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The mediating influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace

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MEDIATING INFLUENCE OF ORGANIZATIONAL TRUST ON THE
RELATIONSHIP BETWEEN TRANSFORMATIONAL LEADERSHIP
AND JOB SATISFACTION IN THE VIRTUAL WORKPLACE

by

Angela Renee Daniels

A Dissertation
Submitted to the Graduate School,
the College of Business and Economic Development
and the School of Leadership
at The University of Southern Mississippi
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

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ABSTRACT

Research has shown how leadership influences job satisfaction and organizational trust in the virtual workplace. With an increasing number of organizations shifting to these work environments, it is essential to study the effect of leadership on virtual workers. Prior studies suggest that leadership behaviors significantly impact job satisfaction (Hacker et al., 2019), and leadership plays a crucial role in inspiring employees to achieve the goals and objectives of the organization in a virtual workplace (Miller, 2020). Specifically, transformational leadership behaviors that shape the mindset and actions of employees are significant (Abelha et al., 2018). This study proposed a mediation model in which organizational trust influenced the relationship between transformational leadership and job satisfaction. Using a quantitative cross-sectional research design, the researcher addressed the research questions and objectives. This study collected data via an online survey from 415 virtual U.S. workers recruited through Amazon Mechanical Turk (MTurk). Findings from this research study support the relationship between transformational leadership and job satisfaction in the virtual workplace. The study also provides statistical evidence that organizational trust indirectly affects the relationship between transformational leadership and job satisfaction in the virtual workplace. The findings from this study could contribute to training and leadership development initiatives within organizations by recognizing the circumstances that heighten the demand for human capital investments and identifying factors that enable transformational leadership to benefit job satisfaction in the virtual workplace.

Keywords: Amazon Mechanical Turk (MTurk), job satisfaction, organizational trust, transformational leadership, virtual workplace

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DEDICATION

I am incredibly fortunate to have my mother, Kathleen Anderson. The Human Capital Development program at the University of Southern Mississippi would not have been possible without her inspiration.

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LIST OF ABBREVIATIONS

<i>DV</i>	Dependent Variable
<i>GTL</i>	Global Transformational Leadership Survey
<i>HCD</i>	Human Capital Development
<i>HIT</i>	Human Intelligence Task
<i>IV</i>	Independent Variable
<i>JS</i>	Job Satisfaction
<i>JSS</i>	Job Satisfaction Survey
<i>OT</i>	Organizational Trust
<i>OTI-SF</i>	Organizational Trust Inventory: Short Form
<i>MV</i>	Mediator Variable
<i>SHRM</i>	Society for Human Resource Management
<i>TFL</i>	Transformational Leadership
<i>U.S.</i>	United States
<i>USM</i>	The University of Southern Mississippi

CHAPTER I – INTRODUCTION

With increasing global competition and advancements in information and telecommunication technologies, organizations are developing virtual workplaces (Maduka et al., 2018; Zahar et al., 2021). The virtual workplace allows individuals from various backgrounds and experiences to work together and combine their expertise, skills, and abilities to meet organizational objectives (Ford et al., 2017; Vought, 2017). Previous research indicates that clear communication, a technology strategy, and effective leadership are essential for the success of the virtual workplace (Wade, 2019). Bagga et al. (2022) suggested that effective leadership is crucial in virtual work settings to foster connections. Other research supports that good leadership is crucial to meet these changing environments' demands, increasing productivity and performance (Dhawan & Chamorro-Premuzic, 2018; Maduka et al., 2018). Managing a virtual business setting can be difficult, and organizations are concerned with developing leaders who can effectively lead these environments (Bagga et al., 2022). The researcher proposes that by utilizing effective leadership, organizations can overcome obstacles such as trust (Mackey, 2022) and job satisfaction (Mohite & Kulkarni, 2019). Maduka et al. (2018) assert that it is vital for organizations to understand the necessary leadership to lead a virtual workplace successfully.

Recent literature suggests that transformational leadership is the most effective style for leading virtual workers (Bagga et al., 2022) and has a significant relationship with job satisfaction (Anoye & Kouamé, 2018; Miller, 2020). Maduka et al. (2018) examined the relationships between transformational leadership and job satisfaction and identified a positive link between the two variables. Other studies suggest a significant

relationship between the two variables that researchers should explore further (Miller, 2020; Sinclair et al., 2021). This research study examined the relationship between transformational leadership and employee job satisfaction in the virtual workplace. Chapter I establishes the background of the study, an overview of challenges associated with virtual leadership, and the research context. The problem statement will explain this quantitative research study (Roberts & Hyatt, 2019). This chapter also provides the conceptual framework and significance, which proceeds with the research question and objectives. Lastly, this chapter provides a definition of the terms and an explanation of the assumptions.

Background of the Study

An increasing number of organizations are establishing virtual workplaces to stay competitive in the global marketplace. Thanks to sophisticated information and telecommunication technologies, organizations can attract the best candidates regardless of geographical location (Liao, 2017; Vought, 2017). Subsequently, the transition to these work environments significantly benefits both organizations and employees by boosting productivity, autonomy, flexibility, competitiveness, profitability (Dhawan & Chamorro-Premuzic, 2018; Ford et al., 2017) while also decreasing time and overhead costs (Hacker et al., 2019). While the virtual workplace was becoming increasingly popular, many organizations had to adopt them abruptly when the World Health Organization (WHO) declared COVID-19 a global pandemic on March 11, 2020 (Hidayat et al., 2021; Widanti & Sunaryo, 2022).

The research defines the virtual workplace as a geographically and organizationally remote location linked by technology where employees perform work

assignments (Ford et al., 2017; Maduka et al., 2018). However, a technological connection may not equate to a personally connected team of virtual workers. These individuals depend on technology and effective leadership to communicate and build a sense of satisfaction and trust in the virtual workplace (Hacker et al., 2019). Research suggests virtual leadership is crucial (Coun et al., 2019), and leading involves unique leadership behaviors (Malik et al., 2017). Research studies support that leadership influences processes and organizational outcomes (Liao, 2017; Maduka et al., 2018) for managing tasks and collaboration among geographically distributed, culturally diverse individuals (Anoye & Kouamé, 2018; Maduka et al., 2018; Vought, 2017). Although effective leadership contributes to overall employee job satisfaction (Liao, 2017; Mohite & Kulkarni, 2019), there is a need for further on the leadership behaviors best suited for the virtual workplace (Jaffe & Lordan, 2020; Malik et al., 2017; Vought, 2017).

This study examined the relationship between leadership and job satisfaction in the virtual workplace. To further investigate, the research also examined the influence of organizational trust on the relationship in the virtual workplace. Without understanding the leadership behaviors that stimulate and motivate virtual workers, job performance may be affected (Liao, 2017; Mohite & Kulkarni, 2019). Employee job satisfaction could also be at risk (Anoye & Kouamé, 2018; Barnett, 2018; Robert & You, 2018). Research suggests that organizations will overcome the challenge of maintaining job satisfaction and organizational trust in the virtual workplace through effective leadership (Hidayat et al., 2021). Therefore, it is reasonable to hypothesize that effective leadership influences job satisfaction and trust in the virtual workplace (Jaffe & Lordan, 2020; Maduka et al., 2018; Mohite & Kulkarni, 2019). Finding ways to facilitate job satisfaction and

organizational trust through leadership is crucial for retaining productive and efficient employees (Mohite & Kulkarni, 2019). Without effective leaders, organizational performance in the virtual workplace is likely to fail (Maduka et al., 2018).

According to Maduka et al. (2018), leading from a distance requires unique behaviors. Organizations should understand the importance of leadership and not confuse virtual leadership with traditional face-to-face leadership (Newman & Ford, 2021). The difficulty of leading employees in a virtual setting emphasizes the necessity for further research to assist organizations in effectively leading the virtual workplace (Miller, 2020). Many efforts to comprehend and cultivate virtual leaders emphasize leadership styles while disregarding the significance of training and the leadership actions that enable triumph in a virtual work setting (Hoch & Dulebohn, 2017; Jaffe & Lordan, 2020; Liao, 2017). There is an emphasis on effective leadership in these environments (Coun et al., 2019; Maduka et al., 2018; Malik et al., 2017). Efforts to identify effective virtual leadership are insufficient without examining how leadership affects attitudes in the virtual workplace (Maduka et al., 2018). Maduka et al. (2018) suggest that identifying and assessing behaviors for virtual workplace leadership integration is instrumental in building organizational success. Current research supports adopting a transformational leadership style (Anoye & Kouamé, 2018; Coun et al., 2019). The transformational leader inspires and motivates followers, promotes trust (Hacker et al., 2019), and increases job satisfaction (Mohite & Kulkarni, 2019). Determining the specific behaviors needed to lead virtual workers to high performance and organizational success (Maduka et al., 2018) has drawn increasing attention (Liao, 2017), and more research has emerged (Coun et al., 2019; Jaffe & Lordan, 2020; Maduka et al., 2018).

There are several leadership styles; however, this study examines the relationship between transformational leadership and job satisfaction in the virtual workplace. The relationship between transformational leadership and job satisfaction has the potential to serve as a measurement of effective virtual leadership. Maduka et al. (2018) consider the virtual workplace on the continuous rise, with approximately 250 million individuals working online worldwide. However, building a productive virtual workplace may not be possible without effective leadership (Dhawan & Chamorro-Premuzic, 2018; Maduka et al., 2018). Additionally, the current study examined the mediating influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace. This inquiry is the primary driving force behind the current study, which has practical implications for the human capital development field.

Statement of the Problem

Over the last 20 years, there has been a trend toward the virtual workplace, and studies increased regarding leading these environments (Newman & Ford, 2021). Virtual workplaces are helping organizations to stay competitive, meet demands, and increase productivity and job performance (Dhawan & Chamorro-Premuzic, 2018; Maduka et al., 2018). Ideally, leaders have the skills and behaviors necessary to lead (Jaffe & Lordan, 2020; Maduka et al., 2018; Mohite & Kulkarni, 2019). Research studies identify transformational leadership behaviors as the most effective leadership for this work environment and found that transformational leaders positively influence several critical outcomes in the virtual workplace, such as job performance, job satisfaction, and organizational trust (Hacker et al., 2019; Hidayat et al., 2021; Jaffe & Lordan, 2020; Kars

& Inandi, 2018; Miller, 2020; Mohite & Kulkarni, 2019). These leaders are role models that inspire effective communication, trust, and commitment (Abelha et al., 2018).

The reality is that today's organizations are deeply concerned with developing leadership that can lead from a distance (Bagga et al., 2022). Factors such as global competition and the COVID-19 pandemic forced organizations to rapidly expand from traditional face-to-face office settings to the virtual workplace (Bagga et al., 2022).

According to the U.S. Census Bureau (2022), between 2019 and 2021, working from home tripled from 5.7% (approx. 9 million) to 17.9% (27.6 million people).

Advancements in information and communication technology made virtual work possible (Liao, 2017), and the declaration of the COVID-19 outbreak accelerated the shift.

However, while technology enables virtual workplaces, the leaders drive the trend forward and bind the workplace together (Bagga et al., 2022).

Furthermore, despite virtual workers' advantages, organizations face challenges in developing leaders to lead these changing work environments (Bagga et al., 2022; Miller, 2020). Some of the issues are that the virtual workplace differs from traditional work settings in building trust, social interaction, and overcoming feelings of isolation (Vought, 2017). Virtual workplaces bring advantages and disadvantages for virtual workers and employers (Wigert & White, 2022). Developing proactive leaders to lead virtual workplaces is challenging for organizations (Bagga et al., 2022). Given the pace of change, it is critical to establish a connected virtual workplace, and this is causing a strain on leaders who may have little experience or training necessary for virtual workplace success.

Since empirical research suggests that transformational leadership is related to job satisfaction (2020; Maduka et al., 2018; Mohite & Kulkarni, 2019), this study aims to improve the understanding of the relationship between transformational leadership and job satisfaction in the virtual workplace. Subsequently, leadership is related to organizational trust. Since leadership and organizational trust are perceived to have a positive relationship (Mohite & Kulkarni, 2019), the goal was to examine how organizational trust influences the relationship between transformational leadership and job satisfaction in the virtual workplace. The study's results may guide transformational leadership behaviors that could enhance employee job satisfaction. These workplace changes pose unique challenges to theory and research on transformational leadership. Failure to identify effective leadership behaviors for building a successful virtual workplace could negatively impact trust (Maduka et al., 2018) and diminish satisfaction (Mackey, 2022). Understanding how to lead from a distance is vital for workplace satisfaction (Bagga et al., 2022).

Purpose of the Study

This quantitative cross-sectional study examined the relationship between transformational leadership and job satisfaction in the virtual workplace. Also, to bridge the gap between transformational leadership and job satisfaction, the researcher examined the influence of organizational trust on the relationship. Previous studies suggest that organizations will overcome the challenge of maintaining satisfaction and trust in the virtual workplace with transformational leadership (Mohite & Kulkarni, 2019). This research study also examined the influence of organizational trust on that relationship in the virtual workplace. For this research, transformational leadership was the independent

variable, the dependent variable was job satisfaction, and organizational trust was the mediating variable. The purpose of the study was to provide insight that could assist in understanding the relationship between transformational leadership and job satisfaction within a virtual workplace.

Research Questions and Objectives

This quantitative study examines the relationship between transformational leadership and job satisfaction in a virtual workplace. According to Hoch and Kozlowski (2014), researchers should identify the mediating mechanisms linking input factors with team performance. There are numerous unanswered inquiries about leadership behaviors that foster improved effectiveness. Also, the aim extends to examine organizational trust as a mediator of the relationship between transformational leadership and job satisfaction in the virtual workplace. The central research questions are, *What is the relationship between transformational leadership and job satisfaction in a virtual workplace? Does organizational trust influence the relationship between transformational leadership and job satisfaction in a virtual workplace?* The following research objectives (ROs) will guide the exploration.

RO1 – Describe the demographic characteristics of respondents by age, race, gender, education, industry type, length of time working virtually, and time reporting to the current leadership.

RO2 – Determine the relationship between transformational leadership and job satisfaction in a virtual workplace.

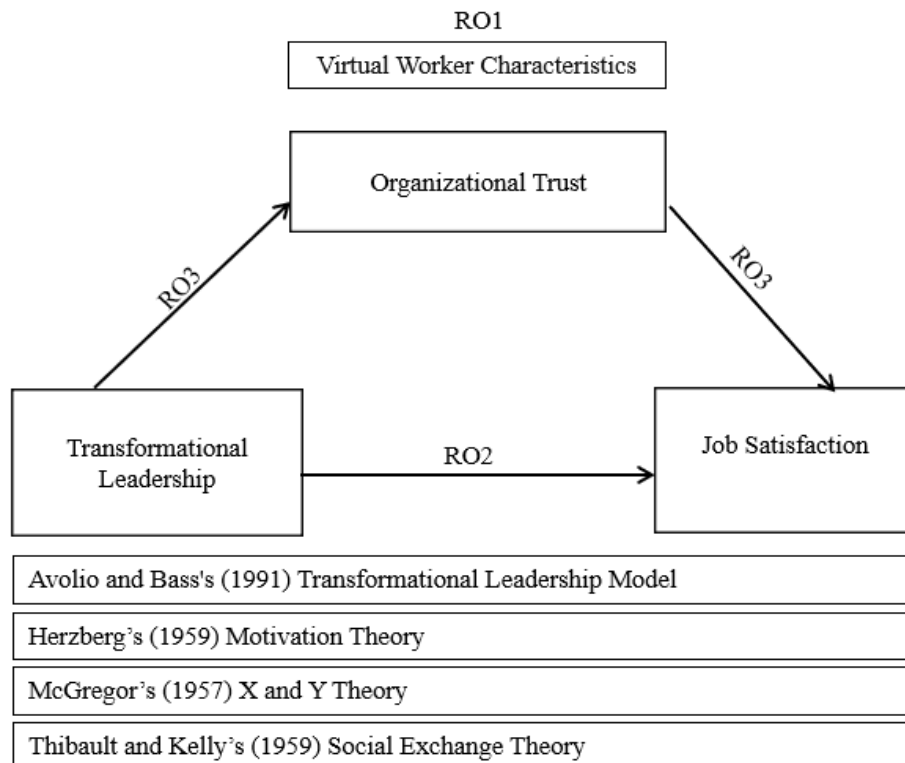
RO3 – Determine the influence of organizational trust on the relationship between transformational leadership and job satisfaction in a virtual workplace.

Conceptual Framework

The study's framework illustrates how organizational trust influences the connection between transformational leadership and job satisfaction within a virtual workplace. The study established a conceptual model using the transformational leadership model (Avolio & Bass, 1991), social exchange theory (Thibaut & Kelley, 1959), Herzberg's motivation theory (Herzberg et al., 1959), and McGregor's X and Y Theory (McGregor, 1957). Figure 1 represents the conceptual framework, or focus, for this study.

Figure 1

Conceptual Framework



Avolio and Bass's (1991) full-range leadership model is one of the most extensively utilized and validated approaches to examining leader behaviors. This model includes three styles of leadership behaviors, transformational, transactional, and passive/avoidant leadership. For this study, the leadership focus is on transformational leadership. The social exchange theory (Thibaut & Kelley, 1959) focuses on social behaviors extending to employee management. In other words, when individuals receive a service, they feel obligated to repay the gesture. These relationships create mutual respect and are associated with cohesiveness and a strong prediction of workplace satisfaction. Team members build trust based on leadership following their commitments (Robert & You, 2018).

The Herzberg two-factor theory of satisfaction and motivation is widely considered one of the most significant work redesign theories. According to the authors, intrinsic characteristics of the work largely determine the degree of job satisfaction. These motivators are intrinsic factors. In contrast, factors external to the work, known as hygienes, are responsible for job dissatisfaction (Herzberg et al., 1959). Leaders are in a position where they can motivate employees with the constructs of the job in a way that enhances job performance (Pranitasari, 2020). The literature identifies that transformational leadership positively affects job satisfaction (Ashgar & Oino, 2018; Maduka et al., 2018). Therefore, this study conceptualized transformational leadership as a predictor of job satisfaction in the virtual workplace.

Significance of the Study

The organizational workplace has changed drastically in the past few decades (Chernyak-Hai & Rabenu, 2018). The growing demand to advance in today's global

economy has forced organizations to shift their way of doing business to stay competitive in the market. One of those changes has been the growing trend of organizations shifting to the virtual workplace (Newman & Ford, 2021). However, changes to the workplace have created challenges for organizations (Miller, 2020), such as the dependency on leadership to cultivate the environment with social interaction and support (Gallup, 2020). Jaffe and Lordan (2020) identified that virtual workplace success requires strong leaders who can bring multiple personalities and behaviors together. Other literature suggests that a leader's ability to create and maintain a satisfying workplace influences organizational trust (Guzzo et al., 2021; Mohite & Kulkarni, 2019). This study aimed to provide insight into transformational leadership and its relationship to job satisfaction in the virtual workplace. Organizations contemplating implementing a virtual workplace may use this timely research study to gain knowledge on virtual leadership. Additionally, researchers who study transformational leadership and job satisfaction in the virtual workplace will have additional literature to build a broader discussion.

Definition of Key Terms

The researcher provided operational definitions to provide clarity and consistency within this study.

1. *Job satisfaction.* In this study, job satisfaction included employees' positive or negative feelings about their job (Zhang, 2016).
2. *Leadership competencies.* Behavioral indicators, skills, and abilities effectively contribute to an organization's performance (Vought, 2017).
3. *Organizational trust.* The study defines the concept of vulnerability as an individual's readiness to rely on someone else, with the expectation that the

other person will perform a specific action that is crucial to the trusting party (Ford et al., 2017).

