productivity and organizational performance success after moving into a fulltime virtual environment. This discovery follows the findings of studies within the literature.

Virtual Leadership Requires Unique Competencies

The findings of this study show that the federal government agency leaders understands that unique competencies such as e-communication effectively maintain productivity and organizational performance success after moving into a fulltime virtual environment. This discovery follows the findings of studies within the literature.

Virtual Leaders Face Difficulties In Building Team Cohesion and Trust in Leadership

The findings of this study also correlate with building team cohesion and trust in leadership. The study finding show virtual leaders does not face difficulties in building team cohesion. This discovery follows the findings of studies within the literature.

Virtual Leaders Face Challenges With Maintaining Employee Productivity

The findings of this study show that the federal government agency leaders understand challenges they experience leading in a virtual environment. The agency leaders have effective leadership and communication styles that are ensuring the organization maintains productivity. Organizational performance is a success while in a virtual environment. This discovery follows the findings of studies within the literature.

Communication and Building Trust are Major Challenges in a Virtual Environment

The findings of this study show that the participants have similar understandings and beliefs and are experiencing effective leadership to overcome these challenges. Maintaining productivity and organizational performance success after moving into a fulltime virtual environment is important. This discovery follows the findings of studies within the literature.

Differences, Unanticipated, or Missing Themes. Researchers have concluded that leading by example, defined as the extent to which a leader demonstrates ideal workday behavior by engaging in employee activities, (Eldor, 2021). This study therefore includes the suggestion that a virtual leader would not lead by example. A difference in the findings exist in this current study where several participants reported success with leading by example in a fulltime virtual environment. The connection to servant leadership found in the literature and the study's findings is not a direct link to a theme of the study. However, servant leadership characteristics are a direct link to this current study as servant leaders identify as modeling a servant's and the ideal behavior. Wijayaningtyas and Lukiyanto (2019) concluded that effective employee performance and productivity will achieve under transactional leadership. The literature revealed the importance of having integrity as a foundational character required of leaders in a virtual environment. No anticipated themes were missing from themes found within the literature. The

results from this study revealed that participants commit to being effective leaders in a virtual environment, and they have not experienced a loss in productivity because of such environment. Interview and survey results pointed to positive relations and associations between virtual leaders and their employees in a virtual environment at the Department of Veterans Affairs.

The Literature

The results of this study revealed that the way managers lead in a virtual environment determines if the challenges identified with being a virtual leader will overcome. The literature includes leading by example as a trait of a servant leader, and this is an effective leadership style utilized while leading in a virtual environment. Neubert et al. (2023) argued that servant leaders have honorable characteristics that contributes to a righteous environment that influences group members to reduce impolite behaviors, therefore leading to treat other people well. Sudarmo et al. (2021) showed a positive and significant effect between servant leadership and employee productivity. Ye et al. (2022) conducted a quantitative study to examine the influence of leading by example with an association to the Leader-member Exchange (LMX) leadership style and organizational psychological ownership. Ye et al. concluded that leading by example is one of the important dimensions of empowering leadership and that leading by example should appear as a new leadership style (Ye et al., 2022). Eichenseer (2023) identified leading by example as an exemplary or role-modeling behavior and as a model of leadership, and associated this theme to transformational, ethical, authentic, and charismatic leadership styles and theories. Further, Eisenkopf (2020) suggested from their study how leading by example shapes group behavior and concluded that leading by example seems to be a particularly powerful method of leadership as actions should enhance the credibility of the leader's words. Leading by example and participant leaders identifying their leadership style as that of a servant leader are also findings of this

current study. Participant MF responded: "I am a servant leader; I believe in developing my team members and working hard to ensure their success."

Leading by example and participant leaders identifying their leadership style as that of a servant leader are also findings of this current study. Studies have also shown a link between leadership style and successful employee performance levels. Subsequently, researchers concluded that effective communication is essential to successfully lead in a virtual environment (Dufrene & Lehman, 2015; T. Kim et al., 2018; Liu et al., 2018; Newman et al., 2020; Stratone et al., 2022; Vercueil & Nicolaides, 2021). Effective communication is sharing information in a manner that informs, coordinates, and regulates, aligns individual goals with collective goals, and fosters innovation (Villa et al., 2017). The literature and the study connected the concept of effective communication with performance and leadership style. This theme anticipated and discovered from this current study. Wilson et al. (2021) explained that the most effective leadership style has proven that leaders support virtual employees by helping staff members to resolve conflict and ensure effective communication. Campion and Campion (2019) supported this claim by suggesting that a key competency in virtual leadership effectiveness is excellent communication skills. The participant leaders responded positively on their belief of having effective communication while in a virtual environment a critical component of organizational performance, production, and overall success.