4. *Transformational leadership*. It is a leadership style that inspires positive change and strongly influences employees' attitudes and behaviors, enhancing job satisfaction (Karem et al., 2019).
5. *Virtual leadership*. Individuals guide and lead a virtual work environment to reach performance goals. They develop and facilitate in the virtual workplace, are proficient in communication, and can develop trust. (Karem et al., 2019).
6. *Virtual teams*. Members are geographically separated, and work is organized and communicated through information and communication tools (Zahar et al., 2021). The literature refers to these teams as the virtual workplace, teleworkers, telecommuters, and remote workers. This research study will refer to teams as virtual workplaces.
7. *Virtual workers*. *Employees* who work at home or in a remote location use communication tools, such as phone, fax, modem, Internet teleconferencing, e-mail, or instant messaging (Mohite & Kulkarni, 2019). The current study refers to virtual workers as remote employees or teleworkers.
8. *Virtual workplace*. Indicates that employees work from a location other than the employer's business office. (Mohite & Kulkarni, 2019).
9. *Telework*. When an employee's residence serves as their place of work, this is known as a home-based workplace. The available literature defines hybrid teleworking as a combination of working from home part-time and coordinating work hours at the organization's office (Zöllner & Sulíková,

2021). The current study will refer to telework or telecommuting as virtual work.

Assumptions

Assumptions are what researchers take for granted (Roberts & Hyatt, 2019). The researcher identified three assumptions concerning this study. Firstly, the respondents provide truthful and accurate responses without the inclination to fabricate them. While one assumes the answers are honest, there is no way to verify the data's accuracy. Secondly, the researcher assumes the language used was clear, and respondents comprehended the concept of virtual work and performed in a virtual role for at least half a year. Finally, the researcher assumed that individuals from various job industries might have varying experiences working virtually.

Organization of Remaining Chapters

The study contains five chapters. Chapter I introduced the study, including its background, purpose, and importance. Chapter II examines the literature on the virtual workplace, transformational leadership, job satisfaction, and organizational trust. The third section, Chapter III, focuses on the research methodology and tool, outlining the proposed process for collecting and analyzing data. Chapter IV will analyze the quantitative data collected in the study. Finally, Chapter V will summarize the study's findings and make recommendations for future research.

Summary

This chapter introduced the study by laying the foundation for the background of the study, purpose, and conceptual framework by providing an overview of transformational leadership and job satisfaction in the virtual workplace. Organizations

must understand how leadership impacts job satisfaction in these work environments.

According to Newman and Ford (2021), creating a virtual workplace culture in which leaders synchronize individuals' objectives with the organization's goals is crucial.

Organizations can achieve a work culture through supportive structures and procedures, formal and informal communication channels, and effective leadership practices.

The transition of organizations towards reliance on the virtual workplace presents unique challenges for leadership, which current research on leading the virtual workplace does not sufficiently address (Hacker et al., 2019). Therefore, this research design uses a quantitative cross-sectional study to examine the relationship between transformational leadership and job satisfaction in the virtual workplace. The study also determines if organizational trust influences that relationship. The researcher realizes the study's virtual workplace timeliness follows the COVID-19 pandemic (Hidayat et al., 2021). This study aimed to expand current research on the relationships between transformational leadership and job satisfaction in the virtual workplace and determine organizational trust's influence on that relationship.

CHAPTER II – LITERATURE REVIEW

In the last 20 years, it has become more common for organizations to shift to virtual workplaces to stay competitive and meet goals and objectives. The emergence of the COVID-19 pandemic of 2020 brought about an unprecedented crisis not just in the living conditions of individuals but also in the working conditions of the organization (Agarwal et al., 2020; Zöllner & Sulíková, 2021). The outbreak accelerated the expansion of virtual workplaces and made these work environments the new normal (Hidayat et al., 2021; Kniffin et al., 2020). Organizations continue learning to lead effectively in the virtual workplace (Lister, 2020; Newman & Ford, 2021). The abrupt nature of this transition made it challenging or impractical to sufficiently equip leaders with the necessary skills to manage the virtual workplace (Newman & Ford, 2021). Managing virtual workers can be challenging, mainly due to the limited knowledge of how to lead them effectively to optimize performance (Agarwal et al., 2020). Some of the challenges include communication (Agbi, 2018), trust (Hacker et al., 2019), and the lack of training in leading the virtual workplace (Hoch & Dulebohn, 2017). Ineffective virtual leadership could hinder job performance and impact employee job satisfaction (Barnett, 2018; Miller, 2020).

In the virtual workplace, leadership plays a critical role in shaping employees' work experience. Leaders who utilize transformational leadership can help reduce employee turnover (Hidayat et al., 2021) and improve employee job satisfaction (Sinclair et al., 2021). Studies have shown that examining leadership on employee motivation is essential for success in the virtual workplace (Maduka et al., 2018). Although further research is needed to understand effective leadership behaviors in the virtual workplace,

studies have found that transformational leaders influence job satisfaction (Hidayat et al., 2021; Miller, 2020). This literature review examines previous studies that analyzed the relationship between transformational leadership and job satisfaction in the virtual workplace (Maduka et al., 2018; Miller, 2020).

This chapter reviews relevant literature in the field of the virtual workplace, transformational leadership (predictor), and job satisfaction (outcome). The literature related to leadership theories includes definitions and discussions on leadership theories. The focus is on transformational leadership, which is the conceptual framework of this study. This chapter provides a detailed overview of the relationship between transformational leadership and job satisfaction and how they relate to the virtual workplace. The chapter concludes with information regarding organizational trust as an influencer of the relationship between the two variables.

The Virtual Workplace

In 1974, during an interview on ABC Television, Arthur C. Clarke, a science fiction writer and futurist, predicted that computers would make it possible for employees to work from home (ABC News In-depth, 2013). This prediction has become a reality as many organizations have begun adopting a remote workplace model. An example is ghSMART, a company with an entirely remote team that reported a 93% retention rate and 20% annual growth in 2020. They attribute their success to their remote work model (Smart, 2021). From July to September 2021, the Bureau of Labor Statistics carried out the 2021 Business Response Survey, which obtained data from a diverse sample of private sector establishments in the United States. A total of 83,032 participated in the survey. According to survey results, 13 percent of all private sector jobs in the United

States involve full-time virtual work, while 9 percent are part-time. (Dalton & Groen, 2022). According to a survey conducted by Global Workplace Analytics in 2020, which polled 2,865 employees, 67% of respondents in the United States had to begin working from home for the first time due to the COVID-19 outbreak. However, only 19% of the respondents expressed a desire to continue virtual work in the future (Global Work Analytics, 2022). These findings suggest that transitioning to virtual work has challenged many individuals. Zöllner and Sulíková (2021) conducted a study investigating the correlation between job satisfaction and virtual work, focusing on the difficulties brought about by the pandemic. The authors suggest that if employers can understand the needs of their workers, they can create a work environment that is both supportive and well-regulated. Moreover, it may enhance the likelihood that employees will experience greater job satisfaction and effectiveness in the virtual workplace.

Telecommuting and the Virtual Workplace

Jack Nilles coined the term "telecommuting" while researching organizational decentralization. The author (1975) defines telecommuting as "the use of computational and telecommunications technology to enable employees of large organizations to work from offices close to their homes, rather than commute long distances to a central office" (p. 1143). Telecommuting focuses on minimizing or eliminating the daily commute to the physical workplace. The definition's use in the 1980s and 1990s became consistent, and virtual workplace development has since been a constant (Newman & Ford, 2021). Even before the pandemic, many organizations used a virtual workplace to conduct business for various reasons, such as the need for global expansion, competition, flexibility, and the ability to collaborate using expert talent from around the world (Dhawan &

Chamorro-Premuzic, 2018; Hoch & Dulebohn, 2017). This new form of organization allows greater flexibility in tackling global market challenges (Guinalú & Jordán, 2016).

Additionally, researchers attribute the rise of virtual workplaces to advancements in information and telecommunication technology (Liao, 2017). And then, the pandemic accelerated the adoption from many organizations that may not have otherwise considered a virtual workplace (Agarwal et al., 2020; Newman & Ford, 2021; Whillans et al., 2021). Thanks to technology, employees can now work from anywhere around the world. Time zones rather than physical boundaries now define these work environments. The virtual workplace has become increasingly popular and has attracted attention from businesses looking to optimize their management.

Liao (2017) describes the virtual workplace as mutual accountability and a reliance on technology for communication and collaboration across geographic and organizational boundaries. Most virtual workplace definitions also include a team typically composed of members from different locations from diverse cultural backgrounds. These teams use technology to interact and collaborate across space and time to achieve a shared objective or complete a task (Ford et al., 2017; Mohite & Kulkarni, 2019; Vought, 2017). Zhang (2016) defines the virtual workplace as a team of employees using communication technology to work remotely and complete their assigned tasks. In comparison, there are several researchers with different definitions for virtual teams. This study refers to telework, remote employees, and virtual teams as the virtual workplace. These individuals interact from different geographical areas with a shared purpose across space and time to achieve a common organizational goal using information and communication technology (Mohite & Kulkarni, 2019). These

employees work remotely, either from home or another location, and communicate with their team and coworkers primarily through electronic means (Mohite & Kulkarni, 2019). Virtual workers must have a clear role and goals aligning with the company's objectives.

The shift from traditional face-to-face workplaces to virtual settings has allowed workers to be flexible, whether from home or a coffee shop. Virtual workers may never meet in person and rely on technology to communicate and complete tasks (Liao, 2017; Vought, 2017). This technology can include phones, email, instant messaging, and videoconferencing (Mohite & Kulkarni, 2019). The virtual workplace can improve organizational performance by leveraging people's knowledge, skills, and abilities worldwide (Ford et al., 2017). Morley et al. (2015) similarly suggest that virtual workplaces give organizations access to broader talent and expertise beyond their immediate boundaries. The move to virtual has also provided employees with more flexibility regarding where they work. The virtual workplace can help organizations address two challenges, bringing together employees who are not physically in the exact location to work on tasks or projects and assembling employees to meet location-specific needs, which reduces travel time and costs Ford et al. (2017). This change in organizational structure requires creating a new approach to leadership (Dhawan & Chamorro-Premuzic, 2018), which includes developing leaders to complement the virtual workplace (Maduka et al., 2018).

Advantages of the Virtual Workplace

The advent of the virtual workplace has changed the management of human capital by allowing employees to work at any time and location through technology-enabled communication (Guinalú & Jordán, 2016). Moving from a face-to-face office to

a virtual one has allowed employees to work from anywhere worldwide (Mohite & Kulkarni, 2019). In addition to providing employees with work-life balance (Liao, 2017), virtual workplaces offer organizations many benefits. Organizations can save money on overhead costs by eliminating the need for physical office space and travel while accessing a more comprehensive range of talent regardless of location. Global Workplace Analytics (Lister, 2021) conducted a study that revealed that companies could save an average of \$11,000 annually per half-time virtual worker through increased productivity, reduced employee turnover, fewer absences, and lower office expenses.

Furthermore, the pandemic has highlighted how virtual work can allow businesses to continue operating even when face-to-face work is impossible (Lister, 2021). Despite the many advantages of virtual workplaces, it is essential to note that these benefits depend on effective leadership. Studies have shown that leading a virtual workplace can be more challenging than leading a face-to-face workplace, and good leadership is essential for workplace success. Researchers agree that leadership is critical to a successful virtual workplace (Jaffe & Lordan, 2020; Miller, 2020; Newman & Ford, 2021).

Challenges of the Virtual Workplace

Virtual workplaces have advantages for global organizations but can also bring issues (Vought, 2017). Studies have identified vital factors such as technology, trust, communication, and leadership (Liao, 2017). While virtual workers can be beneficial and efficient, they may also encounter difficulties such as slower workplace formation, difficulty fostering teamwork, trust issues, lack of face-to-face interaction, and feelings of isolation (Vought, 2017). Researchers argue that virtual leaders must be flexible for

virtual workplaces to succeed (Ford et al., 2017). Other research suggests that those who excel as face-to-face leaders may not necessarily be the best leaders in a virtual setting (Guinalú & Jordán, 2016). Nevertheless, the virtual workplace has specific training and communication needs similar to the face-to-face workplace.

Communication. Effective communication is crucial for the success of a virtual workplace (Vought, 2017). The author discussed virtual workplace leadership and stated that performance could be affected if organizations do not adapt their communication methods to the virtual setting. Organizations must re-evaluate communication strategies because a successful virtual workplace relies on team effectiveness (Agbi, 2018). A research study by Agbi (2018) used Tuckman's four stages of development to examine the communication techniques leaders use to manage virtual workers and improve virtual workplace performance. The sample consisted of four virtual leaders from a multinational accounting firm in the United States. Five themes emerged from completing the four stages, synchronization of time, face-to-face interaction, ongoing training, communication tools and frequency, and leadership training and development (Agbi, 2018). Leaders and technology are crucial in maintaining effective communication in a virtual workplace. That includes creating documentation and guidelines and recognizing the significance of implementing specific communication methods. The essence of virtual work is in communication via technology-based media (Afshar, 2019).

Research by Hymer et al. (2021) highlights the importance of leaders in fostering a safe and efficient communication climate for virtual workers and selecting communication methods that align with the dynamics of the virtual setting. Technology facilitates communication and sharing of information through videoconferences,

knowledge sharing, and regular team meetings (Ford et al., 2017). The goal is to ensure that team members are comfortable with technology and that communication is readily available (Liao, 2017). Virtual leaders should also be mindful of the potential difficulties in maintaining effective communication with virtual workers (Agarwal et al., 2020). Leaders act as a central point for disseminating information and should identify problems and devise communication strategies. A study by Agarwal et al. (2020) found that leading the virtual workplace can pose challenges, such as difficulties with communication and onboarding new virtual employees. The study suggests that communication should be consistent and recurring when leading virtual workers. Leaders should establish common communication platforms, like Zoom, Microsoft Teams, Google Hangouts, or WebEx, so employees feel at ease.

In a virtual workplace, communication is dependent on effective leadership. That necessitates leaders to possess both tactical and strategic thinking abilities and to be able to establish a positive culture within the organization (Avolio & Bass, 1991). Avolio and Bass (1991) outline four critical transformational leadership characteristics, idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Transformational leaders outline their vision and inspire their employees to work towards achieving it. These leaders encourage employees to try new methods and provide support to build trust and foster creativity (Avolio & Bass, 1991). Leaders prioritize actions that strengthen connections with others virtually. Carless et al. (2000) assert that leaders use communication to express principles that steer and inspire the workplace. The authors formulated general statements that encompass the behaviors of a transformational leader, which include (a) presenting a clear vision of the organization's

future objectives, (b) treating each employee as a unique individual with prospects for growth, (c) providing motivation and recognition to workers, (d) encouraging trust, collaboration, and engagement among team members, (e) stimulating innovative thinking and questioning assumptions, (f) being transparent about their values and leading by example, and (g) inspiring others by instilling respect and admiration. A good leader will communicate openly with employees and encourage decision-making input (Agarwal et al., 2020).

Personal Connection. Collaborating globally and using technology can replace in-person interactions. Fundamental visual, auditory, and tactile communication skills are needed to communicate effectively in a virtual setting. While building connections with workers used to be accessible in face-to-face settings, the virtual workplace can be more challenging. It is crucial to create a sense of connection in a virtual environment (Nemiro, 2016). When executed correctly, the workplace can collaborate and achieve the organization's goals.

The virtual workplace can also pose challenges, such as difficulty completing project tasks (Ford et al., 2017), misunderstandings due to inadequate face-to-face communication, and the absence of facial cues (Agbi, 2018; Al Amour, 2018). Electronic communication can also make it harder to understand each other (Nemiro, 2016). Research by Newman and Ford (2021) shows that different factors influence how people use collaborative tools and how well they help groups work together. The findings suggest that virtual work environments often have difficulties with collaboration and coordination. The authors found that only a tiny fraction of individuals who work virtually receive training on how to work effectively in a virtual setting. Studies have also

noted that virtual working can make individuals feel isolated, with few opportunities to connect with others or feel like they belong to the organization (Zhang, 2016). Although electronic technology has enabled virtual work, it cannot completely replace human interactions. One major challenge in a virtual workplace is limited visibility and the lack of physical cues in face-to-face meetings. However, effective leadership can foster a cohesive virtual workplace, like in a traditional, co-located environment (Nemiro, 2016).

Leadership. Technology is now an integral aspect of business organizations and leadership. Managing a virtual workplace is more challenging than a face-to-face workplace and requires a unique approach (Nemiro, 2016). Virtual leaders face specific challenges that differ from face-to-face workplaces (Vought, 2017). Leadership significantly impacts the virtual workplace's success (Guinalú & Jordán, 2016). Leadership in the digital age requires mastering communication and technology to connect with the workplace effectively (Vought, 2017). By developing and strengthening relationships, virtual leaders can remove obstacles that impede workplace dynamics and productivity. Good leadership can also improve the satisfaction and trust of virtual workers.

Liao (2017) presented a framework for virtual team leadership that considers the different levels of leadership behaviors and the impact on both the virtual workplace and the individual virtual worker. The model suggests that virtual leaders must adapt their behaviors depending on whether they interact with the virtual team or individual members. Leaders can gear these behaviors towards task-related activities within the virtual workplace setting by building relationships with individuals working alone in virtual locations. Virtual workers may never have the opportunity to meet in person and

rely on technology such as telephone, email, and video conferencing to stay connected with their team and organization (Vought, 2017). These employees may feel isolated and disconnected without proper leadership, leading to poor job performance, decreased job satisfaction, and trust.

Trust in the Virtual Workplace. Working in a face-to-face office setting offers opportunities for employees to interact socially with their coworkers in person, which can be an essential source of job satisfaction. However, employees may not have the same opportunities for in-person interactions with their peers and supervisors in a virtual workplace and may feel isolated. Leaders of virtual workplaces must be proactive in fostering communication, motivation, and a sense of cohesion among virtual workers, as they may face unique challenges in this work environment (Miller, 2020). Trust evolves alongside the team's evolution (Hacker et al., 2019) and can be challenging to establish due to the lack of social cues (Lepsinger & DeRosa, 2015). Leading virtual workplaces can be challenging, and leaders may struggle to build relationships and develop trust in this environment (Ford et al., 2017). According to research studies, leaders who understand the significance of developing a virtual workplace and offer essential resources and assistance can aid in overcoming these challenges. If leaders fail to understand the unique challenges that virtual workers face, feelings of disconnection and dissatisfaction may hinder trust and team cohesion (Zhang, 2016). Effective leadership can bridge this gap and help virtual workers feel like valuable members of the workplace.

Virtual Workplace Intervention

As virtual workplaces become increasingly prevalent, it is vital to research how leadership impacts virtual workers. While much of the existing literature on virtual work

environments focuses on the composition of the virtual workplace and factors that affect their effectiveness, it is necessary to continue examining how leadership influences job satisfaction in the virtual workplace. Previous research suggests that understanding this relationship is crucial for building a motivated and high-performing virtual workplace.

This research study examines the relationship between transformational leadership and job satisfaction in the virtual workplace. The study also investigates if organizational trust influences the relationship. Malhotra et al. (2007) indicate a virtual team-building intervention with six main goals; (a) establish and maintain trust through the use of communication technology; (b) ensure that distributed diversity is understood and appreciated; (c) manage virtual work-life cycle; (d) monitor virtual members' progress using technology; (e) enhance the visibility of virtual members within the team and outside the organization; (f) and enable individual members of the virtual team to benefit from the team. Similarly, DeRosa (2009) suggests several specific interventions to help improve virtual workplace effectiveness, including (a) face-to-face kickoff meetings, (b) more frequent discussions, (c) the use of adequate technology such as videoconferencing, and (d) frequent development interventions for individual members. Maduka et al. (2018) highlighted the need for more research to examine core transformational leadership behaviors for the efficiency of virtual workplaces. However, despite being significant, these methods for effective leadership have limited research (Miller, 2020). This study examined the relationship between transformational leadership and perceived job satisfaction in the virtual workplace.

Leadership

Academic studies on leadership have shifted the focus from who leaders are to the roles of leaders and how they influence subordinates (Sorenson, 2007). Northouse (2019) defines leadership as influencing a group of people to achieve a common goal. Coun et al. (2019) refer to leadership as inspiring others to pursue goals and objectives. In restructuring organizations, leaders manage employees by ensuring they are satisfied and motivated (Barnett, 2018). At one time, leadership styles were direct and task-oriented. However, Burns urged researchers to shift away from a leader-centric approach and instead examine the relationship between leaders and followers, with both working towards a shared goal (Sorenson, 2007). For many years, leadership research focused on identifying leaders' unique qualities and behaviors, which proved ineffective. Sorenson argued that this behavioral approach to leadership was flawed. Subsequent social science research adopted Burns' perspective, which yielded findings that supported his emphasis on the leader-follower relationship (Sorenson, 2007), paying close attention to the leader-follower exchange as both motivating and generalizable.

Leading the Virtual Workplace

Leadership plays a vital role in the success of virtual workplaces (Nemiro, 2016). Additionally, research on the virtual workplace has identified leadership as a key theme, with Dhawan and Chamorro-Premuzic (2018) stating that the virtual workplace requires strong leaders to succeed. The authors added that managing virtual workplaces can be complex for today's leaders, so organizations may need to rethink their leadership strategies and practices. Past research suggests that expanding virtual workplaces presents an opportunity to redefine leadership (Maduka et al., 2018). According to Al

Amour (2018), organizations should reconsider their approach to leadership because the relationship between leaders and followers is crucial for job satisfaction and trust within the organization. Some leadership abilities may not be suitable in a virtual setting that relies on technology for communication and sharing information and knowledge. Poor leadership can result in poor communication, decreased productivity and job satisfaction, and a high rate of employee turnover (Guinalú & Jordán, 2016; Hidayat et al., 2021).

The goals of leadership related to motivation, direction, trust, and inspiration have not changed, but the way leaders implement has, and leadership attributes are required (Ford et al., 2017). Virtual leaders must adjust their actions to the virtual work setting, acquire new technical abilities, and solve new problems. A leader establishes a vision for the virtual workplace and guides change through inspiration, motivation, and increasing stimulating self-efficacy (Guinalú & Jordán, 2016). This paper uses the terms leaders, managers, and supervisors interchangeably to refer to leaders in a virtual environment.

Both co-located and virtual leaders should possess self-awareness. These leaders know how emotions can impact others and work to address their weaknesses while leveraging their team's strengths. Virtual leaders should be able to communicate emotions effectively, resolve conflicts, and manage emotions through electronic means to gain trust (Ford et al., 2017). Studies indicate that leaders should establish regular and consistent communication through videoconferencing and other forms of synchronous communication and create opportunities for virtual team members to collaborate (Liao, 2017; Mohite & Kulkarni, 2019). When leaders communicate the mission and goals, the behavior can enhance the performance of virtual workers, and their leadership behaviors

help to establish and strengthen the trust (Ford et al., 2017). Effective communication between leaders and followers increases motivation and job satisfaction (Zhang, 2016).

According to (Batool, 2013), emotional intelligence plays a crucial role in virtual leadership. Emotional intelligence and empathy towards team members are crucial in building trust and vital for virtual workplace success. While technology allows for communication through various means, face-to-face communication is richer in nonverbal cues such as attitudes, feelings, behaviors, and non-verbal communication. Guinalú & Jordán (2016) suggest that the face-to-face workplace has a lower risk of information loss through communication channels. However, some leaders may not be aware of the unique challenges of leading virtual workers or the differences between face-to-face and virtual environments. (Nemiro, 2016) notes that leaders may struggle to manage both environments similarly. Effective communication in virtual leadership requires the ability to communicate with sensitivity and the skills to build and maintain relationships. Guinalú and Jordán (2016) suggest that virtual leaders can promote a workplace bond by addressing the diverse needs of the workplace and utilizing technology to foster cohesiveness. By identifying and addressing gaps, effective leadership can help workers feel like part of the team (Fagerlin, 2013).

Leadership plays a crucial role in the skills, behaviors, and practices that contribute to the success of virtual workplaces. However, it is still unclear which specific leadership behaviors contribute to success in a virtual environment (Nemiro, 2016). Studies suggest that traditional leadership styles may not be effective in virtual settings as they do not adapt well to building cohesion and achieving organizational goals (Vought, 2017). For many organizational leaders, managing employees in a co-located setting is a

norm (Ford et al., 2017). However, virtual leaders must adapt to a new concept of virtual leadership and shift their communication style to accommodate a virtual environment where employees are geographically separated. According to Ford et al. (2017), leadership necessitates adjusting one's actions and behaviors. Dhawan and Chamorro-Premuzic (2018) argue that an organization's success relies on virtual leader behaviors that inspire the virtual workplace to establish trust and experience job satisfaction. Therefore, leaders who promote cohesion and establish clear expectations for roles and responsibilities positively impact the organization's success.

Many studies on managing virtual workplaces have shown that effective leadership increases job satisfaction, performance, and communication among team members. In virtual settings, strong leadership is essential for team productivity and success. When leaders establish clear roles and expectations and foster a sense of cohesion, it promotes accountability and contributes to the organization's overall success (Dhawan & Chamorro-Premuzic, 2018). Additionally, when leaders exhibit motivating behaviors and actions, it helps to build trust among team members and improves job satisfaction (Ford et al., 2017). The authors assert that influential leaders possess physical, social, and behavioral characteristics such as empathy and fairness. Leaders who can communicate effectively are more likely to gain the respect of virtual team members. According to the authors, a positive correlation exists between a leader's social attractiveness and the level of trust they inspire in their employees (Ford et al., 2017). Guinalfú and Jordán (2016) state that effective leaders can gradually establish trust among team members by building relationships and possessing the right attributes. Appropriate leadership can create an effective virtual workplace. In a virtual setting, the

virtual team leader must regularly evaluate the workplace's level of engagement in their work (Dhawan & Chamorro-Premuzic, 2018).

Maduka et al. (2018) suggest that the rapid growth in virtual workplaces presents an opportunity to redefine leadership. Organizations should reevaluate their leadership strategies as the relationship between leaders and followers is crucial for job satisfaction and organizational trust. Previous research recognizes the leadership styles needed for face-to-face work environments. However, there is still a need for further examination of leadership behaviors in the virtual workplace (Lauring & Jonasson, 2018).

This quantitative study examines the relationship between transformational leadership and job satisfaction in the virtual workplace. The study also determines if organizational trust influences that relationship in the virtual workplace. Lepsinger and DeRosa (2015) suggest that effective leadership is vital to addressing job satisfaction and trust in a virtual workplace environment. The study highlights transformational leadership behaviors as particularly effective in fostering trust and improving employee job satisfaction. According to various studies (Barnett, 2018; Lepsinger & DeRosa, 2015; Widanti & Sunaryo, 2022), organizations can establish employee job satisfaction and trust in a virtual workplace through effective leadership. Therefore, it is reasonable to suggest that effective leadership in a virtual work environment can significantly impact job satisfaction and organizational trust.

Challenges of Leading a Virtual Team

According to Guinalfú and Jordán (2016), effective leaders possess the right combination of physical, social, and behavioral traits. When they possess these qualities, they can establish trust with their team members, which is crucial for the team's success.

Nemiro (2016) adds that successful leaders clearly understand the challenges and dynamics of virtual workplace leadership and can develop effective strategies to navigate them. To gauge workplace satisfaction, leaders must understand its functioning and dynamics, focusing on its effectiveness. Managing the virtual workplace can present difficulties for leaders who do not grasp the disconnection and dissatisfaction experienced by virtual workers (Zhang, 2016). Studies have shown that poor communication, isolation, and lack of team support are reasons for these feelings and result from ineffective leadership in virtual workplaces (Sinclair et al., 2021; Zhang, 2016). This lack of effective leadership hinders the flow of information necessary for virtual workers to perform their jobs, leading to decreased productivity (Guinalú & Jordán, 2016). Organizations should reevaluate their leadership roles and practices because leadership is instrumental in the success of the virtual workplace (Ford et al., 2017; Nemiro, 2016).

Guinalú and Jordán (2016) argue that traditional leadership methods are not best suited for virtual work settings and that virtual leaders should relinquish control and trust their employees to complete tasks. The authors suggest virtual leaders should focus on managing employee performance rather than controlling how and when they work instead of face-to-face leaders in co-located settings. The virtual work environment needs a new leadership approach (Dhawan & Chamorro-Premuzic, 2018; Ford et al., 2017). Virtual leaders should adapt to a new form of virtual leadership and adjust their communication style to fit the virtual setting (Dhawan & Chamorro-Premuzic, 2018). Scholars suggest that virtual leadership demands flexibility to succeed in a virtual environment (Ford et al., 2017). Not all leaders are equally suited for leading the virtual

workplace. Leaders who have typically led teams face-to-face may not possess the skills or qualities needed to lead effectively in a virtual environment (Guinalú & Jordán, 2016). These leaders, accustomed to leading teams in person, are now being asked to lead virtually (Ford et al., 2017). This transition can be challenging due to virtual communication, the virtual workplace, and appropriate organizational structures (Morley et al., 2015). Leaders should know the time, resources, and dedication needed to establish a virtual workplace. Traditional leaders may find it challenging to adapt to this environment, as it requires a shift from face-to-face to electronic communication (Guinalú & Jordán, 2016).

Additionally, the reliance on technology for communication can make it difficult to establish personal connections with team members (Nemiro, 2016). While virtual workplaces can potentially benefit organizations, they also present significant communication challenges, such as distance, time zone differences, and communication expectations (Ford et al., 2017). One of the biggest obstacles to the performance of virtual workplaces is the lack of physical visibility. Unlike co-located workers, the virtual workplace requires special skills to communicate effectively through various modes, such as visual, auditory, and tactile (Ford et al., 2017; Guinalú & Jordán, 2016; Morley et al., 2015). Virtual meetings lack the physical and visual cues present in face-to-face meetings, making it hard to detect behaviors that establish informal rules or norms, thus increasing the chance of misunderstanding (Harvey et al., 2007). Building connections between team members was more straightforward in face-to-face settings. Developing and maintaining a sense of unity is crucial for virtual leaders, similar to the dynamics of the co-located workplace. Nemiro (2016) states that computer-mediated communication

can result in "dehumanization and social isolation." One researcher notes that e-leadership is a novel form of leadership (Vought, 2017). Virtual leaders require good communication skills and the ability to have personal conversations with their teams. If done correctly, team members will collaborate effectively to achieve the organization's goals. However, lacking communication can jeopardize the workplace. Therefore, it is essential to establish communication methods suitable for the dynamics of a virtual workplace (Guinalú & Jordán, 2016). While there is much research on the challenges of virtual workplaces, there is a lack of resources to guide leaders in managing virtual workers. The following section examines leadership theories and styles, explicitly focusing on transformational leadership behaviors.

Full-Range Leadership Theory

The Full-Range Leadership Theory incorporates three categories of leadership behaviors, transformative, transactional, and laissez-faire. Avolio, Bass, and Jung (Avolio et al., 1999) established categories later refined by Avolio and Bass in 2004. What sets the Full-Range Leadership Theory apart from other leadership theories is its capacity to evaluate the influence of behaviors on subordinates, both favorably and negatively. That makes it a valuable instrument for investigating the effects of various leadership techniques. According to this notion, leaders can deploy a range of leadership styles to achieve success (Avolio et al., 1999). This study focuses on transformational leadership.

Transformational Leadership Theory

A significant number of researchers have investigated leadership styles in virtual workplaces. There are multiple reasons why transformational leadership is part of research for the virtual workplace. Studies demonstrate that transformational leadership

behaviors in a virtual setting increase job satisfaction and work performance (Al Amour, 2018; Sinclair et al., 2021). For instance, transformational leadership's charismatic behaviors help to portray a future vision for virtual organizations and inspire employee engagement and intellect (Atmojo, 2012). Such leadership attributes positively impact employees and encourage changes in attitudes and behaviors. Avolio and Bass (1991) argue that transformational leaders implement the organization's vision through their actions. Transformational leaders also possess charismatic behaviors that help change employees' perspectives on various issues and promote employee engagement (Afshar, 2019).

Afshar (2019) examined the influence of transformational leadership on the engagement of virtual workers. The study focused on two mediators, 1) the relationship between leaders and team members (LMX), and 2) the frequency and quality of communication media used, divided into three categories, high (e.g., face-to-face), moderate (e.g., desktop sharing, phone, direct email), and lean media (e.g., indirect email). The research concluded that transformational leadership positively impacts employee engagement and leads to various positive outcomes in organizations, such as better performance, reduced intention to leave, and greater job satisfaction.

Bass (1990) defines transformational leadership as an effective framework in which “leaders broaden and elevate the interests of their employees when they generate awareness and acceptance of the purposes and mission of the group, and when they stir their employees to look beyond their self-interest for the good of the group” (p. 21). The leadership style has four dimensions—Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration (Avolio et al., 1995). Leaders

use inspirational motivation to communicate a vision for the workplace and bring about change through inspiration and increasing self-confidence (Guinalú & Jordán, 2016). Martin Luther King Jr. was a leader during the civil rights movement who motivated and convinced a nation to change its thinking and work towards a shared goal. An influential media figure, Oprah Winfrey, inspires people to set ambitious goals. According to Forbes magazine, Oprah is a leader who motivates others to act and fulfill their potential by giving them a sense of direction that aligns with her vision (Goudreau, 2010). These leaders are exceptional and set themselves apart from the average. They belong to an elite group of individuals who promote growth and innovation by encouraging their employees to take risks and share their thoughts, known as intellectual stimulation. Luring and Jonasson (2018) suggest that leaders who use inspirational motivation guide their workers toward a shared vision and goal are known as transformational leaders. Leaders who practice individualized consideration pay close attention to the requirements and needs of their subordinates, boost productivity and job satisfaction in the workplace, and offer them guidance. Lastly, idealized influence behaviors demonstrate qualities and behaviors that earn trust and respect (Vought, 2017).

The research findings indicate that transformational leaders positively impact employee development (Anoye & Kouamé, 2018), job satisfaction (Al Amour, 2018; Atmojo, 2012), trust (de Lima Rua & Costa Araújo, 2016; Guinalú & Jordán, 2016; Hassan et al., 2016; Vought, 2017), virtual communication (Afshar, 2019; Agbi, 2018), employee engagement Afshar (2019) and job performance (Miller, 2020).

Transformational leaders possess the ability to understand and relate to their employees,

and those leadership behaviors play a crucial role in developing and shaping numerous employee outcomes (Afshar, 2019).

Kniffin et al. (2020) suggest that effective virtual leaders are persuasive in communicating a bold vision for the organization's future direction. The behaviors and traits of transformational leadership include open communication and integrity. They establish trust and use personal characteristics to motivate others. These behaviors are crucial in this research as it examines the relationship between transformational leadership and employee job satisfaction in a virtual workplace. Since the different transformational leadership behaviors may influence the virtual worker's perception of leadership, job satisfaction, and trust, these attributes are vital for this quantitative study. The researcher also selected transformational leadership as the conceptual framework because research shows transformational leadership behaviors positively influence job satisfaction (Miller, 2020) and organizational trust (Widanti & Sunaryo, 2022). The focus of several previous studies, including Brown-Reid (2018), has been on leadership styles in virtual work environments. Several studies are specific to transformational leadership (Afshar, 2019; Vought, 2017). In the past two decades, transformational leadership in the virtual workplace has been the most cited leadership theory (Afshar, 2019; Brown-Reid, 2018; Miller, 2020; Vought, 2017). These studies provided empirical support that transformational leadership is an effective style for fostering employee and work engagement (Afshar, 2019) and job satisfaction in the virtual workplace (Mohite & Kulkarni, 2019). Results have implied that organizations should adopt a transformational leadership style for those leading a virtual workplace (Mansfield, 2018).

The literature review has established evidence that virtual workers have higher job satisfaction when working with virtual leaders who employ transformational leadership behaviors (Atmojo, 2012; Johnson, 2012; Miller, 2020; Vought, 2017). A few researchers have examined leadership behaviors and their influence on employee satisfaction in a virtual workplace (Al Amour, 2018; Johnson, 2012; Miller, 2020; Vought, 2017).

Miller (2020) recently conducted a study investigating the relationship between transformational leadership characteristics, job satisfaction, and job performance in a virtual workplace. The author noted that further research should examine the relationship between transformational leadership and job satisfaction in a virtual work environment. In particular, fewer studies have examined how virtual workers perceive these behaviors (Al Amour, 2018). The current study examined the relationship between transformational leadership and job satisfaction in the virtual workplace from the virtual worker's perspective.

Job Satisfaction

Tsounis and Sarafis (2018) have stated that job satisfaction is a critical factor in organizational behavior and impacts the productivity and effectiveness of the workplace. The authors suggest that job satisfaction is essential for employee well-being and the successful operation of any organization. Mohite and Kulkarni (2019) also suggest that job satisfaction is crucial for organizational success and for comprehending employees' needs and the factors contributing to job satisfaction. Irwansyah and Suhadak (2018) defined job satisfaction as an employee feeling positive about their job or lacking satisfaction with the intent to leave. Paul E. Spector defined job satisfaction as "the extent

to which people like (satisfaction) or dislike (dissatisfaction) their job” (Spector, 1997, p. 2). The author noted that it is essential for organizations to understand what factors contribute to satisfaction. According to a study by Gilstrap and Collins (2012), one aspect that can impact job satisfaction is the employee’s perception of their leader. The authors propose that an employee’s perception of leadership behaviors through communication can either enhance or decrease their trust in their leader and impact their job satisfaction.

Boamah et al. (2017) studied acute care nurses to determine the effect of transformational leadership behaviors exhibited by management on job satisfaction and patient outcomes. There were 378 direct acute care nurses from hospitals across Ontario, Canada, that completed a cross-sectional survey design. The study results revealed that transformational leadership positively impacted nurses’ job satisfaction by increasing workplace empowerment and reducing the number of adverse patient outcomes. The transformational leadership behavior of “inspirational motivation” significantly affected nurses’ job satisfaction and patient outcomes.

This study aims to identify the relationship between transformational leadership and perceived job satisfaction in the virtual workplace. Irwansyah and Suhadak (2018) dissatisfaction among employees can result in elevated turnover rates, causing a deficit in trust and organizational commitment. According to the 2019 Society for Human Resource Management (SHRM) top 20 U.S. cities survey, over 8,000 individuals who were either employed or searching for employment identified two factors contributing to job fulfillment, financial and workplace culture (SHRM, 2019). The top five factors were pay, job security, supportive and honest leadership, meaningful work, and work-life balance. Christenson (2019) concurred with these findings, suggesting that tedious work,

limitations in work, leaders' bias, and inadequate support can lead to employee turnover. The author emphasizes that the better managed an organization is, the more satisfied employees will be. Irwansyah and Suhadak (2018) investigated different leadership styles and noted that various factors, including leadership, could affect job satisfaction and the intent to remain with an organization. The authors examined the impact of transactional leadership, job satisfaction, and organizational commitment on employees' intent to stay. The sample consisted of 218 employees from eight outsourcing companies. The study revealed that all three variables significantly affected an employee's intent to stay. Transactional leadership impacts job satisfaction, but organizational commitment did not have a significant effect. The study found that job satisfaction significantly impacts an employee's organizational commitment. Conversely, passive avoidant leadership has a negative effect on job satisfaction and employees' intent to stay (Irwansyah & Suhadak, 2018). The study did not examine the influence of transformational leadership.

Job Satisfaction Theories

Job satisfaction refers to an employee's positive or negative attitude toward their job (Mohite & Kulkarni, 2019). Literature suggests that when individuals find greater fulfillment in their job, it increases productivity and motivation (Atmojo, 2012; Malik et al., 2017). Leaders significantly impact workplace success because one of their primary responsibilities is to motivate and inspire employees toward a shared goal (Bans-Akutey & Tiimub, 2021). Job satisfaction theories significantly impact the motivational factors of followers. Herzberg's Motivation Theory (Herzberg et al., 1959) is among the most recognized theories among job satisfaction theories. The researcher emphasized the importance of leadership's role in understanding that job fulfillment comes from factors

within the job, such as recognition, growth, achievements, increased job responsibilities, and trusted leadership (Herzberg, 1968) rather than just training.