The literature revealed that there is a lessened ability and a loss of social interaction when leading in a virtual environment. Asatiani et al. (2021) claimed that virtual environments undermine the socialization process and results in the hinderance of the formation of a true organizational culture. Asatiani et al. (2021) stated that virtual working environments add the inability to rely on physical interactions between employees and leaders, imposing challenges

specific to performance and organizational socialization. Maduka (2018) identified virtual leaders having challenges with providing a social presence, which is possibly required for effective leadership in virtual teams to maintain or have team integration, member identification, and coordination. Efimov et al. (2020) explained that virtual leadership requires specific skills from leaders such as e-communication skills and e-social skills. Hoption and Mary Han (2021) claim transformational leaders maintain a positive social presence with their followers. This claim poses a challenge with remote leading. Lastly, Bickle et al. (2019) concluded that the level of social presence of leaders influences the quality of virtual interactions and productivity. This study confirmed those findings and concluded that most participants were aware of or felt a sense of a loss with socialness or with having an ability for social interactions.

Transformational leader is the most cited theory as an effective or utilized leadership style of virtual leaders found in the literature. Based on the literature and this study's findings, transformational leadership seems well established. The results from both the interviews and surveys spoke to how participants associate having integrity or honesty with successfully leading in virtual environments. These are also traits of a Transformational Leader but also that of a servant leader. Mutha and Srivastava (2021) claimed that results from their study indicated that trust helps to mediate the relationship between leadership influence and employee performance and production, leading to greater staff motivation and engagement. Further, Huberts (2018) argued that: integrity is a crucial concept for an understanding of authority; integrity should be embedded in existent approaches and theory development; integrity is a professional wholeness or responsibility with considering the environment, and integrity means that leaders exercise their duties adequately, carefully, and responsibly, considering the relevant variables associated.

The Problem

        The problem that motivated this study is the possible challenges of leaders to maintain employee productivity in a virtual environment resulting in the reduction of organizational performance. The specific problem to be addressed is possible challenges of leaders within the Veterans Affairs to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. According to Mutha and Srivastava (2021), virtual teams have short social exchanges and a lack of para-verbal and nonverbal communication which poses several challenges to the virtual leaders. This section discusses how the findings and the themes discovered relate to the problem in the study. The findings in this study demonstrated that transformational leadership and servant leadership styles have impacts in federal government virtual leadership to the extent that these leadership styles and traits of these styles were uncovered by several participants.

        The outcomes from this study are consistent with the literature concerning leaders being successful leading in virtual environments (Loyless, 2023). The participants responded to their not having to change their leadership style to maintain productivity. All leaders reported that production is not at a loss and has not suffered or lessened after moving to a full-time virtual working environment. However, 11 participants or 73% of leaders reported that they did in fact change their leadership style due to leading fulltime virtually. Many participants found no lack of communication, and several reported that communication has substantially increased after moving into a fulltime virtual environment. Participant LF1 state when asked if she had experienced a lack of communication: "no, more for clarity." Only 27% offered that they had not encountered challenges specifically related to working in a virtual environment, leaving 73% of leaders reported that they have encountered challenges. Most accounts of challenges were

claimed by the participants to be a result of communication barriers. All the participants also reported that it is their belief that the Veterans Affairs, or the government has been completely successful with leading in a fulltime virtual environment. discovered that success to be partially because government performance standards and regulations and appraisals, as well as the promotions and bonuses associated with high performance. However, the responses provided by the participants showed that there are barriers that contribute to challenges in and from communication.

Loyless (2023) claimed that that virtual communication skills, is an underdeveloped area of research and serves a role in developing the next generation of competent *remote* leaders (2023). This study addressed the problem through initiating participant interviews that display the elements pertaining to effectively leading in a virtual environment and outcomes of leadership styles and communication. The outcomes of this study engaged various researchers and multiple results relating to the problem. The findings in this study demonstrated that effective communication between leaders and followers have positive impacts in federal organizations to the extent of maintaining successful production levels. The findings also show support for having an authoritative leadership style while leading in a virtual environment. Participant CM responded: "I am a Servant leader all times. I am also a transformational leader most times but at times I must be more authoritative." Transformational leadership is a style that could help maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. Without question, literature and research findings from this study indicate that having an effective leadership style is critical to all organizations and for organizational success.

Summary of the Findings

The literature greatly linked effective leadership to the success of having higher employee productivity in a virtual environment. The 15 participants revealed they believe that effective communication is essential to successfully lead in a virtual environment. The positive link found between having and maintaining effective communication and maintaining employees' productivity mirrors results that have been found throughout the literature. Recurring concepts that arose from this study include trust, integrity, accountability, role model, respect, and flexibility. Participant leaders responded that: (a) trust in leadership, (b) leadership and employees having integrity and accountability, and (c) an effective leader that leads by example associates concepts to address possible challenges with leading in a virtual environment and maintaining employee productivity.