Herzberg's Two Factor Theory

Herzberg et al. (1959) proposed a motivation-hygiene theory consisting of two factors that impacted Maslow's hierarchy of needs. This theory is related to human needs and motivation. The pyramid model consists of a hierarchy of five levels, with the most basic needs at the bottom and the most advanced needs at the top. The needs, in ascending order, include physiological needs such as food and shelter, safety, love and belonging, esteem, and self-actualization. The theory states that individuals must fulfill lower-level needs before focusing on fulfilling higher-level needs (Maslow, 1943). For example, someone hungry and homeless cannot prioritize self-actualization until meeting physiological and safety needs. Herzberg (1966) later revisited the theory proposing that the factors that determine job satisfaction do not determine dissatisfaction. Some aspects of the workplace lead to satisfaction, while others lead to dissatisfaction.

The factors that cause dissatisfaction are known as hygiene factors and are related to the day-to-day aspects of the job, such as company policies and management, supervision, working conditions, salary, and relationships with colleagues (Herzberg, 1968). On the other hand, intrinsic motivators lead to satisfaction, including achieving success, recognition, responsibility, opportunities for advancement, and personal growth. These motivating factors bring about satisfaction, whereas hygiene factors increase or decrease job satisfaction. However, these elements are not responsible for job satisfaction (Herzberg, 1968). The primary concept of the two-factor motivation theory is the difference between satisfiers and dissatisfiers, where the presence of motivating factors

increases satisfaction in the work environment. The absence of motivation leads to low levels of job satisfaction. Herzberg (1968) classified motivating factors as being intrinsic and essential for a positive work environment, and the lack of these factors leads to negative attitudes about the job.

On the other hand, a lack of hygiene factors leads to dissatisfaction in the workplace, but improving these factors does not necessarily lead to increased job satisfaction, but it will decrease dissatisfaction. Herzberg (1968) stated that factors that result in dissatisfaction are external and do not fulfill the need for personal growth or make the job more appealing. He believed that leaders influence workers through both motivation and hygiene factors. A research study by Wade (2019) found that individuals in organizations that provide hygiene factors are motivated by the introduction of motivators. While assessing Herzberg's two-factor theory, the author identified motivation as related to job satisfaction and that it is essential to enhance motivational factors in order to enhance employee satisfaction. However, motivators will not lead to job satisfaction without hygiene factors. That implies that organizations should first address and meet the hygiene factors and ensure they are in place before focusing on increasing motivation. Herzberg's theory suggests that if basic needs, or "hygiene factors," are not met, attempts to increase motivation will be ineffective (Herzberg, 1968). Therefore, organizations should address these needs before focusing on motivating employees. Herzberg aligns this concept with Maslow's Hierarchy of Needs (Maslow, 1943), stating that the lower levels of the hierarchy, which are related to physiological and safety needs, correspond to hygiene factors, while the higher levels, related to self-actualization, are motivators.

Researchers often use Herzberg's theory as a basis for research on job satisfaction in organizational settings. One example is a study conducted by Johnson (2012) in which he used Herzberg's theory to examine the relationship between transformational leadership and job satisfaction in a virtual workplace. The study involved 210 federal employees who completed a survey that assessed leadership styles through the Multifactor Leadership Questionnaire (MLQ) developed by Avolio et al. (1995) and employee job satisfaction through Spector's (1997) Job Satisfaction Survey (JSS). The quantitative study results (Johnson, 2012) revealed that certain aspects of transformational leadership, such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, positively affect job satisfaction in virtual workplaces. However, the author pointed out that some of the transformational leadership behaviors identified in the study could also negatively impact employee satisfaction, with the level of impact varying. Additionally, the researcher emphasized that hygiene factors significantly affect job satisfaction (Johnson, 2012). The study's findings indicate that hygiene factors are less crucial and that factors contributing to motivation are essential in boosting job satisfaction.

Social Exchange Theory

Leaders in today's fast-paced and demanding work environment often struggle with managing workplace relationships (Chernyak-Hai & Rabenu, 2018). Studies have investigated the positive impact of leader-member interaction on factors such as productivity and job performance, using theories like Social Exchange Theory (SET) to understand the process of organizational socialization. This research study examines the relationship between transformational leaders and virtual workers and its effects on job

satisfaction. According to Robert and You (2018), it is essential to establish a relationship between job satisfaction and the Social Exchange Theory (SET). Leadership plays a crucial role in promoting individual satisfaction in virtual work settings. SET has been widely studied and is often applied to analyze workplace relationships. The interactions between an organization and its employees, known as working relationships, are crucial to socialization and can improve performance and job satisfaction (Chernyak-Hai & Rabenu, 2018). SET explained human interaction and the formation of relationships through cost-benefit analysis. The development was through research contributions from social psychologists such as Thibaut and Kelley (1959). The authors applied SET to organizational research to study the exchange relationship between leaders and employees. Thibaut and Kelley are widely recognized as important contributors to SET because they explain how parties involved in the exchange assess the advantages and decide on their level of dedication to the relationship.

The Social Exchange Theory (SET) describes a system of reciprocal rewards in which the recipient of a service or favor feels obligated to return the favor in kind (Robert & You, 2018). An example is when a leader assists and employees respond by working harder because they perceive that the leader cares. Thus, the attitude and conduct of the employee reflect the actions of the leader or organization. Therefore, virtual workplace relationships between leaders and employees are crucial.

According to Chernyak-Hai and Rabenu (2018), technological advances, the economy, and globalization during the previous decade can potentially affect organizational relationships. It is vital to adjust to these changing employment conditions. When employees have a positive relationship with their leaders, their performance

improves. Changes in the workplace and leadership qualities are interrelated (Chernyak-Hai & Rabenu, 2018). Organizations should seek to increase the positive outcomes of their employees since this improves performance. The happier they are, the greater their productivity. People engage in social exchange when they cooperate and share, and leaders who engage foster a work climate that promotes employee satisfaction (Robert & You, 2018). Employees who are content with their job are likelier to demonstrate higher levels of organizational trust and job satisfaction (Chernyak-Hai & Rabenu, 2018; Robert & You, 2018).

A study by (Robert & You, 2018) demonstrated that leadership might improve satisfaction in the virtual workplace in both direct and indirect ways by building trust. Trust and autonomy are two qualities that enhance happiness. As employment becomes more flexible and virtual, it is essential to alter social exchange connections to match the evolving employee and workplace features (Chernyak-Hai & Rabenu, 2018). The study's authors analyzed the primary application areas of SET and questioned the validity of traditional SET variables (exchange intensity and interaction quality). They proposed an alternative model that combines the old SET model with new workplace characteristics that account for organizational and employee changes, such as the need for autonomy, flexibility, cultural diversity, and perceived support and rewards. As the virtual workplace grows, organizations will understand that changes to the social exchange relationship can have a substantial impact. Organizations may need to discover additional exchange characteristics that have become increasingly important in the new virtual workplace if they are to adopt a new approach to social connections at work (Chernyak-Hai & Rabenu, 2018; Robert & You, 2018).

McGregor's X/Y Theory

Douglas McGregor championed the value of human relations and highlighted some factors of employment that contribute to employee happiness (Bans-Akutey & Tiimub, 2021; Prottas & Nummelin, 2018). For decades, McGregor's conception of Theory X and Theory Y has impacted scholars (Prottas & Nummelin, 2018). McGregor stated that leaders have two subordinate groups, X and Y (McGregor, 1957). According to the conventional management style, Theory X, employees are often unenthusiastic, unreliable, and unmotivated. They are not inclined to take the initiative, avoid responsibility, and prefer to be led. According to Theory X leaders, employees typically do not enjoy their jobs, shirk responsibilities, and have low aspirations. The only way to motivate them is through coercion or incentives (Johnson, 2012). These leaders feel that they must be hands-on, micromanage, and exercise staff control to motivate them to work. According to Prottas & Nummelin (2018), leaders rely on external variables like rewards and penalties to encourage workers. Johnson (2012) claimed that Theory X leadership produces a hostile work atmosphere that lacks trust and stifles cooperation and innovation.

Prottas and Nummelin's (2018) research indicates that Theory Y leaders embrace a more relaxed and inspiring style. Humans have an innate drive to work and learn via self-improvement and self-discipline and are motivated by more than simply money, according to McGregor (1957). Johnson (2012) suggests that employees prefer demanding challenges that they can execute alone. Theory Y leaders regard workers as dependable, conscientious, willing, and able to contribute significantly to the business (Prottas & Nummelin, 2018). According to McGregor (1957), Theory Y leaders focus on

tapping into the inherent human urge for self-improvement by sharing ideas, soliciting opinions, and encouraging innovation. According to the author, Theory Y leaders inspire their employees through internal factors. These leaders also feel that workers take pleasure in their work. Setting ambitious objectives promotes employee happiness as they sense the benefits of accomplishing them. Prottas and Nummelin (2018) suggest that Theory Y leaders believe workers are clever, creative, and have unrealized potential and that various incentives drive them. These leaders encourage employee growth and take pride in seeing subordinates reach their full potential.

Theory X/Y also indicates that leadership influences employees' attitudes (Prottas & Nummelin, 2018). If a leader believes that individuals are unmotivated and communicates this assumption, it can negatively impact staff motivation and performance. In their study, the authors (2018) analyzed the perspectives of 3,500 healthcare personnel about the Theory X and Theory Y orientations of their supervisors using hierarchical regression. The study indicated that the variables were favorably connected to Theory Y and negatively correlated with Theory X, with a substantial impact size of Theory Y. The authors believe it is best to view Theory X and Theory Y as independent elements rather than the single construct, Theory X/Y (Prottas & Nummelin, 2018).

Transformation Leadership and Job Satisfaction

The relationship between employees and their leaders determines job satisfaction (Maduka et al., 2018). Previous studies have shown a connection between leadership that promotes positive change and increases employee job satisfaction (Johnson, 2012; Karem et al., 2019). Without effective leadership, employees are less inclined to trust their

leaders or the organization (Gibson, 2012; Mohite & Kulkarni, 2019). Gibson (2012) examined how trust in leadership, job satisfaction, and the intent to leave an organization is related. The study included 197 registered nurses from two healthcare institutions and considered demographic factors such as age, gender, and how long the respondents had been with the organization. The study found that a leader's credibility impacts job satisfaction and the intent to leave.

Leadership that promotes positive change encourages employees to step out of their comfort zones and embrace new values and attitudes that align with the organization's vision. The actions of leaders are vital in shaping employees' perceptions of their work and can inspire them to strive to achieve goals and objectives (Gibson, 2012). Gilstrap and Collins (2012) researched the connection between leadership behaviors advocating for goals and communicating a vision. Using an integrative trust model as a mediator, the study examined the relationship between leadership and employee job satisfaction. The results revealed that effective communication by leaders increases trust and job satisfaction. The study population was 246 professional employees from a large industrial company in the Midwest. The results indicate that trust is crucial in the relationship between transformational leadership and job satisfaction.

Barnett (2018) conducted a study investigating the relationship between multiple leadership behaviors and job satisfaction among adjunct faculty who teach online classes. The data was collected using the Multi-factor Leadership Questionnaire and Spector's Job Satisfaction Survey. The sample population was adjunct instructors from various universities and disciplines. The researcher sent invites to 800 instructors to take part in the study, and 77 completed surveys were received. The study revealed a correlation

between the two variables and that transformational leadership significantly predicted job satisfaction. The study's author encourages incorporating transformational leadership as part of instructor training to enhance job satisfaction and improve organizational effectiveness and the quality of online education (Barnett, 2018).

Awamleh and Al-Dmour (2004) conducted a study that examined the impact of transformational leadership on job satisfaction and the self-proceed performance of bank employees. The research examined transformational leadership's effects on perceived job performance and satisfaction. The study found that to maximize the satisfaction level of followers, leaders must possess charisma and individualized consideration and intellectually stimulate and inspire followers. The study's finds show that leadership requires attributes of both transformational and transactional styles to be effective, and minimizing transactional qualities will diminish the effectiveness of the leadership. Adverse outcomes can impede workplace satisfaction Awamleh and Al-Dmour (2004). The authors stress the importance of training and developing more leaders. Leadership is crucial to increasing job satisfaction in the virtual workplace (Mansfield, 2018).

According to Bans-Akutey and Tiimub (2021), a virtual workplace is a group of employees that work from different locations using information technology for activities, including communication and sharing information. These tools enable employees to complete their work from outside the organization. A study by Mohite and Kulkarni (2019) demonstrates the significance of job satisfaction for the prosperity of virtual workplaces and organizational growth. Job satisfaction pertains to job satisfaction, and a lack of satisfaction can lead to a complex workplace. Studies indicate that effective leadership can foster the relationship between job satisfaction and trust (Guinalú &

Jordán, 2016) in virtual workplaces (Mohite & Kulkarni, 2019). Building a solid collaboration between leaders and members is vital for the success of the virtual workplace and essential for job satisfaction (Mohite & Kulkarni, 2019; Zhang, 2016).

Wade (2019) used a qualitative case study research design to investigate the communication tactics employed by bank managers to motivate remote workers. The study's sample included five frontline banking managers. The results showed that managers could improve job satisfaction in the virtual workplace by utilizing effective communication strategies.

Jewczyn (2010) examined factors that affect job satisfaction and morale, such as the physical work environment and the relationship with leaders. The study found that morale is related to satisfaction in the workplace and argued that the social environment and the quality of leadership support impact job satisfaction. The study emphasizes the importance of creating a positive work environment for employee morale and retention.

Mansfield (2018) studied 145 telecommuters from 50 companies to investigate job satisfaction and attitudes in virtual workplaces. The study utilized a quantitative research design that employed an electronic survey tool incorporating questions from four instruments to assess job satisfaction, attitude towards virtual workplaces, leadership styles, and the leader-member exchange. The study results showed that leadership styles contribute to establishing the relationship between job satisfaction and attitude toward virtual work settings. According to Mansfield's (2018) research, leader-member exchange and job satisfaction exhibit positive outcomes in the presence of transformational leadership. Conversely, passive avoidant leadership has a negative impact on the relationship. Previous research has indicated that transformational

leadership can significantly influence job satisfaction. However, there is still a need for further research on the relationship between transformational leadership and job satisfaction in virtual workplaces (Miller, 2020). This study addresses this gap by examining the potential mediating influence of organizational trust on the relationship between transformational leadership and job satisfaction in virtual workplaces.

Organization Trust

Several studies have explored the importance of trust within an organization. Kars and Inandi (2018) argue that organizational trust emphasizes characteristics that establish trust and shape the behavior of employees. This current study will utilize Cummings and Bromiley's (1996) model of organizational trust. The authors define trust as,

The expectation is that another individual group will make a reasonable faith effort to behave in accordance with commitments. Both explicit and implicit. Saying whatever negotiation preceded those commitments and not take excessive advantage of others, even when the opportunity exists (p. 302).

This research examines the concept of organizational trust, which is important because it relates to how employees view and trust their organization. The reasons for this are twofold. Firstly, trust in an organization impacts factors such as the likelihood of employees leaving, their level of engagement, and their job satisfaction. Research has shown that employees in organizations with high trust tend to be more productive and have higher levels of job satisfaction when working collaboratively (Kars & Inandi, 2018). Secondly, the actions, behaviors, and communication of leaders influence trust. Transformational leadership may impact the level of trust followers have in their leaders.

According to Northouse (2019), leadership styles can affect job satisfaction and organizational trust. How leaders communicate can also affect employees' perceptions of organizational trust.

Previous studies on trust have examined various topics, including how personality traits and cultural factors influence trust and how trust operates within institutions. Hacker et al. (2019) specifically looked at trust in relationships. The authors found trust based on the characteristics of both the person giving trust (the "truster") and the person receiving trust (the "trustee"). The authors identified three key attributes contributing to trust in a relationship, the trustee's ability, benevolence, and integrity. These attributes represent the trustee's competence, caring nature, and honesty. Another critical characteristic of trust in a relationship is dependability and reliability as perceived by the truster. That is through the consistent performance of work duties and responsibilities. When it comes to trust at an organizational level, the situation is more complicated because multiple individuals may be involved, each with their attributes. Ford et al. (2017) pointed out that personality traits can shape expectations of trust and remain consistent across different situations. They also noted that cultural and social factors and individual personality characteristics shape trust in organizational settings.

Organizational Trust in the Virtual Workplace

Trust is crucial for the effective functioning of any team. However, it can be challenging to establish and maintain in a virtual workplace where face-to-face interactions and visual cues are lacking (Ford et al., 2017). In a virtual workplace, employees do not have the opportunity to socialize or take breaks with their colleagues as they would in a traditional in-person setting. According to previous research, this lack of

social interaction can result in lower levels of positivity in communication compared to face-to-face workplaces (Mohite & Kulkarni, 2019; Zhang, 2016). According to research, the lack of social cues in virtual environments can make it challenging to establish trust and collaboration (Lepsinger & DeRosa, 2015). Traditional, in-person workplaces rely on the opportunity for social interaction to foster trust among coworkers over time and offer fewer opportunities in electronic communication-based virtual workplaces (Ford et al., 2017; Liao, 2017).

Working in a virtual environment presents difficulties, particularly when building trust, due to the limitations of not being physically present with one another. Virtual workers are often geographically dispersed and work together through videoconferencing, email, and other forms of technology. Ford et al. (2017) noted that conveying empathy through electronic communication could be challenging, making it feel impersonal and may lead to misunderstandings. Additionally, relying solely on electronic communication does not always facilitate the development of relationships in the workplace. The authors suggest that the virtual workplace might lead to psychological isolation. The lack of social interaction may negatively impact those used to face-to-face work settings instead of physical separation. Previous studies have indicated that social interactions, such as casual conversations between coworkers, are crucial. Although virtual workers communicate electronically, the human aspect of the workplace is still present.

Creating personal connections and trust within these structures can prove challenging (Nemiro, 2016). The author expresses that when creating virtual workplaces, organizations must consider the social context in which they operate. Although

technology enables people far apart to connect electronically, it does not guarantee effective personal connections, communication, and creativity. While information technology is essential for virtual corporations and teams, it cannot solve all the challenges of working across geographical and cultural boundaries. The solutions to these issues ultimately foster positive human and organizational relationships and develop work environments that inspire the best in people who work within these virtual structures. The study proposes crucial elements for successful virtual workplaces, including creating clear goals and roles and fostering a sense of trust among team members working remotely (Nemiro, 2016).

Trust is essential for virtual workplace success (Ford et al., 2017). The authors state that trust within the virtual workplace is about the level of interaction among employees who may not be familiar with each other's personalities and backgrounds. Trust is vital in virtual workplaces as it promotes psychological unity among team members who are geographically separated. Fagerlin (2013) explains that trust grows from integrity, competence, and compassion. In order to gauge the integrity and capability of other team members, individuals tend to evaluate them based on their knowledge, skills, proficiency, and recent performance. The study indicates that members must have information about the prior commitments of others to evaluate how closely the actions align with their perspectives (Ford et al., 2017). Members need relevant work experience to evaluate the abilities of others accurately.

Additionally, sharing personal information can foster a sense of benevolence and aid in building relationships. This exchange of information can lead to increased commitment among members. The collaborative process between leaders and members

can positively impact individuals by helping form an identity essential to developing trust (Ford et al., 2017; Liao, 2017). The messages that leaders convey to their employees can significantly affect attitudes toward the organization.

According to a study by Levin (1996) involving 601 respondents from seven different groups, the level of trust within an organization can predict the actions and behaviors of its senior leaders. The study also showed that behavior consistency and predictability contribute to credibility and trust. Levin believed that leaders' vital role in the workplace is establishing a culture of trust.

Cummings and Bromiley (1996) state that trust involves working and behaving as a group and adhering to organizational commitments. They also emphasized that trust involves being honest and refraining from taking advantage of a situation, even if the opportunity arises. They noted that group trust encompasses practical, cognitive, and behavioral components. In a virtual workplace, integrity may be a strong indicator of trust due to the difficulty in forming personal relationships (Ford et al., 2017). Vought (2017) investigated the correlation between transformational leadership, interpersonal trust, and organizational commitment among virtual members. The researcher examined the four components of transformational leadership and the moderating effect of the degree of virtuality. The research study involved 870 employees who worked with some degree of virtuality. The findings suggest that transformational leadership behaviors positively influence trust within the virtual workplace and organizational commitment. Specifically, the study revealed that individualized consideration, a characteristic of transformational leadership, had a significant impact. As stated by Vought (2017), leaders

who are open and honest in their communication with employees can positively influence their feelings and trust toward the organization.