The anticipated themes for this study included: effective leadership is a critical factor for organizational success in a virtual environment; virtual leadership requires unique competencies; virtual leaders face difficulties in building team cohesion and trust in leadership. In addition, the themes include virtual leaders face challenges with maintaining employee productivity; and communication and building trust are major challenges in a virtual environment. The results of this study confirmed that the anticipated themes are well established and identified and presented and discussed throughout the literature. All themes, except for the theme associated with facing challenges with maintaining employee productivity where findings and conclusions from this study.

Themes discovered during the data collection and analysis phase include leading by example is an effective leadership style utilized while leading in a virtual environment, and virtual leaders associate servant leadership with successfully leading in virtual environments. In

addition, the themes where effective communication is essential to successfully lead in a virtual environment, there is a loss of socialization when leading in a virtual environment, and virtual leaders associate having integrity or honesty with successfully leading in virtual environments. These themes derived from the coding of participants' responses to the interview questions. These themes echoed themes and concepts discovered from a review of the literature. The interpretation of these themes is: to maintain effective leadership in a federal government virtual environment, leadership should work to provide a successful balance of the frequency of communication and the communication style to maintain employee productivity and to maintain organizational performance.

According to the literature and the findings of this study, virtual teams are often successful. Only 27% offered that they had not encountered challenges specifically related to working in a virtual environment, leaving 73% of leaders reporting that they have encountered challenges. Most accounts of challenges were claimed by the participants to be a result of communication barriers. All the participants also reported that it is their belief that the Veterans Affairs, or the government has been completely successful with leaders in a fulltime virtual environment. However, the responses provided by the participants showed that barriers exist that contribute to challenges in and from communication.

The theories guiding data collection and analysis included transformational leadership, situational leadership, the contingency theory, and the goal setting theory. The findings of this research relate to the transformational leadership theory. Creating a full-time virtual environment includes transformational leadership to o inspires public servants to perform beyond expectations and embrace needed change (Molines et al., 2022). The dimension of providing an appropriate role model was significantly positively related to dimensions of transformational leadership

(Greimel et al., 2023). Five participants, or 33.33% of participants identified themselves as transformational leaders. Transformational leaders could maintain a positive social presence with their followers. Maintaining a positive presence poses a challenge with remote leading. The study confirmed those findings and found that most participants were aware of or felt a sense of a loss with socialness or with having an ability for social interactions.

The situational leadership theory relates to the findings of this study. Thirty three percent of participants responded as being a situational leader when describing their leadership style. I believed that this type of leadership style would necessitate for successful production levels and overall organizational performance in a virtual environment. Findings from this study showed that leaders are using other forms of leadership styles and do not relate their leadership style or virtual environment as contingent. The goal setting theory relates to the findings of this study. Findings from this study suggest that leaders are using other forms of intrinsic motivation and suggests that employees are also motivated by extrinsic factors. There were no studies found that contradicted the value from utilizing the goal setting theory to influence or measure its association with effective leadership, productivity, and performance. However, numerous studies within the literature that have emphasized the influence of the goal setting theory in support of employee productivity and effective leadership. The contingency theory related to this current study but not a finding from data collection and analysis.

The findings in this study demonstrated that transformational leadership and servant leadership styles have impacts in federal government in virtual leadership to the extent that these leadership styles and traits of these styles communicated by several participants. The outcomes from this study have a positive association with the literature concerning leaders being successful leading in virtual environments. The participants responded to not having to change their

leadership style to maintain productivity. The participant leaders responded positively on their belief of having effective communication while in a virtual environment. The leaders reported that production did not diminish after moving to a full-time virtual working environment. However, 11 participants or 73% of the leaders reported that they did change their leadership style because of leading fulltime virtually. Many participants found that a lack of communication encountered; several reported that communication increased after moving into a fulltime virtual environment.

The results of study found that the participant leaders have a strong leadership and presence while leading in a virtual environment. For this study, governing unions were not an issue or a factor during the data collection. The findings from this study and in the literature revealed the importance of leadership style on an organizational success level and on a personal leader's point of view. The findings of this study revealed that the federal government leaders use intrinsic motivation to maintain productivity levels. The findings of this study showed that the federal government agency leaders overall organizational performance level of employees remain stable in a fulltime virtual environment. In addition, the findings from the study disclosed that the participants are experiencing success while leading in a virtual environment. Furthermore, the findings from the study proposed that the participants are acceptable and adaptable to their new work environment. The results from this study indicated that the participants are bringing effective leadership in a virtual environment. Interview and survey results reflects positive relations and associations between virtual leaders and their employees at the Department of Veterans Affairs.