Organizational Trust and Transformational Leadership

The literature review reveals that trust is one of the most cited studies in transformational leadership (Afshar, 2009; Gibson, 2012; Guinalú & Jordán, 2016). Northouse (2019) supported this relationship by proposing that transformational leaders establish trust in the organization through clear communication and guidance and that building trust in an organization is the role of effective leaders. It requires (a) a clear vision of the future, (b) a leader who can clearly express the organization's mission, and (c) defending the organization's goals (Pranitasari, 2020). Vought (2017) also expressed that effective leadership is crucial for fostering the skills, behaviors, and practices that lead to success in a virtual workplace. Leaders who act in ways that motivate their virtual team members to build trust are crucial (Dhawan & Chamorro-Premuzic, 2018). Leaders who fail to understand the importance of forming relationships and establishing trust may struggle in virtual workplaces (Ford et al., 2017).

According to Adams and Wiswell (2007), leaders often believe they have minimal control over the trust levels within their organizations. The authors state that a perception is a form of self-protection that limits the chances for leaders and organizations to acquire knowledge about trust and potential behavioral alterations that can improve trust levels. Instead, organizations should develop these leaders to manage the virtual workplace to achieve optimal outcomes effectively. That necessitates identifying leaders who can inspire and motivate employees to increase their levels of satisfaction (de Lima Rua &

Costa Araújo, 2016). The authors define trust as a “psychological state which depends on expectations related to the behaviors of others” (de Lima Rua & Costa Araújo, 2016).

Previous studies found a relationship between transformational leadership and organizational trust (Kars & Inandi, 2018; Widanti & Sunaryo, 2022). Other studies have also recognized that trust can be impacted by leadership (Guzzo et al., 2021); Vought, 2017) and organizational commitment (de Lima Rua & Costa Araújo, 2016; Pranitasari, 2020). de Lima Rua & Costa Araújo (2016) examined the mediating influence of organizational commitment on the relationship between transformational leadership and organizational trust. The study was at the Serralves Foundation in Porto, Portugal, and empirically tested the proposed research model and its hypotheses. The author developed a survey instrument to collect primary data from a sample of 58 employees. The data analysis used methodological techniques and linear regression. Results confirmed a significant correlation between transformational leadership and organizational trust. However, results determined that organizational commitment did not mediate the relationship.

Individuals perceive organizational trust differently and are influenced by leaders' actions, behaviors, and communication. It comprises positive beliefs, intentions, and attitudes. When workers believe the organization cares for their well-being and is supportive and understanding, it leads to positive perceptions of the organization. Positive experiences can evoke positive emotions in employees, influencing their behavior (Adams & Wiswell, 2007). Moreover, Adams and Wiswell (2007) suggest that trust is associated with vulnerability, indicating that trust creates a sense of security where individuals do not worry about facing punishment or retaliation. Kars & Inandi

(2018) discussed that trust reflects employees' willingness to be open and vulnerable with leaders. Employees depend on leaders to communicate the organization's policies and goals.

Employees may trust or distrust the organization based on perceptions (Adams & Wiswell, 2007; Ford et al., 2017). When evaluating trust in a leader, employees consider the organization they lead. Employees may extend trust to the entire organization when they view the leader as a representative of it. The literature review has shown that leadership behavior influences appropriate attitudes, such as job satisfaction and organizational trust (Kars & Inandi, 2018). The authors of a study involving 722 teachers in Turkey sought to examine the connection between how teachers perceive school principals' leadership behaviors and the level of trust in the organization. Through their study of school principals, the researchers found that the way a leader behaves does have an impact on teachers and that the relationship has an effect on organizational trust. The research discovered a relationship between how teachers viewed their principal's leadership conduct and organizational trust. The findings indicate that employees' perceptions of their leaders significantly impact their trust in the organization. Studies of trust in leaders and trust in organizations are different but related. Tan and Tan (2000) suggest that a leader's competency, benevolence, and integrity can affect trust in the leader. This research aims to contribute to the understanding by examining if trust in the organization influences the relationship between transformational leadership and job satisfaction in the virtual workplace.

Summary

Empirical studies demonstrate a relationship between transformational leadership and the virtual workplace, transformational leadership and job satisfaction, and transformational leadership and organizational trust. The study examines the relationship between transformational leadership and job satisfaction. Additionally, the current study examines if organizational trust influences the relationship between transformational leadership and job satisfaction in a virtual workplace. This research may contribute to furthering theories and improving human capital in the virtual workplace.

CHAPTER III – RESEARCH METHODOLOGY

This study examined the relationship between transformational leadership and job satisfaction in the virtual workplace and the influence of organizational trust on the relationship. This study used a quantitative research method. Researchers employ quantitative methods to infer evidence for a hypothesis by measuring variables that generate numerical results (Field, 2018). Included in this chapter is the rationale for a quantitative study. The chapter starts by outlining the study's design, research questions, and objectives. This chapter then discusses how the population and sample were selected, the survey instrument used, and the data collection process. Finally, the chapter concludes with a plan for analyzing the data using statistical methods. The research questions and objectives outlined in the chapter stem from examining the influence of organizational trust on the relationship between transformational leadership and job satisfaction in a virtual work workplace.

Research Objectives

The research objectives guided the study to examine the relationship between transformational leadership and job satisfaction in the virtual workplace. This study also examined the influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace. The virtual workplace measured hypotheses using correlation and mediation analyses through multiple regression. Baron and Kenny (1986) state that a variable can act as a mediator if it can explain the relationship between the independent and dependent variables. Mediators explain the mechanisms or reasons behind the occurrence of such effects. The authors (1986) suggest that a variable can act as a mediator if it satisfies the following

criteria, (a) changes in the independent variable have an impact on changes in the mediator variable, (b) changes in the mediator variable account for changes in the dependent variable, and (c) when the relationship between the independent and dependent variables that were previously significant becomes non-significant. The central research questions were, *What is the relationship between transformational leadership and job satisfaction in the virtual workplace? Does organizational trust influence the relationship between transformational leadership and job satisfaction?* The research objectives (ROs) were as follows.

RO1 – Describe the demographic characteristics of respondents by age, race, gender, education, industry type, length of time working virtually, and time reporting to the current leadership.

RO2 – Determine the relationship between transformational leadership and job satisfaction in the virtual workplace.

RO3 – Determine the influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace.

Research Design

Trochim (2006) suggests that a research design acts as a binding agent that unites the various elements of a study. This study employed a quantitative, cross-sectional design to examine how transformational leadership and job satisfaction relate in a virtual work setting. The study also examined the influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace.

This study examined the relationship between transformational leadership and job satisfaction without modifying or changing variables or circumstances without manipulating or altering variables or conditions. The data collection for this cross-sectional study was to predict a relationship between transformational leadership and job satisfaction in the virtual workplace and examine the mediating influence of organizational trust on the relationship. The researcher gathered data through an electronic survey instrument hosted by Qualtrics (Qualtrics, n.d.). The quantitative data were analyzed using correlation and mediation analyses to test the hypotheses. This study aimed to contribute to the existing literature examining organizational trust, transformational leadership, and job satisfaction in virtual workplaces (Bagga et al., 2022; Newman & Ford, 2021; Sinclair et al., 2021).

This study examined the relationship between transformational leadership and job satisfaction in a virtual workplace. The research also determined the influence of organizational trust on that relationship. A non-experimental, quantitative method was chosen as the most suitable approach because it allowed the researcher to investigate the relationships between the variables within a virtual workplace. Based on a quantitative study, the literature review of the relationship between transformational leadership and organizational trust revealed that building trust in the virtual workplace requires effective leadership behaviors (Maduka et al., 2018). The need for further research examining the relationship between transformational leadership and job satisfaction in the virtual workplace drives the cross-sectional design decision. The researcher measured both transformational leadership (the predictor) and job satisfaction (the outcome) at the same time. The survey tool used in the study asked virtual workers to self-rate perceptions of

transformational leadership, job satisfaction, and organizational trust. A cross-sectional, quantitative research design was appropriate for this study. According to Shadish et al. (2002, p. 18), a nonexperimental design recognizes a supposed cause and effect but uses no experimental manipulation. In a cross-sectional study, the researcher gathers data at one given time.

The researcher used Qualtrics for survey hosting and data collection. In this study, the researcher aimed to understand the relationship between transformational leadership and job satisfaction in a virtual workplace and then examined the influence of organizational trust on that relationship. Previous research has established relationships between transformational leadership and job satisfaction (Mohite & Kulkarni, 2019). A relationship between transformational leadership and organizational trust also exists (Guinalú & Jordán, 2016; Hacker et al., 2019; Mohite & Kulkarni, 2019; Vought, 2017).

The researcher did not use a quantitative causal-comparative design because that design aims to determine the impact of one variable on another rather than showing the strength and relationship between variables and does not imply that one caused the other (Meltzoff & Cooper, 2018, p. 38). When limited information is available, a research study administers qualitative research (Merriam & Tisdell, 2016), focusing on discovering patterns rather than comparing variables. The most appropriate research model for this study was a quantitative non-experimental design. The research utilized a correlation for RO2 and a mediation analysis to test the hypotheses for RO3. For the mediation, the researcher used simple regressions to examine the linear relationship between the variables. The research objective was to determine whether it was possible to predict the dependent variable's value using the independent variable's value and whether

the linear regressions were statistically significant (Field, 2018). Multiple regression is a statistical analysis method that uses multiple independent variables to predict a continuous dependent variable. In addition to evaluating the model's overall fit, multiple regression allows the researcher to analyze how much each predictor contributes to explaining the total variability (Laerd, 2018).

Linear regressions were appropriate for RO3 to investigate the influence of the mediator variable (organizational trust) on the relationship between the independent variable (transformational leadership) and the dependent variable (job satisfaction). According to Zhao et al. (2010), the only requirement to establish mediation is that the indirect effect $a * b$ should be significant. Multiple regression, such as Baron and Kenny's (1986) mediation method, is useful primarily in classifying the type of mediation. More statistically rigorous methods exist. Baron and Kenny (1986) describe a Sobel test that provides a more direct test of an indirect effect. However, Zhao et al. (2010) suggest that the Sobel test is low in statistical power compared to the bootstrapping popularized by Preacher and Hayes (2004). For added validity, this study will conduct both to test the indirect effect.

To conduct this research, the researcher gathered data using an online survey. The primary objective of using quantitative designs was to generalize the findings from a sample to the entire population (Shadish et al., 2002). A cross-sectional approach addressed the research inquiries and focused on data from the different variables or constructs in the study's population at a given time (Phillips et al., 2013, p. 57).

Population and Sampling Procedure

The population for this research was virtual workers across the United States. The research design used convenience sampling for data collection. The researcher recruited respondents through Amazon's Mechanical Turk (MTurk) system (Appendix A). This crowdsourcing internet platform provides an easy way for individuals and businesses to gather data through the participation of a 24/7 globally distributed workforce by creating an online Human Intelligence Task (HIT) (Amazon Mechanical Turk, n.d.). MTurk workers, also known as "MTurkers," set up accounts as workers on the platform. The study includes both male and female workers who met the eligibility criteria. MTurk is rapidly becoming a crucial tool for conducting research with human participants, allowing researchers to gather data more efficiently, conveniently, and sometimes at a lower cost (Amazon Mechanical Turk, n.d.). The researcher established an account as a requester and created a task to recruit workers who met the criteria for participation.

The criteria identified 486 virtual workers and granted these individuals access to the study. The population for this study was 18 years or older, employed 35+ hours per week, and currently residing in the United States. Only MTurkers who met these qualification requirements could preview the HIT. All respondents who met these requirements could review the survey link that included the criteria for eligibility, which includes being a current virtual employee for at least six months and reporting to their current leadership for at least six months. Respondents who met these criteria selected the hyperlink to complete the research survey in Qualtrics (see Appendix G).

The researcher utilized Qualtrics, a web-based survey platform that provides survey creation software and data storage capabilities (Qualtrics, n.d.). The survey

software has the advantage of easy progress tracking and automatic saving, allowing respondents to complete the survey at their convenience. Qualtrics can be accessed through computers and mobile devices, making data collection, analysis, and reporting possible. MTurk granted access to Qualtrics for individuals who met the survey requirements. The screening criteria asked respondents to verify if they met the survey requirements. If they answered "No," they were not eligible to participate in the study. Those who answered "Yes" were qualified to participate and could continue. Afterward, respondents completed an online survey that assessed their views on transformational leadership, job satisfaction, and organizational trust. Based on a pre-pandemic total, there was a population of 19.4 million employees working remotely (Courtney, 2020). The researcher used G*Power software to calculate the minimum number of respondents required for the study. The G*Power estimated a minimum number of 385 with a 95% confidence level, a 5% margin of error, and a 50% response distribution (Raosoft, n.d.). The researcher collected more data than needed. The literature suggested collecting an additional 15-30% padding to compensate for respondents with incomplete responses and failure to meet compliance checks (Aguinis et al., 2021). That way, the targeted sample size would be there after cleaning the data (Cobanoglu et al., 2021). Therefore, the sample size was 445.

Institutional Review Board

As this research involved engagement with human participants, the researcher sought approval from the Institutional Review Board (IRB) of the University of Southern Mississippi in Hattiesburg. The IRB is a committee responsible for reviewing the research plan to guarantee human subjects' protection and confirm that the research

violates no rights (Merriam & Tisdell, 2016). The IRB assures “both in advance and by periodic review, that appropriate steps are taken to protect the rights and welfare of humans participating as subjects in the research” (U.S. Food and Drug Administration, 1998, para. 1). For the IRB application, the researcher explained the purpose of the research study, the population of inquiry, and the interaction between the researcher and respondents. The University of Southern Mississippi has established codes, guidelines, and policies that define ethical practices. In order to get permission to carry out the study, the researcher completed the Human Subjects Research Application Form and sent it to the dissertation chair for review and signature prior to submission to the Institutional Review Board (IRB) at the University of Southern Mississippi. Appendix C includes a copy of the IRB authorization. Following IRB approval, the researcher used the tool and collected data per IRB guidelines.

Instrument

This research utilized a cross-sectional survey design to examine the relationships between transformational leadership and job satisfaction in the virtual workplace and the influence of organizational trust on that relationship. According to Phillips et al. (2013), cross-sectional studies are once and provide a momentary picture at a specific point in time. This type of data collection was appropriate for this study because of its fast results and ability to uncover the characteristics of a group (Fink, 2017). The researcher recruited respondents for the research study using MTurk. The researcher utilized Qualtrics, accessible through a survey link in MTurk. This online platform allows for anonymous participation and does not save IP addresses or location data (Qualtrics, n.d.). Qualtrics collected the data using a self-administered tool through devices such as

computers, laptops, tablets, and phone applications to test the hypotheses generated from the research questions. The tool provided instructions and informed respondents that the survey takes approximately 15 minutes. The instructions allowed respondents to decide to participate in the study. Researchers have an ethical responsibility to (a) protect participants from harm, (b) consider their right to privacy, (c) the notion of informed consent, and (d) the issue of deception should be taken into consideration (Shadish et al., 2002, p. 281). The instrument contained 63 items from three validated surveys and eight demographic questions. The following instruments were used in their entirety for this research study using Likert scales.

1. Global Transformational Leadership Scale (GTL) developed by Carless et al. (2000),
2. Job Satisfactory Survey (JSS) developed by Paul Spector (1994), and
3. Organizational Trust Inventory: Short Form (OTI-SF) developed by Cummings and Bromiley (1996).

Although there were alternative data collection tools for gathering data on the study variables, the researcher used an online survey methodology because it was valid, reliable, and easy to use. The following section outlines each segment of the survey instrument used in this study.

Demographic Questionnaire

The first section of the survey collected demographic data from the respondents and consisted of eight researcher-developed demographic questions (Q1-Q7 and Q63). The questions included inquiries regarding the respondents' age, gender, race, education, and industry type. Respondents were given the option to identify as male, female, non-

binary, or prefer not to say for the gender category. The race category offered options such as White, Black or African American, Asian, American Indian or Alaska Native, Native Hawaiian or Pacific Islander, and Other. The researcher collected frequency distribution for education level as some high school or less; high school diploma or GED; some college, but no degree; associates or technical degree; bachelor's degree; graduate or professional degree (MA, MA, MBA, Ph.D., JD, MD, DDS); and prefer not to say. The respondents responded to the time spent working virtually and reporting to the current leadership as less than six months, six months to a year, 1-3 years, 3-5 years, and greater than 5. The study used descriptive statistics to describe the virtual workplace. This information gave the researcher information to determine how to generalize for future studies. The following questions (Q8-Q14) included a matrix of transformational leadership questions.

Global Transformational Leadership Scale (GTL)

The second section of the survey comprised the GTL developed by Carless et al. (2000). The authors proposed that the following behaviors signified transformational leadership, (a) communicates a vision, (b) develops staff, (c) provides support, (d) empowers staff, (e) is innovative, (f) leads by example, and (g) is charismatic (Carless et al., 2000). The researcher obtained permission to use the GTL instrument for this study (see Appendix D). Carless et al. (2000) developed a short, validated 7-item instrument using broad statements to support a brief measurement consistent with transformational leadership conceptualization. The seven items of the GTL are listed below.

1. Communicate a clear and positive vision of the future,
2. Treat staff as individuals supports and encourages development,

3. Gives encouragement and recognition to staff,
4. Fosters trust, involvement, and cooperation among team members,
5. Encourages thinking about problems in new ways and questions assumptions,
6. Is clear about his or her values and practices what he or she preaches, and
7. Instills pride and respect in others and inspires me by being highly competent.

This instrument measures the rater's perceptions of transformational leadership utilizing a 5-point Likert scale (1 = *rarely or never*, 2 = *once in a while*, 3 = *sometimes*, 4 = *reasonably often*, 5 = *very frequently or always*). The possible range in scores on the GTL is 7 to 35. The high alpha coefficient supports the conclusion that the GTL is a reliable measure of transformational leadership (Carless et al., 2000).

Its reliability using the Cronbach alpha was calculated as .93. The authors found the GTL correlated strongly with the Leadership Practices Inventory (LPI) (Kouzes & Posner, 1990) and the Multifactor Leadership Questionnaire (MLQ) (Avolio et al., 1995). Weaker correlations between other subscales support the convergent validity of the GTL (Carless et al., 2000). The GTL helped to examine RO2 and RO3 of this research study. The next set of research questions (Q15–Q50) includes job satisfaction questions.

Job Satisfaction Survey (JSS)

Spector (1997) created the JSS to measure workers' attitudes toward various aspects of their job for research. Although the instrument was copyrighted, Dr. Spector granted the researcher permission to use the instrument in exchange for sharing the results after the study completion (see Appendix E). The JSS helped to examine RO2 and RO3 of this research study. The JSS is one of the most frequently used job satisfaction instruments, and the researcher decided to use it because of its high reliability (Tsounis &

Sarafis, 2018). The instrument aligned with the definition of job satisfaction for this study. The JSS (Spector, 1997) is a multidimensional instrument that focuses on nine facets of job satisfaction such as (a) pay, (b) promotion, (c) supervision, (d) fringe benefits, (e) contingent rewards, (f) operating procedures (required rules and procedures), (g) coworkers, (h) nature of work, and (i) communication. Compared to other scales, the JSS demonstrates high validity (Tsounis & Sarafis, 2018). The survey has also demonstrated a coefficient alpha range of .91 for the scale, correlating to high levels of reliability (Spector, 1997). For each dimension of the JSS, the Cronbach alpha coefficient varied from .62 to .87, except for operating procedures, which was 0.48. The total 36 items had an overall reliability estimate of .87 (Tsounis & Sarafis, 2018). Reliability and validity are vital for further empirical research in this field. The survey instrument comprises 36 items and gives a score for each of the nine facets' overall level and worth assessed with four job satisfaction items (Spector, 1997). The respondents responded to a Likert Scale, 1 = *disagree very much*, 2 = *disagree moderately*, 3 = *disagree slightly*, 4 = *agree slightly*, 5 = *agree moderately*, and 6 = *agree very much*. The subscale for scoring the JSS is in Table 1.