The outcomes of this study engaged various researchers and multiple results relating to the problem. The findings in this study demonstrated that effective communication between

leaders and followers have positive impacts in federal organizations to the extent of maintaining successful production. The literature and research findings from the study indicate that having an effective leadership style is critical for organizational success.

Application to Professional Practice

Leading in a virtual environment causes leaders to rely on virtual communication to motivate their employees. Furthermore, many leaders, in virtual environments, find difficulty in keeping employees motivated to meet performance goals because of communication challenges (Steude, 2021). "During a challenging work environment, leaders must stress the mission of the organization. The leaders can deliver the mission by supporting fresh thoughts and remain enthusiastically persistent in the mist of challenging circumstances (Spears-Jones et al., 2021). The results of this study can apply to professional practice by leaders who can benefit from the themes found in this study and within the literature. The findings from this study present possibilities for federal organizational leaders to utilize to effectively lead in a fulltime virtual environment. Strategies for effective communication and effective leadership qualities are highly important to successfully lead in a virtual environment. The next section will include how virtually leading by example with integrity, having effective virtual communication, and having a social presence while leading virtually can improve the general business practice of leading in a virtual environment.

Improving General Business Practice

According to Alkhayyal and Bajaba (2023), teleworking is a new organizational reality and has led to the need for businesses to adapt leadership styles and communications to function in a virtual environment. Even with the recency of this study, Alkhayyal and Bajaba claimed that studies on e-leadership or virtual leadership are currently limited and in the early stages (2023).

Greimel et al. (2023) claimed that their study associated with virtual transformational leadership paves the way for further research on transformational leaders and their influence on virtual teams. The most prevalent leadership styles or behaviors which contribute to success in maintaining employee productivity in a virtual environment revealed from this study include leading by example with integrity and being a transformational leader. Second to transformational leadership, the findings of this study show servant leaders successfully leading in a virtual environment. Within the literature, transformational leadership (TL) has also been shown to have a positive correlation to being a role model to followers (Kehr, 2019). The approach of providing an appropriate role model was significantly and positively related to dimensions of transformational leadership (Greimel et al., 2023). Five participants from this current study, or 33.33% of participants identified themselves as a transformational leader.

The findings of this study illustrated a complete understanding that leaders are still facing communication challenges from leading in a virtual environment but are finding successful styles and methods to successfully overcome these challenges. As a result of this study, five themes identified. The cultural elements found from the sample for this study include integrity, being a role model, trust, and honesty. Having effective communication when leading full-time in a virtual environment discovered in this study is essential to successfully lead in a virtual environment. The results from the interviews and surveys demonstrated how participants associated having integrity or honesty with successfully leading in virtual environments. Eichenseer (2023) identified leading by example as a role-modeling behavior and as a model of leadership associated this theme to transformational leadership. Loyless claimed (2023) contemporary transformational leadership should produce a renewed focus on leader competency through virtual communication. Therefore, effectively leading in a virtual environment is

contingent upon organizations and leadership paying close attention to maintaining effective communication and leadership style associated with transformational leader. Transformational and servant leadership includes in the discussion   of the discovered themes section.

The study can improve general business practices by providing a guide to leading successfully in a virtual environment. In using results of this study, organizations can become aware of what has been effective during the shift from traditional face-to-face work environments to virtual environments. Organizations can train their leaders on effective virtual leadership communication, role modeling, and on how to maintain integrity during the changing environment and leader/follower relationship transformation. To improve virtual leadership within the federal government, a comprehensive approach that includes effective leadership and role modeling along with effective communication styles and methods would allow for a more positive outcome with the continuous maintaining of employee productivity. The findings from this study provide a great contribution to improving general practices of leading in a virtual environment in the selection of virtual leadership and virtual communication styles and abilities. Organizational leader can obtain success with effective leadership and communication when they communicate understanding and common goals among employees.; when they include all employees in the day-to-day activities by using proper communication methods, and when they apply strategies for effective decision making (Stratone et al., 2022).

Potential Application Strategies

As federal organizations emerge into a post-pandemic government with new goals and leadership challenges and opportunities, they have several strategies and prior studies as a source of direction and guidance for successfully leading in a virtual environment. I sought to provide potential application strategies that federal organizations can use from the findings of this study.

The following will include an explanation how leading by example with integrity, being a transformational and servant leader, and maintaining a social presence in a virtual environment can improve general business practice by being potential application strategies for federal leaders. The recommendation is that the federal government implement these application strategies by officially adding these leadership traits and abilities as part of their leaders' performance criteria and evaluation factors.