Table 1

JSS Subscales

Subscale	Item numbers
Pay	1, 10, 19, 28
Promotion	2, 11, 20, 33
Supervision	3, 12, 21, 30
Fringe Benefits	4, 13, 22, 29

Subscale	Item numbers
Contingent rewards	5, 14, 23, 32
Operating conditions	6, 15, 24, 31
Coworkers	7, 16, 25, 34
Nature of work	8, 17, 27, 35
Communication	9, 18, 26, 36
Total satisfaction	1-36

Note. Job Satisfaction Survey nine-facet subscale adapted from *Job satisfaction: Application, assessment, causes, and consequences*. (Spector, 1997).

Organizational Trust Inventory: Short Form (OTI-SF)

The final section of the research tool used the OTI-SF, an instrument created by Cummings and Bromiley (1996), which assessed the participant's trust in the leadership and organization. As outlined in Appendix F, the researcher was granted permission from Dr. Bromiley to include the OTI-SF in this study. Cummings and Bromiley (1996) view organizational trust as a person's perception or a shared belief among a group on good-faith efforts, honesty, and limited, selfish behavior of others. They also believe three factors influence human behavior, emotional state, cognitive processes, and intended behaviors.

The survey instrument has eight questions that measure individual or collective perceptions regarding trust in another person and four that focus on the organization. The survey questions are in Appendix G–Organization. MTurkers responded to a seven-point Likert Scale, 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, 7 = *strongly agree*. The researcher used the instrument because it was reliable and met the criteria for this study in examining if

organizational trust influences the relationship between transformational leadership and job satisfaction in the virtual workplace. The authors tested the instrument's validity and reliability (Cummings & Bromiley, 1996), and the OTI-SF achieved a Bentler's comparative fit index of .98, high correlated reliability of .94 in keeping commitments, and a .90 for avoiding taking excessive advantage of others (Cummings & Bromiley, 1996). Other researchers validated the instrument (Vidotto et al., 2008). The authors conducted an exploratory factor analysis to confirm the strength of the three trust factors and found that it explained 74.6% of the variance. The selection of the OTI-SF for the study was appropriate as it demonstrated good psychometric properties regarding reliability and validity in measuring organizational trust (Vidotto et al., 2008).

Organizational trust questions (Q51 – Q62) helped to address the RO3 of this study. This study assessed the influence of organizational trust on the relationship between transformational leadership and job satisfaction in a virtual workplace.

Validity using Survey Mapping and Pilot Testing

The researcher utilized a survey map to align research questions with objectives to validate the content (Phillips et al., 2013). The survey map assisted in aligning the research tools with the research content and demonstrated how the survey questions in Table 2 aligned with the study's research objectives. The survey completion time was approximately 15 minutes.

Table 2

Survey Map Aligning Research Objectives and Survey Questions

Research Objectives (RO)	Survey Questions	Research Instrument
RO1 – Describe the demographic characteristics of respondents by age, race, gender, education, industry type, time spent working virtually, and reporting to the current leadership.	Q1- Q7, Q63	Researcher Created
RO2 – Determine the relationship between TFL and JS in the virtual workplace.	Q8 - Q14 Q15 - Q50	GTL JSS
RO3 – Determine the influence of OT on the relationship between TFL and JS in the virtual workplace.	Q8 - Q14 Q15 - Q50 Q51 - Q62	GTL JSS OTI-SF

Note. OTI-SF = Organizational Trust Inventory: Short Form-S. Global Transformational Leadership Scale = GTL. Job Satisfaction Survey = JSS. Transformational Leadership = TFL. Organizational Trust = OT. Job Satisfaction = JS.

Before receiving approval from the IRB, the study launched a pilot study to determine if the tool had the appropriate questions and to assess the administrative process. Pilot testing offers an opportunity to determine whether the researcher has done a good job designing the instrument and whether respondents understand the directions. In addition, the testing helps to identify errors and any necessary administrative changes with the tool (Wadood et al., 2021). Since the researcher employed MTurk, the human intelligence task (HIT) required clear rules and instructions (Aguinis et al., 2021). The survey included eight researcher-developed questions addressing the study respondents' demographics and combining three validated instruments. The testing of the tool before distribution was critical to determine if the survey instrument would inform the research question (Roberts & Hyatt, 2019) and to correct potential data or programming problems

in the survey collection process before seeking approval to conduct research (Cobanoglu et al., 2021). According to Fink (2017), researchers should test online surveys before being made final. Surveys depend on user-friendliness and clarity.

According to Fink (2017), the method for conducting a pilot test involves recruiting respondents who meet the criteria of the sample population. Aguinis (2021) stated that a sample size of 10 to 30 respondents was appropriate for a pilot test for a preliminary survey or scale development. Only respondents who met the qualifications criteria and answered all survey questions were included in the pilot results (see Appendix H). For every approved survey response, the researcher paid \$0.50. The pilot test survey consisted of informed consent and 63 survey questions. The researcher added pilot test questions at the end of the pilot survey (see Appendix I) to ensure the respondents comprehended the survey items. The pilot test questions include, (a) were the statements easy to understand? If the participant responds YES or SOMEWHAT, display logic asking (b) which statements were hard to understand. If the respondents responded NO, they proceeded to the following questions, (c) how long did it take to complete the survey, and (d) was navigating through the survey easy? If the participant responded YES or SOMEWHAT, display logic asked, (e) what did you find hard about the navigation? The response was an open-ended field. If MTurkers responded NO, they proceeded to the final pilot question, (f) was there anything else you would like to add? The response was an open-ended field. Throughout the pilot phase, the researcher observed the HIT to determine whether survey responses were low and whether it was necessary to raise the incentive amount. After obtaining 15 approved responses, the researcher ended the pilot survey on MTurk. Aguinis et al. (2021) state that screening MTurk data allows the

researcher to estimate the number of potential responses and adjusts the number of respondents needed to reach the minimum sample size.

The pilot test was closed after three hours of being posted on the HIT. Pilot testing helped to estimate the time it would take to gather 445 completed surveys using the MTurk system. The pilot test also allowed the researcher to identify and rectify any issues. Based on the responses, the researcher found that adjusting the categories for education levels and work industries was necessary. An easy-to-use and comprehensible survey enhanced the instrument's reliability and validity (Fink, 2017). The researcher did not include the data collected from the pilot test in the data analysis. The researcher cross-referenced the MTurk work IDs of participants in the pilot study with those in the final analysis to eliminate duplicates and ensure that responses from the pilot study were not included (Cobanoglu et al., 2021). The researcher used the data from the pilot to incorporate administrative changes and lessons learned into the study's MTurk recruitment procedures and ensure the collection procedures meet the intended results of the study. After analyzing the pilot study outcomes, the researcher felt confident about the instrument's data collection reliability and validity. Upon approval from IRB, the researcher published the survey tool.

Data Collection Procedures

Collecting data from participants is detailed in the data collection procedure to provide the researcher with the necessary information (Fink, 2017; Roberts & Hyatt, 2019). To accomplish this study's large, demographically diverse population of virtual workers, the researcher employed Amazon Mechanical Turk (MTurk) to recruit from an online pool of workers or MTurkers (Amazon Mechanical Turk, n.d.). MTurk provides

access to a broad range of jobs and organizations with data collection speed and flexible research design at a reasonable cost (Aguinis et al., 2021). See Appendix A for the task qualification criteria.

Upon approval from IRB, the researcher published the HIT in MTurk. Participants who qualified for the HIT selected a hyperlink to a self-reported online survey built on Qualtrics. Qualtrics is an online tool for collecting self-reported questionnaires (Qualtrics, n.d.). The online tool provided immediate results and tracked the responses. The respondents chose to consent or not to participate in the study (Appendix B). The consent form described the study's purpose, the estimated completion time (15 minutes based on Qualtrics' estimated system), inclusion criteria, and compensation (\$0.50 upon survey completion). The consent informed respondents that participating in the study was voluntary, no foreseeable risks were involved, and their responses would remain confidential. The researcher provided contact information to the respondents. The five pre-screen questions that determined eligibility were (a) 18 years or older, (b) currently reside in the United States, (c) employment status of 35+ hours per week, (d) a virtual employee for at least six months, (remote, telework, telecommute, or work-from-home employee), and (e) report to current leadership for at least six months. Only those who answered “yes” to all the questions selected the hyperlink to the survey in Qualtrics. Once the participant opened the survey, the informed consent asked respondents to select “I do Consent” or “I do not Consent” within the consent statement. The statement forced respondents to respond. Participants agreed with the statement by selecting “I do Consent” on the informed consent form. Individuals who selected the “I

do not consent" option Qualtrics sent a message expressing gratitude for their time and interest. Those who provided their consent proceeded with the study.

The study began with eight questions about respondents' demographics (see Appendix G–Demographics). Next, MTurkers responded to seven questions that evaluated their perceptions of their leadership (see Appendix G–Leadership). The following were 36 questions that assessed their received job satisfaction (see Appendix G–Job Satisfaction). Lastly, 12 questions evaluated perceptions of organizational trust (see Appendix G–Organization). After the respondents completed the sections, they answered an open-ended question regarding their age. The survey took approximately 15 minutes. Once a participant answered the last survey question, a message of appreciation for their participation was displayed, along with the researcher's contact information to address any questions. Qualtrics randomly generated a unique ID code once the participant completed all the survey questions. The participant returned to MTurk to enter the unique ID code into the HIT to qualify for compensation. Within five days, the researcher screened for survey completion and compensated each participant \$0.50 for completing the study. Furthermore, participants had to answer all survey questions for their responses to be deemed usable in this study. Table 3 presents the timeline of activities in the data collection plan for this research project.

Table 3

Data Collection Timeline

Week	Task
Pre-Study	Create a survey in Qualtrics with informed consent. Perform a pilot test on MTurk with qualification criteria and direct link to the survey in Qualtrics for administrative changes before IRB Approval.
1-4	Receive Institutional Review Board approval. Publish recruitment for the Human Intelligence Task on MTurk with qualification criteria and a direct link to the survey in Qualtrics. Begin the study for a maximum of 4 weeks or until the sample size plus 15% is received (445 respondents).
5-6	Conduct data analysis using SPSS
7-8	Create a written analysis of the data collected

Internal Validity and External Validity

This study faced potential threats to internal and external validity, and the researcher took measures to authenticate the research design to ensure the measurements' accuracy. A valid instrument measures what it means to measure (J. Phillips & Phillips, 2016). External validity relates to how the research would generalize across other treatments and settings (Trochim, 2006). According to Trochim (2006), a threat to external validity is when a researcher draws an incorrect inference from sample data to other persons or settings. Using a convenience sample threatens validity because the respondents are not randomly selected. Threats to external validity would also include the pandemic. The research study collected data during recovery from the COVID-19 pandemic. A researcher might get a different result if conducted at a later time. Threats to external validity could occur in the experiment, and the likelihood could vary. Those

threats could be enough for a critic to argue the study's validity (Trochim, 2006). When a researcher cannot rule out the threats, the findings have the potential not to be generalized across other settings (Meltzoff & Cooper, 2018).

Studies have supported the reliability of using crowdsourcing, such as MTurk, to gather data, including cross-sectional designs (Strickland & Stoops, 2018). These platforms allowed for quick data collection compared to the researcher going into the field for data collection (Cobanoglu et al., 2021). MTurk is one of the most popular crowdsourcing platforms for recruitment among researchers, and its usage has increased by 2,117% from 2012 to 2019 (Aguinis et al., 2021). Amazon created MTurk to enable organizations to access an online labor force. The platform creates human intelligence tasks (HITs), which humans, not machines, can complete. In this study, MTurk users participated as "workers" voluntarily.

Aguinis et al. (2021) identified ten challenges and associated validity threats, (a) inattentiveness, (b) self-misrepresentation, (c) self-selection bias, (d) high attrition, (e) inconsistent English language, (f) non-naivete, (g) growth of MTurker communities, (h) vulnerability to web robots, (i) social desirability bias, and (j) perceived researcher unfairness. The researcher attempted to minimize the potential biases and limitations in generalizing the findings to a larger population by providing information about the demographics of the study's respondents instead of assuming they were similar to those in other studies (Casey et al., 2017). External validity pertains to the ability to generalize and concerns the extent to which the findings of a study apply to individuals, locations, and periods beyond those included in the study (Trochim, 2006). To address misrepresentation, Aguinis (2021) suggests that qualifications relevant to the study

should be clear and employ screening questions to ensure MTurkers are familiar with the research topic. That way, the researcher can screen all respondents and eliminate those not meeting the criteria. The qualification criteria were helpful since this study was limited to only US citizens and eliminated MTurkers from other countries.

The research provided clear instructions and rules regarding compensation to address the threat of perceived research unfairness (Aguinis et al., 2021). The researcher included the payment schedule and the criteria for rejecting MTurker in the informed consent (Appendix B). Aguinis et al. (2021) provided a template for customization for future MTurk research. The researcher found no additional risks to external validity in their non-experimental study, but they continued examining potential threats during the survey. Non-experimental research generally has a low level of internal validity. Internal validity is only relevant in studies that establish a causal relationship (Trochim, 2006). Nevertheless, the authors recognized that instrumentation could threaten internal validity.

The researcher consolidated questions from three validated instruments into one design for this study. The survey tools remained the same to minimize the threat, but the length was a potential threat (Fink, 2017). Aguinis et al. (2021) also stated that a well-designed survey tool could help address validity threats posed by web robots and semi-representation. Participants provided their MTurk IDs for this study, and the researcher will maintain an Excel spreadsheet of all participation. For attention checks, the researcher included two open-ended questions. Research suggested a minimum of two attention checks to help address both inattentiveness and web bots. Attention checks do not affect the quality of the data as long as they are developed for this objective (Aguinis, 2021; Cobanoglu et al., 2021). For this study, the researcher repeated pertinent questions

in the instrument and asked open-ended questions, (a) country of residence, and (b) please provide your age in years. Researcher suggests building multiple validity checks into the instrument's design (Cobanoglu et al., 2021; de Quidt, 2017). Lastly, the study included an option for respondents to end their participation or contact the researcher on every page of the study, which addressed perceived researcher unfairness (Mason & Suri, 2012).

Researchers must find the proper method to identify and explore the threat's influences (Shadish et al., 2002). The researcher observed MTurk Crowd, an online MTurker forum, to collect comments, identify potential vulnerabilities or problems that could develop during the study, and resolve these concerns. Aguinis (2021) suggested that these steps helped address potential research unfairness threats. There were no recognized issues. Additionally, Fink (2017) suggests that researchers consider incentives that may encourage respondents to respond to lengthy surveys. For this study, the researcher paid MTurkers \$.50 for completion, hoping to compensate for the time it takes to complete the survey. Once MTurk received 445 responses, the HIT closed, and the process of analyzing the collected data began.

Data Analysis Plan

The analysis of the data occurred following data collection. According to Roberts and Hyatt (2019), the data analysis plan describes the study's survey objective, hypotheses, and research questions. The online survey tool provided immediate results and tracked MTurkers' responses to the survey (Qualtrics, n.d.). The final benefit of Qualtrics was the ability to import data into the IBM Statistical Package for Social Science (SPSS) in Windows for accurate and efficient data analysis. Data collection

included nominal, ordinal, and interval categories. This study employed nominal scales for respondents to name groups, such as age, gender, race, education, and industry type. Categorical measures with no numerical value and more than two definite possibilities (Phillips & Phillips, 2016) but no quantitative relationship are nominal (Phillips et al., 2013). In this study, the time spent working remotely and the duration of reporting to the current leadership were considered ordinal data. Ordinal data refers to variables that are arranged in order of rank and have a range (Phillips et al., 2013). Likert-type data expressing a "greater than" relationship were also ordinal (Boone & Boone, 2012). Phillips and Phillips (2016) stated that each Likert-type item should represent a high priority level, preference, or performance when using the ordinal data measurement. Boone and Boone (2012) stated that if four or more Likert scale items are combined to form a composite score, treating the results as interval-level data. Likert scale items are continuous or interval data (Phillips et al., 2013). The interval data types for this study were transformational leadership, job satisfaction, and organizational trust.

Rensis Likert developed the Likert concept in 1932 to evaluate the attitudes and beliefs of the population (Stratton, 2019). Combined items quantitatively measured attitudes or personality traits (Stratton, 2019). The researcher treated the Likert scale items as interval data in this study. Understanding the data types helped the researcher select the correct statistical analysis method, as Fink (2017) and Phillips et al. (2013) noted. According to Phillips et al. (2013), interval scales measure frequency in order with equal distance between response choices. For this research study, the Likert-type scale items were transformational leadership, job satisfaction, and organizational trust. The researcher used these scales to measure perceptions with which respondents agreed or

disagreed with the research objectives. Table 4 provides the data categories and statistical tests for this study's objectives. The study's independent variable was transformational leadership, with job satisfaction as the dependent variable and organizational trust as the mediator. The survey instrument included the demographics questionnaire and three validated instruments, the GTL (Carless et al., 2000), JSS (Spector, 1994), and the OTI-SF (Cummings & Bromiley, 1996). The researcher reviewed the research objectives and determined that frequency distribution, correlation, and mediation analysis were appropriate methods for data analysis. To ascertain the direction and strength of the linear relationship between two continuous variables, the researcher employed a Pearson product-moment coefficient, also known as Pearson's correlation (Laerd, 2018). The researcher conducted a mediation analysis via linear regressions to assess the relationship between the predictor(s) and the outcome of this study. Transformation leadership was the independent (predictor) variable, job satisfaction was the dependent (outcome) variable, and organizational trust was the mediator. The research questions were *What is the relationship between transformational leadership behaviors and job satisfaction in a virtual workplace? Does organizational trust influence the relationship between transformational leadership and job satisfaction in a virtual workplace?* The data analysis plan is available in Table 4.

Table 4

Data Analysis Plan

Research Objectives	Data Collection	Data Type	Statistical Analysis
RO1	Age	Scale	Descriptive Statistics
	Gender	Nominal	Frequency Distribution
	Race	Nominal	Frequency Distribution
	Education	Ordinal	Frequency Distribution
	Industry type	Nominal	Frequency Distribution
	Length of Time Working Virtually	Ordinal	Frequency Distribution
RO2	Time Reporting to Current Leader	Ordinal	Frequency Distribution
	TFL	Interval	Correlation
RO3	JS	Interval	Correlation
	TFL (IV)	Interval	Mediation analysis
	JS (DV)		
OT (MV)			

Note. IV = independent variable. DV = dependent variable. MV = mediator variable. Transformational Leadership = TFL. Organizational Trust = OT. Job Satisfaction = JS.

Summary

For Chapter III, the study used a quantitative research design to address the research questions *What is the relationship between transformational leadership and job satisfaction in the virtual workplace? Does organizational trust influence the relationship between transformational leadership and job satisfaction in the virtual workplace?* This chapter consisted of a thorough review of the study design. The target population was virtual workers in any industry field within the United States recruited via Amazon Mechanical Turk. This research study employed an online survey that incorporated three validated instrument tools. Carless et al.'s (2000) GTL measured the participant's

perception of transformational leadership. Spector's (1994) JSS assessed factors that affect job satisfaction. Lastly, Cummings and Bromiley's (1996) OTI-SF measured levels of trust in the participant's leader and organization. After obtaining approval from the University of Southern Mississippi Institutional Review Board, the researcher initiated the Human Intelligence Task (HIT). The researcher published an online survey and collected data presented in the subsequent chapter.

CHAPTER IV – RESULTS OF THE STUDY

The purpose of this research was to examine the relationship between transformational leadership and job satisfaction in the virtual workplace and how organizational trust affects that relationship. The results aim to answer the research questions *What is the relationship between transformational leadership and job satisfaction in the virtual workplace? Does organizational trust influence the relationship between transformational leadership and job satisfaction in the virtual workplace?* The data presented in this chapter was collected through an online survey. The first part of the chapter introduces the characteristics and demographic details of the respondents.

Research Objective 1 – Participants' Demographics

Describe the demographic characteristics of respondents by age, race, gender, education, industry type, length of time working virtually, and time reporting to the current leadership.