Leading by Example or Role Modeling with Integrity

This study included anticipated themes included: virtual leaders face difficulties in building team cohesion and trust in leadership and communication and building trust are major challenges in a virtual environment. This study's findings revealed leaders had the understanding that being a leader with integrity and leading by example leads to organizations successfully maintaining productivity in a virtual environment. According to Wei et al. (2019) leaders with integrity have a positive impact on employees' trust in their leadership. This trust is leads to exceptional work engagement and increased employee performance (Wei et al., 2019). Ye et al. (2022) concluded that leading by example is one of the important dimensions of empowering leadership. Researchers should include studying leading by example as a new leadership style (Ye et al.,). Furthermore, leader integrity was critical to leaders' ability to lead by example and able to motivate employees towards successful production levels. Leading with integrity helps build trust between leaders and followers. Kehr (2019) claimed that transformational leadership includes a decisive connection to being a positive role model to followers. By leveraging the findings of this study, federal organizations can obtain strategies for effectively leading and effectively motivating staff which is highly important to successfully lead in a virtual environment. The recommendation is that the federal government implement this potential

application strategies by officially adding these leadership traits and abilities as part of their leaders' performance criteria and evaluation factors.

Transformational and Servant Leadership in a Virtual Environment

Effective leadership in a virtual environment depends on organizations and leadership paying close attention to maintaining effective communication and a leadership style associated with that of a transformational leader and a servant leader. Geibel and Otto (2022) rationalized that transformational leadership, as an effective leadership behavior, promotes changes through vision, improves employees' performance through motivation and well-being, and benefits innovation. The availability of transformational leaders is the key to an organization's overall success or failure (Geibel & Otto). Furthermore, servant leadership has a pronounced positive and significant effect on employee innovation and productivity (Sudarmo et al., 2021). Servant leadership promotes positive results by unique orientation in emphasizing follower growth and development and as modeling concern for others (Eva et al., 2019). The findings of this research relate to the significance of being a transformational leadership and a servant leader in a virtual environment. Thirty three percent of leaders interviewed for this study identified themselves as a transformational leader. Four participants identified themselves as servant leaders. To leverage the findings of this study, federal organizations can train their leadership to develop or refine a transformational and servant leadership style. The recommendation is that the federal government implement this potential application strategy by officially adding transformational leadership and servant leadership training traits and abilities as part of their leaders' mandatory training curriculum, performance criteria, and evaluation factors.

Maintaining a Social Presence in a Virtual Environment

Claims of the loss of socialization came from 9 participant responses or 60% of the participants. The positive connection found between a loss of social presence while leading virtually represents results found throughout the literature. The recommendation is that the federal government implements this potential application strategy by officially adding training, effective information systems, communication platforms, and other innovative means to incorporate a stronger social presence between leaders and their staff. According to Hoption and Mary Han (2021), transformational leaders maintain a positive social presence with their followers.

Summary of Application to Professional Practice

The application to professional practice includes virtually leading by example with integrity, having effective virtual communication, and having a social presence while leading virtually. The researcher concluded that leading by example with integrity, being a transformational and servant leader, and maintaining a social presence in a virtual environment can improve general business practice by being potential application strategies for federal leaders. The findings from this study should apply to professional practice within the federal government uniformly through leadership trainings and accountability. The findings provide illustrations and opportunities for federal organizations to follow to maintain employee productivity while leading in a virtual environment. The strategies should include implementation by officially adding these leadership traits and abilities as part of their leaders' performance criteria and evaluation factors.

Recommendations for Further Study

The purpose of this qualitative study was to add or expand the understanding or reasons behind the potential challenges of federal government leaders with maintaining employee productivity in a virtual environment. I sought to determine the driving factors in employee productivity in the federal government while in a virtual environment and observe if there is a specific leadership style to help maintain productivity and organizational performance. Federal organizations are always looking for new and better ways of leadership engagement to foster an organizational culture which necessitates continuous improvement of productivity and leader follower relations to meet their mission and goals (Espindola et al., 2019). Organizations should understand that thought and consideration must prevail in decision making and leadership development and training. I recommend that this study repeat to include multiple federal government organizations for a more diverse and larger participant pool. The research can include followers and participants to get a broader perspective on the effectiveness of leading in a virtual environment. This study only included the perspectives of government leadership and not the total makeup of the leader and follower relationship. Furthermore, I recommend that a large-scale quantitative study with electronic surveys be conducted across all federal organizations as it is concluded that more input and participation would be gained from such a study. Seventeen leaders in a virtual environment participated and were included in this study. Those 17 participants make up a sample size of only 31% of the total population. Of those 17 participants, 15 participants received interviews and 17 surveys were completed by the participants. Saturation occurred during this study, leaders' however, participation was minimal. The study conclusion included effective communication is essential to successfully lead in a virtual environment and that there is a loss of socialization when leading virtually. I recommend

researcher conduct further studies to expand the knowledge on effective communication and leadership styles to maintain productivity in a virtual environment, but also studies where findings can lead to other means of maintaining a social presence while leading virtually.

Reflections

"Each person should live as a believer in what-ever situation the Lord has assigned to them, just as God has called them" (1 Corinthians 7:17 ESV). God purposely designed the underdeveloped world and designed people to further develop and cultivate the word. In reflecting on the qualitative study conducted, I consider the knowledge and experience gained as well as how Biblical implications are related to this study. By analyzing the message presented from conducting this study in its real-life setting along with an extensive literature review, answers uncovered to identify leadership styles and behaviors that contribute to failure to maintain employee productivity in a virtual environment and those that contribute to successfully maintain employee productivity virtually. The following section serves to reflect on both the researcher's personal and professional growth and a biblical perspective.

Personal & Professional Growth

This study influenced me personal and professional growth. The knowledge gained from the participants and the literature, but to be a doctoral candidate because of being able to conduct a qualitative study produces professional growth. Personally, completing this study allowed me to interact with other leaders and receive their first-hand accounts of their experience leading in a virtual environment. Scholars concluded that in the academic arena, a researcher's worldview has tremendous implications in that it affects the design of and how conclusions occur (T. Kim et al. 2018). This qualitative study allowed the experience one-on-one interviews and to gain the views and practices of other leaders successfully leading in a virtual environment. A wealth of

knowledge gained from the literature studied which mirrored the real-life experiences reported by the leader participants. My hopes and faith are that the knowledge and experience gained from this study will be an asset to successfully leading virtually and face-to-face with my small business venture. The primary goal of this study was to gain a better understanding of the effectiveness of government leadership to maintain productivity in a virtual environment. This goal occurred by the findings of this study.

Biblical Perspective

God has given us the necessary skills, talents, and favor to overcome the obstacles of this world. The Bible explains: "And I have filled him with the spirit of God, in wisdom, and in understanding, and in knowledge, and in all manner of workmanship" (*King James Bible*, 1769/2017, Exodus 31:3). Faith, knowledge, and Biblical perspective led to me gaining the necessary approval at a federal agency to conduct this study but to also see this research study to the end.

As a federal government leader, I was able to bring a Christian worldview to this study. The Christian worldview locates the problem with the world not in any part of it or in any distinct group of people but rather in sin. Research locates the problem in processes and people. The Christian worldview holds that: (a) there is a God who existed before the world existed, (b) this one true living God created the world, (c) He is the ultimate origin of everything formed and developed, and (d) that this worldview is found in scriptures (T. Kim et al., 2018). In business research, Christian worldview dictates the way we resolve ethical issues and make decisions at work (T. Kim et al., 2018). This study was about serving our neighbors through our vocations just as God intended our work to do. We are to share our gifts and knowledge as we serve Jesus Christ and others. Therefore, knowledge can gain by conducting research and sharing it with

others for their obtainment of understanding. This researcher's study is an honor to God. I will continue to keep the word and will of God as the ultimate guide. This study included the Holy Spirit flowing within and through self. An effective style of communication comes from daily prayer to God to give an individual the right words and the right manner and delivery of all communications, verbal and nonverbal alike. This practice of effective communication was a finding of this study. "Let the word of Christ richly dwell within you as you teach and admonish one another with all wisdom, and as you sing psalms, hymns, and spiritual songs with gratitude in your hearts" (*King James Bible*, 1769/2017, Colossians 3:16). This study occurred with the love of God dwelling in and from this researcher consequently allowing the participants to be respected and treated with care.

Summary of Reflections

The problem that motivated this study is the possible challenges of leaders to maintain employee motivation in a virtual environment that could result in the reduction of organizational productivity. The specific problem addressed was possible challenges of leaders' face within the Veterans Affairs to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. The outcomes from this study are consistent with the literature concerning leaders successfully leading in virtual environments. This section included recommendations for further study, a personal reflection on personal and professional growth, and a discussion of the researcher's thoughts on a Biblical perspective.

Summary of Section 3

Section 3, Application to Professional Practice included a presentation of findings. A detailed overview was also presented in this section. Also included in Section 3 was a discussion of the application to professional practice, recommendations for further study, and a personal,

professional, and Biblical reflection. This research was to understand and clarify how virtual environments contribute to challenges leaders may experience with maintaining employee productivity for organizational success. The specific problem addressed was possible challenges leaders face with maintaining employee productivity in a virtual environment. The findings in this study demonstrated that transformational leadership and servant leadership styles have impacts in federal government virtual leadership. These leadership styles and traits were a personal leadership style by several participants. The obligation of the leaders included portraying positive results between leadership and employees' working experiences. The findings of this study suggest that the participants are experiencing success while leading in a virtual environment. Furthermore, the findings of this study suggest that the participants have accepted and adapted to their new work environment. The results from this study indicated the commitment of the participants were to become effective leaders in a virtual environment.