This non-experimental quantitative study recruited workers from different job industries within the United States through Amazon MTurk, a method for obtaining respondents through convenience sampling. The survey was only open to MTurkers who lived and worked virtually in the United States. While 486 individuals accessed the survey, only 464 agreed to the informed consent. Of those respondents, 16 did not pass the initial attention check. Of the remaining 448 respondents, only 439 provided a unique survey completion code in the Human Intelligence Task (HIT) in MTurk. Following a cross-check against Qualtrics, the researcher eliminated seven more respondents due to incorrect unique survey completion codes. The study received 432 completed responses, translating to a response rate of 89%. However, the minimum sample size for the study

was 385 (Raosoft, n.d.). To ensure reaching the targeted sample size after cleaning the data (Cobanoglu et al., 2021), the researcher added a 15-30% padding to compensate for incomplete responses and non-compliance (Aguinis et al., 2021). The researcher provided the 432 MTurkers with a \$.50 bonus for their involvement. The researchers imported the survey responses from Qualtrics into IBM SPSS Statistics 29 software, where the raw data was cleaned and prepped for analysis. The online survey included questions about demographics that were analyzed using frequency distribution, such as the participant's age, race, gender, industry, time spent working virtually, and length of time reporting to the current leadership.

Participant ages were widely dispersed between 18 and 67 years old, with the majority between 20-29 ($n = 127$) and 30-39 ($n = 165$), accounting for 67.6%. Only 0.5% of respondents were 18-19 ($n = 2$), and 3.9% were 60-69 ($n = 17$), as seen in Table 5. The choices for gender were limited to male, female, other, and prefer not to say. The demographic statistics identified self-reported as 66.7% as male ($n = 288$) and 31.5% as female ($n = 136$), as seen in table 6.

Table 5

Frequency Distribution by Age Category

Age	Frequency	Percentage	Cumulative Percent
18-19	2	0.5%	0.05%
20-29	127	29.4%	29.9%
30-39	165	38.2%	68.1%
40-49	86	19.9%	88.0%
50-59	35	8.1%	96.1%
60-67	17	3.9%	100%
Total	432	100.0%	

Table 6

Frequency Distribution for Gender

Gender	Frequency	Percentage
Male	288	66.7%
Female	136	31.5%
Other	5	1.2%
I prefer not to say	3	0.7%
Total	432	100.0%

The race categories in this study were White, Black or African American, American Indian/Native American/Alaska American, Asian, Native Hawaiian or Pacific Islander, Other, and Prefer not to Say. The majority of participants, precisely 86.3% ($n = 373$), identified themselves as White or Caucasian. Meanwhile, 5.3% of the respondents were Black or African Americans, while American Indian or Alaska Native, Asian, and Native Hawaiian or Pacific Islander demographics accounted for 6.7%. A small percentage (0.9%) of respondents chose not to disclose their race, and 0.7% identified as “Other,” as shown in Table 7. A large percentage of respondents, 78.9% ($n = 341$), reported having a bachelor’s degree, and 14.8% ($n = 64$) reported having a professional degree. Table 8 below displays the education levels. The respondents classified their work industry. Information Technology was the most commonly reported industry among respondents, at 42.8% ($n = 185$). No one reported working in the agriculture or federal government industry.

Table 7

Frequency Distribution by Race

Race	Frequency	Percentage
White or Caucasian	373	86.3%
Black or African American	23	5.3%
American Indian/Native American/Alaska American	6	1.4%
Asian	16	3.7%
Native Hawaiian or Pacific Islander	7	1.6%
Other	3	0.7%
Prefer Not to Say	4	0.9%
Total	432	100%

Table 8

Frequency Distribution for Education Levels

Education Levels	Frequency	Percent	Cumulative Percent
Some high school or less	0	0	0
High school graduate or GED	17	3.9%	3.9%
Some college, but no degree	6	1.4%	5.3%
Associate or technical degree	4	0.9%	6.2%
Bachelor's degree	341	79%	85.1%
Graduate or professional degrees (MA, MBA, Ph.D., JD, MD, DDS)	64	14.8%	100%
Total	432	100.0%	

Note. Information was adapted from Qualtrics' premium demographic library (Qualtrics, n.d.).

The distribution of respondents across job industries is in Table 9. Respondents report the length of time working in the virtual work environment. The majority self-reported between 1-2 years 30.3% ($n = 131$) and 2-4 years 29.2% ($n = 126$), as seen in Table 10. Lastly, the respondents self-reported the length of time reporting to their current leadership. The answers varied from < 6 months to > 5 years. Most respondents

have a minimum virtual work experience between 1-2 years, 36.3% ($n = 157$), as shown in Table 11.

Table 9

Frequency Distribution by Industry

Industry	Frequency	Percentage
Mining	3	0.7%
Construction	12	2.8%
Manufacturing	50	11.6%
Educational services	24	5.6%
Health care and social assistance	57	13.2%
Retail trade	11	2.5%
Federal government	5	1.2%
Transportation and warehousing	13	3.0%
Leisure & Hospitality	2	0.5%
Information Technology	185	42.8%
Financial activities	47	10.9%
Other services	2	0.5%
Wholesale trade	9	2.1%
Professional and business services	10	2.3%
State and local government	2	0.5%
Total	432	100.0%

Note. Industry labor force listing adapted from the Bureau of Labor Statistics (BLS, 2022).

Table 10

Frequency Distribution for Length of Virtual Work Experience

Length of virtual work experience	Frequency	Percent	Cumulative
			Percent
> 6 months to 1 year	53	12.3%	12.3%
> 1-2 years	131	30.3%	42.6%
> 2-4 years	126	29.2%	71.8%
> 4-5 years	62	14.4%	86.2%
> 5 years	60	13.8%	100.0%
Total	432	100.0%	

Table 11

Frequency Distribution for Length of Time Reporting to Current Leadership

Length with current leadership	Frequency	Percent	Cumulative Percent
> 6 months to 1 year	80	18.5%	18.5%
> 1-2 years	157	36.3%	54.8%
> 2-4 years	102	23.6%	78.4%
> 4-5 years	57	13.2%	91.7%
> 5 years	36	8.3%	100.0%
Total	432	100.0%	

Research Objective 2 – TFL and JS

Determine the relationship between transformational leadership and job satisfaction in the virtual workplace.

The researcher analyzed RO2 using the Pearson product-moment correlation. A Pearson correlation coefficient, denoted as r , measures the strength and direction of the relationship between two interval variables (Laerd, 2018) and ranges from -1 (a negative relationship) to +1 (a positive relationship). Field (2018) states that a positive correlation happens when both variables have high or low scores. Conversely, a negative correlation occurs when one variable has high scores while the other has low results. A zero correlation occurs when no relationship exists, regardless of which variable is high or low (Field, 2018). This study utilized Pearson's correlation to determine the strength and direction of the relationship between transformational leadership and job satisfaction. Before measuring the strength and direction of the linear relationship, several assumptions entail verifying whether the data the researcher intends to examine is suitable for Pearson's correlation.

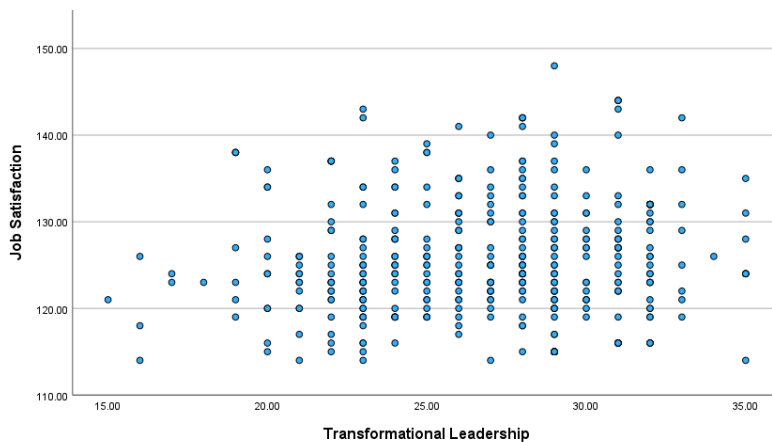
Pearson's Correlation Assumptions

The data must meet certain assumptions to use Pearson's correlation. The first two pertain to the research design and variables involved (Laerd, 2018). Specifically, two continuous variables should be present and paired (Laerd, 2018). In this study, the first two assumptions have been satisfied. The Likert scales for transformational leadership and job satisfaction are interval data and pair variables. The following three assumptions relate to a Pearson correlation. Firstly, a linear relationship between variables should exist. Secondly, significant outliers should not be present. Finally, both variables should have a normal distribution (Laerd, 2018). Additionally, to run null hypothesis significance testing, the research must satisfy the bivariate normality assumption (Laerd, 2018).

Linear Relationship. The scatterplot in Figure 2 allowed the researchers to investigate the assumption of linearity (Field, 2018). A visual inspection showed a positive linear relationship between transformational leadership and job satisfaction, which indicates no violation of the assumption of linearity (Laerd, 2018).

Figure 2

The linear relationship between TFL and JS



The first three assumptions guide the appropriate use of Pearson's correlation for data analysis. If the first three assumption tests are unmet, researchers must select a different statistical test (Laerd, 2018). RO2 met all three assumptions. According to Laerd (2018), the two variables are intervals, paired, and have a linear relationship, which is visual from the scatterplot. Additionally, as Field (2018) states, a sample size of 30 or more can help infer a normal distribution of samples, thanks to the central limit theorem. The current research consisted of 432 respondents and met the criteria for normal distribution, enabling the use of Pearson's correlation analysis. The remaining assumptions establish how data fits into the correlation coefficient model. Violations of the assumptions can lead to inaccurate or misleading results and affect the ability to detect meaningful differences among population means. However, it is not uncommon for data to violate one or more of these assumptions (Gignac, 2019).

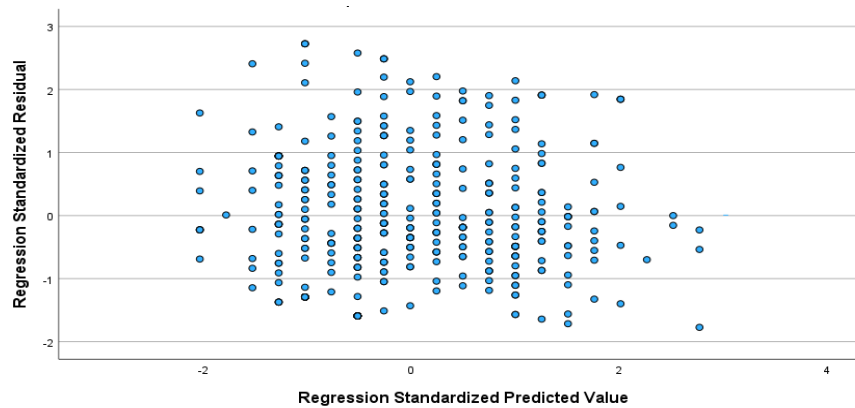
Outlier Detection. Using the Shapiro-Wilk test, the researcher performed normality tests to check the normal distribution of the data for transformational leadership and job satisfaction. The results from the Shapiro-Wilk test showed that not all variables are normally distributed as their p -values were $< .05$. Furthermore, the researcher also observed non-normal distribution for both variables using Q-Q plots and histograms. Although Shapiro-Wilk's test suggested that the data for both variables did not conform to the normality assumption, the skewness and kurtosis for transformational leadership (IV) were within an acceptable range. According to Gignac (2019), data is normal distribution when skewness falls between -2 and $+2$ and kurtosis between -7 and $+7$. Transformational leadership scores were normally distributed, with a skewness of $-$

.740 ($SE = .12$) and kurtosis of 1.35 ($SE = .02$). Whereas job satisfaction (DV) had a skewness of 1.38 ($SE = .12$), which is positive. However, the kurtosis score for JS was not within an acceptable range at 9.26 ($SE = .23$), which suggests a non-normal distribution. A visual inspection of the histograms revealed several outliers for both variables. Box plots can identify outliers' data points outside the typical range. According to (Laerd, 2018), if an outlier does not significantly impact the results, it can be left in the data s or removed. The researcher visually examined box plots and found three outliers in the transformational leadership scores and seventeen in the job satisfaction scores for 20 outliers. However, two were shared, leaving 18 outliers. Tabachnick et al. (2013) state that when outliers are present, the researcher should examine for data entry or measurement error and determine how well these outliers represent the target population. The researcher rechecked the scores of the job satisfaction sub-scales to confirm accurate calculations and then re-evaluated the data for each outlier and found that the data was consistent. Gignac (2019) also recommended performing a Pearson's correlation to verify the assumption of homoscedasticity. If Pearson's correlation has a statistically significant p -value ($p < .05$), the results mean that the assumption of homoscedasticity was met (Gignac, 2019). Before running Pearson's correlation, the author (2019) suggested converting the standardized residuals to absolute values to make it simpler to spot a pattern in the scatterplot and conduct a Pearson's correlation. The researcher ran an analysis to establish the correlation between the absolute residuals and the standardized predicted values. The results showed a weak, positive correlation of $r = .054$, $p = 0.264$. However, there was not a statistically significant linear relationship, which indicates a violation of the homoscedasticity assumption and suggests heteroscedasticity in the data.

Tabachnick et al. (2013) recommended running data with and without the outliers to check if the outliers were affecting the results. To resolve the issue of violations of homoscedasticity, the researcher removed the 18 data points, decreasing the sample size to $N = 415$. Further analysis showed the relationship to be linear with both variables' normality distributed, as determined by Shapiro-Wilk's test ($p > .05$), and there were no remaining outliers. The researcher inspected the scatterplot and found that the residuals for transformational leadership predicting job satisfaction were more evenly distributed than before removing the outliers.

Figure 3

Scatterplot between TFL and JS



Homoscedasticity. The researcher correlated the standardized predicted and the standardized residual values. This time the analysis revealed a statistically significant, small positive correlation, $r(413) = .137, p < .002$, satisfying the assumption of homoscedasticity. This approach indicates that removing the 18 outliers resolved the violations of the assumption of homoscedasticity for variables transformational leadership and job satisfaction. The normality testing also confirms the decision made

during the research design to use parametric testing during data analysis. The following section discusses the means and standard deviations.

RO2 Means and Standard Deviations

RO2 examined the relationship between transformational leadership and job satisfaction in the virtual workplace. There are seven questions from the GTL. This instrument measured the rater's perceptions of transformational leadership utilizing a 5-point Likert scale ranging from 1 = *rarely or never* to 5 = *very frequently or always*. Responses for the seven questions measuring perceived transformational leadership were analyzed using descriptive statistics. Transformational leadership scale items developed by Carless et al. (2000) include "Communicate a clear and positive vision of the future" and "Is clear about his or her values and practices what he or she preaches." The researcher calculated a mean or average score from the Likert scale for the seven transformational leadership questions. Since transformational leadership scores were recorded for each question separately, the researcher calculated the mean score using the data from all seven transformational leadership questions. The possible range in scores was 7 to 35 after summing all responses for each participant (Carless et al., 2000). The mean score for transformational leadership was 26.62 ($SD = 4.21$).

The JSS assessed factors that affect job satisfaction. The 6-point Likert scale, ranging from 6 = *agree very much* to 1 = *disagree very much*. There are nine subscales of the JSS (Spector, 1997). There is (a) pay, (b) promotion, (c) supervision, (d) fringe benefits, (e) contingent rewards, (f) operating procedures (required rules and procedures), (g) coworkers, (h) nature of work, and (i) communication. Job satisfaction scale items include "I feel I am being paid a fair amount for the work I do" and "Work assignments are

not fully explained.” The researcher calculated a mean or average score from the Likert scale for the 36 job satisfaction questions. The JSS includes both positive and negative items. There are nine subscales, each consisting of four items, and scores can range from 4 to 24 for each subscale. JSS has 6-point agree-disagree choice options. According to Spector (1997), agreeing with positive-worded statements and disagreeing with negative-worded statements denotes satisfaction, while disagreeing with positive-worded statements and agreeing with negative-worded statements reflects dissatisfaction. Mean scores for job satisfaction were highest for nature of work ($M = 17.07$, $SD = 2.34$) and promotion ($M = 16.36$, $SD = 2.19$) and lowest for contingent reward ($M = 12.20$, $SD = 2.55$) and communication ($M = 11.96$, $SD = 2.74$). There were also differences in the standard deviations relative to the value of the means.

If the standard deviation is small, it means tightly clustered scores around the mean. On the other hand, a large standard deviation indicates that the scores are spread out more widely from the mean. A standard deviation of zero would mean the scores are relatively the same (Field, 2018). According to Spector (1997), the overall job satisfaction score can range from 36 to 216. A summed score of 36 to 108 signifies dissatisfaction, 144 to 216 signifies satisfaction, and 108 to 144 indicates ambivalence. Based on this interpretation, the analysis showed an ambivalent attitude toward their overall job satisfaction, with a mean score of 126.36 ($SD = 8.88$). The researcher will discuss these findings in Chapter V. Table 12 depicts descriptive statistics for transformational leadership and job satisfaction in the virtual workplace.

Table 12

TFL and JS Subscales

Variables	<i>N</i>	<i>M</i>	<i>SD</i>
Pay	415	14.35	1.60
Promotion	415	16.36	2.19
Supervision	415	14.54	1.90
F_Benefits	415	14.20	1.87
Rewards	415	12.20	2.55
Op_Con	415	11.52	2.33
Coworkers	415	14.13	2.22
Nature_Work	415	17.07	2.34
Communication	415	11.96	2.74
Total Job Satisfaction	415	126.36	8.88
Transformational Leadership	415	26.62	4.21

RO2 Pearson's Correlation Results

The researcher performed Pearson's correlation to assess the relationship between transformational leadership and job satisfaction in the virtual workplace. The correlation between transformational leadership and job satisfaction revealed a positive correlation. In conducting the correlation test between transformational leadership and job satisfaction in the virtual workplace, the researchers used the conventional criterion with an alpha level of .05, which means there was a 5% chance of error and a 95% confidence level. The test results in Table 13 indicated a significant and strong positive relationship between transformational leadership and job satisfaction, with transformational leadership accounting for 85% of the variability in job satisfaction. Specifically, the correlation coefficient $r(413) = .92, p < .001$, indicating that the relationship between the two variables was statistically significant. High levels of job satisfaction are associated with greater transformational leadership.

Table 13

Correlation between TFL and JS

Variables	Job Satisfaction	
Transformational Leadership	Pearson's Correlation	.92**
	Sig. (2-tailed)	< .001
	<i>N</i>	415

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

Research Objective 3 – OT, TFL, and JS

Determine if organizational trust mediates the relationship between transformational leadership and job satisfaction in the virtual workplace.

The researcher used the OTI-SF for the final section (see Appendix F). (Cummings & Bromiley, 1996) The instrument has 12 questions that measure the participant's trust in another person and the organization. The survey questions are in Appendix G–Organization. The researcher chose the instrument because it is reliable and meets the criteria for this study in determining if organizational trust mediates the relationship between transformational leadership and job satisfaction in the virtual workplace. The authors tested the instrument's validity and reliability (Cummings & Bromiley, 1996). The OTI-SF achieved a Bentler's comparative fit index of .98 and high correlated reliability of .94 in keeping commitments, and a .90 for avoiding taking excessive advantage of others (Cummings & Bromiley, 1996). Other researchers validated the instrument (Vidotto et al., 2008). The authors conducted an exploratory factor analysis to validate the strength of the three trust factors resulting in an explanation of 74.6% of the variance. The OTI-SF was the right choice for this study because it is a reliable instrument with good psychometric properties in terms of reliability and validity when measuring elements of organizational trust (Vidotto et al., 2008). RO3 examined

the influence of organizational trust on the relationship between transformational leadership and job satisfaction in a virtual work environment. Organizational trust questions (Q51–Q62) helped to address RO3 for this study. The respondents responded to a seven-point Likert Scale, 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neither agree nor disagree*, 5 = *slightly agree*, 6 = *agree*, and 7 = *strongly agree*. The researcher calculated a mean or average score from the Likert scale for the 12 questions. After adding all the questions for each respondent, the possible range of scores was 12 to 84. (Cummings & Bromiley, 1996). The mean score for organizational trust was 50.50, and *SD* = 4.21.