Summary and Study Conclusions

The specific problem addressed by this study was the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment resulting in the possible reduction of organizational performance. The general problem addressed was the challenges leaders face with maintaining employee productivity in a virtual environment resulting in the reduction of organizational performance. The research questions and sub-questions fully addressed the specific problem statement as they led to knowledge of why the challenges of leaders to maintain employee productivity in a virtual environment and uncovered ideal leadership styles and behaviors to prevent or reduce failure. Furthermore, the research questions and sub-questions fully addressed the specific problem statement because they allowed the researcher to collect data from different aspects of the problem and situation that was

analyzed and interpreted, while at the same time provided data that applied to overcome the problem. The research questions and sub-questions had the potential to lead to original work yet generate new insights.

The purpose of this flexible design single case study was to add or expand the understanding of reasons behind the potential challenges of federal government leaders with maintaining employee productivity in a virtual environment. With the researcher utilizing qualitative techniques, the constructivism paradigm guided this study by the development of reality and knowledge constructed through human interaction. As a federal government leader, this researcher brought a worldview to this study. The research determined that the driving factors in employee productivity in the federal government while in a virtual environment and to see if there was a specific leadership style to help maintain productivity and organizational performance. The larger problem of maintaining employee productivity in the federal government explored through an in-depth study of employee productivity and its effect on organizational performance in the Veterans Affairs (VA). Additionally, this study added to the body of knowledge by studying the effects of virtual leadership styles in the VA, the nation's largest healthcare system (Administration, 2008).

This study included identifying what leadership styles and behaviors can include best practices to maintain employee productivity in a virtual environment for successful organizational performance. This study is significant as the findings from this study can serve as a resource and reference for future researchers. The results could assist individuals and leaders to understand and recognize practices leadership can use to maintain employee productivity in a virtual environment. Additionally, this study is significant because of the importance to the field of business administration. This study can add to the literature and could fill a gap or lead to

further understanding in the field of leadership and identify best leadership practices and styles for successfully leading in a federal virtual environment by providing a broader understanding of the developing topic. Furthermore, this study can fill in the gap or add understanding and effective practice of leadership by revealing competency most effective to lead in a virtual environment.

The findings of this study illustrated a full understanding that leaders are still facing communication challenges from leading in a virtual environment but are finding successful styles and methods to successfully overcome these challenges. The findings of this study suggest that the federal government leaders use intrinsic motivation to maintain productivity levels and organizational success. The findings of this study revealed the importance of leadership style on an organizational success level and on a personal leader's perspective. The findings of included the suggestion that the population has not experienced a loss in productivity after moving into a fulltime virtual environment because of adapting communication and leadership methods. The findings of this study showed that the federal government agency leaders overall organizational performance level of employees remain stable in a fulltime virtual environment. Furthermore, the findings of this study show that the participants are experiencing success while leading in a virtual environment. The findings revealed a positive connection between having and maintaining effective communication and maintaining employees' productivity, which also mirrors results discovered throughout the literature. A positive connection between a loss of social presence while leading virtually, represents results discovered throughout the literature. Leaders' having integrity and honesty as a key trait for virtual leadership success was also a discovered theme. Lastly, the findings of this study suggest that the participants have accepted and adapted to their new work environment.

This study included addressing the relationship to the leadership cognate as it associates with managing human resources, quality management, productivity, and leading organizational change. This study can benefit business practice because of revealing an effective leadership style to utilize to obtain success while leading in a virtual environment. This study benefits business practice as it revealed the most effective manner of communication style to utilize to overcome the possible challenges of leaders within the Veterans Affairs (VA) to maintain employee productivity in a virtual environment. Future studies regarding the effectiveness of government leadership to maintain productivity in a virtual environment can include evaluating the effectiveness of different leadership styles, other theories, and other concepts and constructs.

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Appendix A: Permission Request Form A

Date: 2/24/2023

Recipient: Donyale Smith

Title: Director

Company: Department of Veterans Affairs

Address: 849 International Dr. Linthicum Heights, MD

Dear Ms. Smith,

As a graduate student in the School of Business at Liberty University, I am conducting research as part of the requirements for a Doctor of Business Administration degree. The title of my research project is Effectiveness of Government Leadership to Maintain Productivity in a Virtual Environment and the purpose of my research is to add or expand the understanding of reasons behind any potential challenges of federal government leaders with maintaining employee productivity in a virtual environment.

I am writing to request your permission to contact members of your staff at the Department of Veterans Affairs (VA), VISN 5 to invite them to participate in my research study.

Participants will be asked to complete the attached questionnaire and to participant in an audio recorded interview lasting no more than 1 hour and a possible follow-up interview lasting no more than 15 minutes. The data will be used to determine the driving factors in employee productivity in the federal government while in a virtual environment and see if there is a specific leadership style to help maintain productivity and organizational performance. Participants will be presented with informed consent information prior to participating. Taking part in this study is completely voluntary, and participants are welcome to discontinue participation at any time.

Thank you for considering my request. If you choose to grant permission, please respond by email to cshowell1@liberty.edu. A permission letter document is attached for your convenience.

Sincerely,

Crystal J. Showell
Doctoral Student
Liberty University School of Business

Appendix B: Interview Guide

Date:

Name:

Start with background information on researcher, interviewee, and program.

This study has been approved by the Institutional Review Boards (IRB), and you as a participant consent to participate in this interview with the understanding that your personal information will remain confidential. Continuation with this interview serves as a formal consent.

Do you have any questions for me before we start?

Do you consent to participating in the study and to being audio recorded during the interviews?

How long have you been a leader at the VA?

Have you led in a fulltime virtual environment for at least 12 months? Have you led in a fulltime virtual environment for less than 12 months?

How long have you been in leadership?

Main Interview

1. What is your leadership style; how would you describe yourself as a leader? (RQ1 & RQ2)

2. What does being a virtual leader mean to you and how is this different from face-to-face leadership? (RQ1 & RQ2)

3. Have you changed your leadership style due to leading fulltime virtually? If so, how? (RQ1 & RQ2)

4. What is your virtual communication style and main method used for communication with your followers? (RQ1 & RQ2)

5. Have you encountered a lack of communication between yourself and your followers while leading virtually? If so, can you explain and give an example? (RQ1)

6. Have you encountered a lack of communication between yourself and your leader while leading virtually? If so, can you explain and give an example? (RQ1)

7. Have you encountered challenges specific to leading in a virtual environment? If so, how? (RQ1 & RQ2)

8. Have you encountered a drop in subordinate(s) productivity while leading in a virtual environment? If so, can you explain and give an example? (RQ1 & RQ2)

9. Have you had to adapt your leadership style to maintain or increase employee productivity? (RQ1 & RQ2)

10. Did you discover strategies or practices to better lead in a virtual environment? If so, can you explain and give an example(s)? (RQ1 & RQ2)

11. What organizational values are most important to you and why? (RQ3)

12. Are there any traditions or practices you use while leading virtually? If so, can you explain and give an example? (RQ3)

13. Do you believe the VA has been successful with leadership in a fulltime virtual environment? Please elaborate on your answer. (RQ3)

Closing Statement

Thank you for your participation in this study. Are there any questions you would like to discuss further? Would you be available for a second interview as a follow-up to make sure that I have summarized your responses accurately and have made the correct conclusions from this interview? If so, should I contact you by phone or e-mail?

Appendix C: Observation Protocol C

Date:		
Tine:		
Length of Interview: _____ minutes		
Site:		
Participant:		
Descriptive Notes	**Observational Notes**	**Researcher's Reflective Notes**
Virtual Environmental Setting: Visual Layout	Description of Participant	Questions to Self Observation of Nonverbal Behavior My Interpretations

Appendix D: Transformational Leadership Survey D

Transformational Leadership

1. I provide employees with clear responsibilities and allow them to determine how to achieve them.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

2. I make sure employees are aware of, and understand all organizational policies and procedures.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

3. I recognize employees' achievements with encouragement and support.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

4. I meet with employees regularly to discuss their needs.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

5. I avoid making judgements or premature evaluations of performance.

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always

6. I establish or identify performance standards for each aspect of my employee's job.

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always

7. I ask employees to think ahead and develop long-term plans for their career goals.

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always

8. I explain to my employees, the benefits of achieving their work goals.

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always

9. I rotate the role of team trainer among my employees.

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always

10. I hold regular meetings to discuss work status.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

11. I provide employees with the time and resources to pursue their own developmental objectives.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

12. I check employees' work on a regular basis to assess their progress and development.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

13. I discuss the organization's strategic mission with my employees.

  ○ Never

  ○ Rarely

  ○ Sometimes

  ○ Often

  ○ Always

14. I emphasize the importance of quality, but I allow my employees to establish the control standards.

  ○ Never

  ○ Rarely

  ○ Sometimes

○ Often

○ Always

15. I ensure that information systems are timely and accurate and that information is provided directly to my employees.

○ Never

○ Rarely

○ Sometimes

○ Often

○ Always