Table 14

RO3 Means and Standard Deviations

Variables	<i>N</i>	<i>M</i>	<i>SD</i>
Organizational Trust	415	50.50	4.22
Job Satisfaction	415	126.36	8.88
Transformational Leadership	415	26.62	4.21

Mediation Analysis

To answer RO3, the researcher performed regression analyses to determine if organizational trust (mediator) influenced the relationship between transformational leadership (predictor) and job satisfaction (outcome) in the virtual workplace, using Baron and Kenny’s (1986) mediation method. This approach measures relationships among each combination of variables (Preacher & Hayes, 2004). Simple regression analyses are in Steps 1 and 2 before using multiple regression analysis in Step 3. The hypothesis is supported if it meets two conditions, (a) if there is a significant relationship between transformational leadership and job satisfaction, and (b) if there is a significant

relationship between organizational trust and job satisfaction (Baron & Kenny, 1986).

For both conditions, the significance level is alpha .05. Multiple linear regression tests the hypotheses and examines the strength of the relationships between transformational leadership variables (IV) and job satisfaction (DV). The statistical analysis plan in Table 15 outlines the research objectives, variables, data types, and statistical analyses.

Table 15

Analytical Model for RO3

Research Objectives	Description of analytical models	Variables		
		Independent	Mediator	Dependent
Analytical Model (RO3)	OT as a mediator on the relationship between TFL and JS	TL	OT	JS

The researcher tested mediation hypotheses using the Baron and Kenny (1986) mediation method, which is widespread, well-documented, and cited by 111,522 journal articles according to the *Social Sciences Citation Index* as of May 2022. Mediation is when the outcome can explain the relationship between the predictor variable and the outcome variable (Field, 2018). The study assessed the influence of organizational trust on the relationship between transformational leadership and job satisfaction. To test for mediation hypotheses, the researcher conducted three regression equations (Preacher & Hayes, 2004). The researcher measured the mediation using total scores for job satisfaction, organizational trust, and transformational leadership. Mediation happens when the relationship between the predictor and outcome becomes weaker in the mediator's presence. Baron and Kenny (1986) proposed that the most robust form of mediation occurs when the indirect effect has no direct effect on the equation. If all four criteria meet, this is considered a complete mediation (Preacher & Hayes, 2004).

The study supports partial mediation if the data meets the first three conditions and has a direct and indirect effect. The authors (1986) claim that there is no reason to explore the IV and DV effect further if mediated by MV without an effect to mediate. If there is an indirect or direct effect, a Sobel test will serve as a supplement to test the conclusion's validity (Baron & Kenny, 1986). Zhao et al. (2010) argued that the effect of the IV and DV is reduced when the MV is insufficient and recommend using the bootstrap in SPSS. This type of mediation is examined by further exploring the significance of the direct and indirect effects. Zhao et al. (2010) state that to establish mediation, all that matters is a significant indirect effect. According to Field (2018), Baron and Kenny seek significant relationships. When using the Sobel z -test, there is significant mediation if the predictor significantly affects the outcome through the mediator. For this study, the researcher will perform the bootstrap using the Hayes Process Macro (Hayes, 2013). Testing for mediation is in Table 16.

Table 16

The mediating influence of OT on the relationship between TFL and JS

Variables	Measurement	Statistical Test
TFL (IV) JS (DV)	Scale	Simple linear regression
TFL (IV) OT (DV)	Scale	Simple linear regression
TFL (IV) OT (MV) JS (DV)	Scale	Multiple linear regression Sobel z -test Hayes Process Macro

Note. IV refers to the independent variable. DV refers to the dependent variable. MV refers to the mediating variable.

In examining RO3, the researcher performed Baron and Kenny's (1986) mediation method to assess if organizational trust influences the relationship between transformational leadership and job satisfaction. Baron and Kenny (1986) state that the results must meet four conditions to support mediation.

1. The independent variable (transformational leadership) must be related to the dependent variable (job satisfaction).
2. The independent variable (transformational leadership) must be related to the mediator variable (organizational trust).
3. The mediator (organizational trust) must be related to the dependent variable (job satisfaction) while in the presence of the independent variable (transformational leadership).
4. The independent variable (transformational leadership) should no longer be a significant predictor of the dependent variable (job satisfaction) in the presence of the mediator variable (organizational trust).

RO3 Assumptions Testing

Assumptions Testing – Step 1

A simple linear regression examines the linear relationship between two continuous variables, aiming to predict the value of a dependent variable based on an independent variable's value (Laerd, 2018). The author outlines five assumptions for simple regression testing: one dependent variable and one continuous independent variable linear relationship between variables, independent observations, absence of significant outliers, homogeneity of variances, and residuals distributed normally. The researcher first checked assumptions for the simple linear regression analyses. In this

study, simple linear regression testing was appropriate since the objective met these assumptions. The independent variable was transformational leadership, and the dependent variable was job satisfaction in the virtual workplace. A scatterplot was created to visualize the relationship between the two variables and indicate a linear relationship.

For the subsequent assumption testing, the researcher used the Durbin-Watson test. The test focuses on the residuals and whether a correlation exists. The statistic can range from zero to 4; without a correlation, the Durbin-Watson should be close to 2. The data analysis showed that the residuals were independent, as indicated by a Durbin-Watson statistic of 1.979, and no outliers were present. Furthermore, a scatterplot reveals the normality assumption. Visual inspection shows data points closely following the normal trend line, indicating that the normality assumption is met (see Figure 4). Figure 5 shows homoscedasticity through a plot of standardized residuals versus the standardized predicted values. All assumptions for Step 1 are met.

Figure 4

Normal P-Plot for linear regression with TFL predicting JS

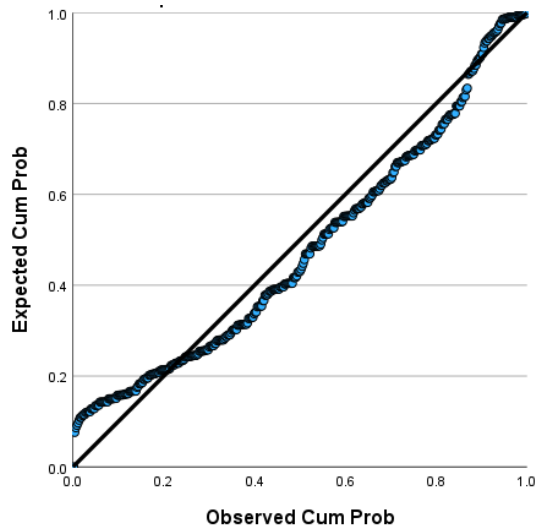
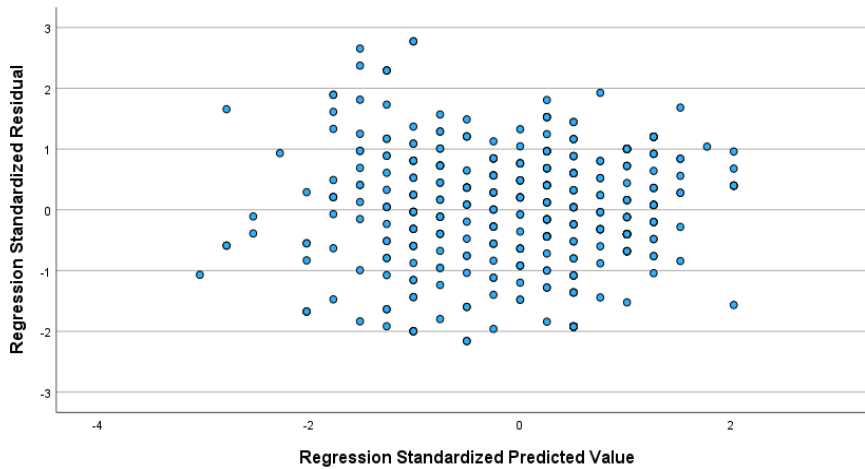


Figure 5

Residuals scatterplot for linear regression with TFL and JS



Assumptions Testing – Step 2

The researcher checked assumptions for the simple linear regression analyses for Step 2. A simple linear regression examines the linear relationship between two continuous variables, aiming to predict the value of a dependent variable based on an

independent variable's value (Laerd, 2018). The author outlines five assumptions for simple regression testing: one dependent variable and one continuous independent variable, a linear relationship between the variables, independent observations, no significant outliers, homoscedasticity, and approximately normally distributed residuals. In this study, simple linear regression testing was appropriate since the objective met these assumptions. The independent variable was transformational leadership, and the dependent variable was job satisfaction in the virtual workplace. The researcher establishes linearity by visual inspection of a scatterplot. For the subsequent assumption testing, the researcher used the Durbin-Watson test. The test focuses on the residuals and whether a correlation exists. The statistic can range from zero to 4; without a correlation, the Durbin-Watson should be close to 2. Results reveal an independence of residuals of 2.008, indicating no correlation between residuals. There were also no outliers identified in the data set.

Moreover, normality and homoscedasticity assumptions are examined visually using scatterplots. The data points closely adhered to the normal trend line, indicating that the data meet the normality assumption (see Figure 6). There was homoscedasticity, as assessed by visual inspection of a plot of standardized residuals versus standardized predicted values, as shown in Figure 7. All the assumptions for Step 2 are met.

Figure 6

Normal P-Plot for linear regression with TFL predicting OT

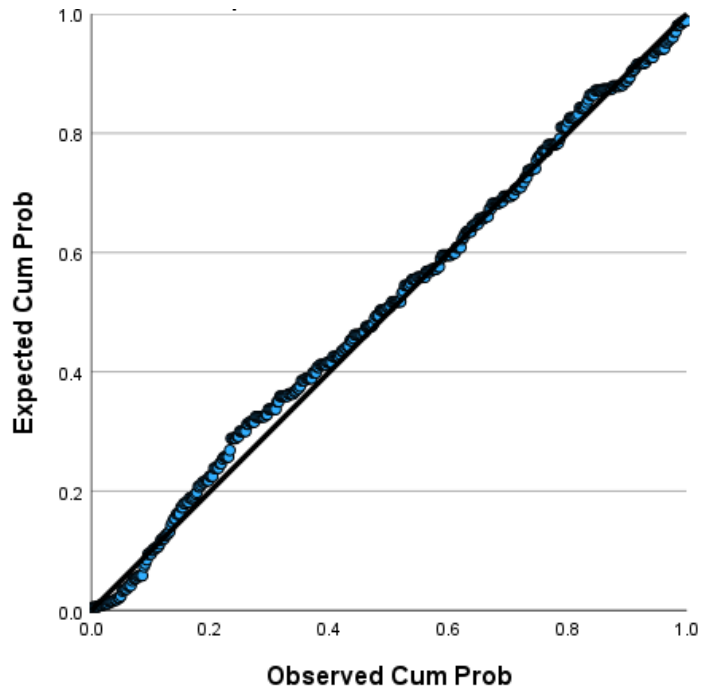
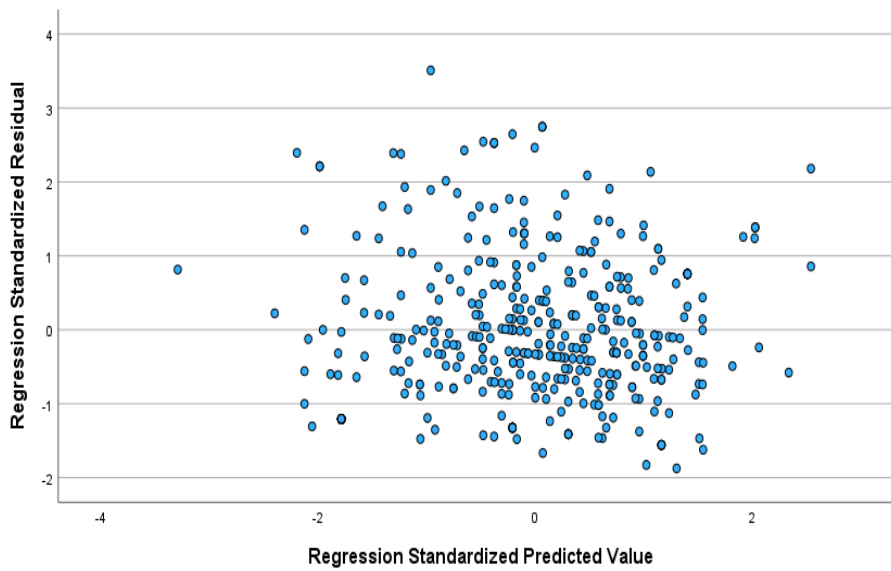


Figure 7

Residuals scatterplot for linear regression with TFL predicting OT



Assumptions Testing – Step 3

Step 3 is multiple regression. Multiple regression is a statistical method that can be employed to predict a dependent variable, measured on a continuous scale, utilizing numerous independent variables. In addition, multiple regression analysis enables us to evaluate how well the model fits and the relative contribution of each predictor variable in explaining the total variability. Job satisfaction is the outcome, transformational leadership is the predictor, and organizational trust is the mediator for this model. Laerd (2018) outlines several assumptions for multiple regression. These assumptions include having one dependent variable and two or more independent variables measured as continuous intervals. Establish a linear relationship between the dependent variable and each independent variable. Homoscedasticity should be present. There are little or no multicollinearity or significant outliers and normally distributed residuals.

The Durbin-Watson test assesses independence on a scale of 0 to 4. A statistic of 1.98 indicates no correlation and meets the assumption. Additionally, the test found a linear relationship between the dependent and independent variables. Figure 8 displays a p-plot demonstrating that the residuals follow a normal distribution and are evenly scattered along the diagonal line, suggesting the presence of homoscedasticity. The testing has met all of the assumptions for multiple linear regression.

Figure 8

Normal P-Plot for linear regression with TFL and OT predicting JS

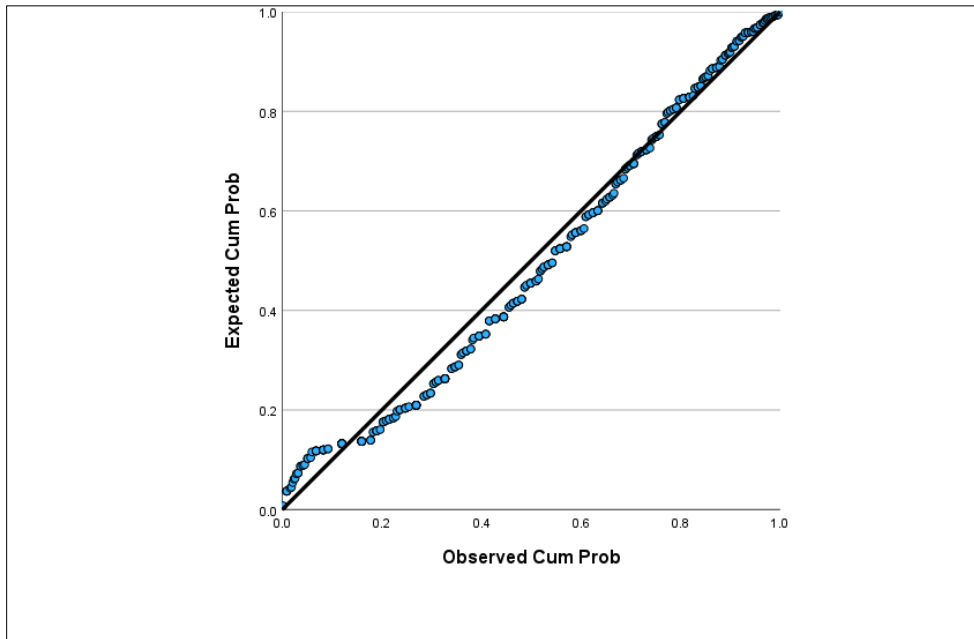
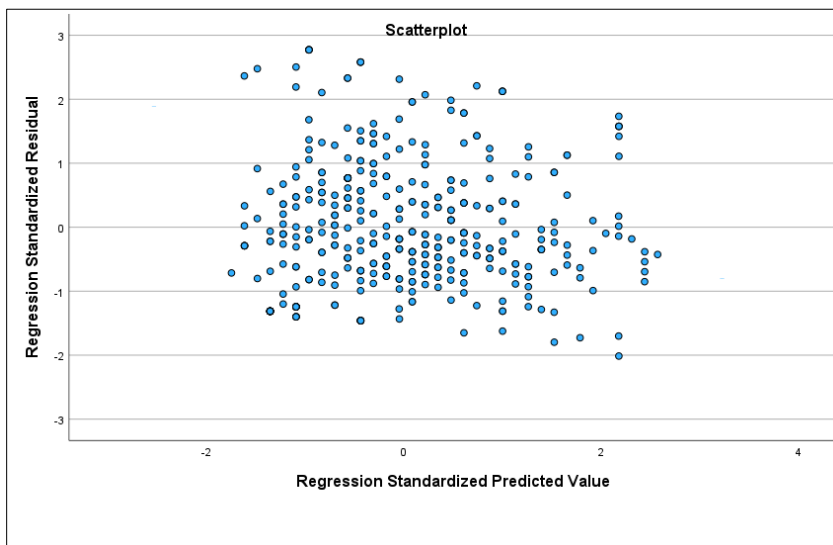


Figure 9

Residuals scatterplot for TFL and OT predicting JS



Examining the correlation coefficients and tolerance values to identify multicollinearity is possible. According to Laerd (2018), it is most important to refer to the coefficients table and pay special attention to the values of "Tolerance" and "VIF." If all tolerance values (divided by 1) exceed 0.1 but are less than 10, the researcher can be fairly confident that there are no issues with collinearity in the dataset. Table 17 presents the correlation coefficients for each of the independent variables. Table 18 shows that every tolerance value is more significant than 0.1 and less than 10. Hence, there is no cause for multicollinearity concerns, according to Field (2018). Moreover, the standardized residuals do not exceed ± 3 , and no outliers or leverage values above 0.2 or influential values above one are present. This fulfills the assumption criteria, as stated in Laerd (2018).

Table 17

Correlation for Multicollinearity

Variables	JS	TFL	OT
JS	1.000	.923	.071
TFL	.923	1.000	.135
OT	.071	.135	1.000

Note. N = 415. Transformational Leadership = TFL. Organizational Trust = OT. Job Satisfaction = JS.

Table 18

Tolerance Values for Multicollinearity

Variables	<i>t</i>	<i>Sig.</i>	Correlations	Collinearity Statistics		
				Partial	Part	Tolerance
(Constant)	44.969	< .001				
TFL	49.289	< .001	.923	.925	.922	.982
OT	2.906	.004	.071	.142	.054	.982

Note. Job satisfaction is the dependent variable. Transformational Leadership = TFL. Organizational Trust = OT.

Evaluating how well the model fits the data with all three variables requires multiple criteria, including the multiple correlation coefficient, the percentage of variance explained, the overall statistical significance of the model, and the precision of its predictions. The multiple correlation coefficient, r , measures the strength of the linear relationship between the variables and can range from 0 to 1. The coefficient of determination, R^2 , for the entire model was determined to be 85.6%, with an adjusted R^2 of 85.5%. Table 19 reports the value of r as .925, which indicates a substantial correlation.

Table 19

Multiple Correlation Coefficients for Model Fit

<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>
.925	.856	.855

Note. The predictors are transformational leadership and organizational trust. Job satisfaction is the dependent variable.

The overall model's statistical significance indicates that transformational leadership and organizational trust predict job satisfaction, which indicates $F(2, 412) = 1221.940$, $p < .0001$. Table 20 presents these findings. This study satisfies the assumption testing for multiple regression.

Table 20

Statistical Significance

<i>Test</i>	<i>Sum of Squares</i>	<i>df</i>	<i>Mean Square</i>	<i>F</i>	<i>Sig.</i>
Regression	15.980	2	7.990	1221.940	< .001
Residual	2.694	412	.007		
Total	18.674	414			

Note. The predictors are transformational leadership and organizational trust. Job satisfaction is the dependent variable.

Baron and Kenny's (1986) Mediation, Step 1 – IV must be related to DV

To examine Step 1 of the mediation analysis, the researcher conducted a simple linear regression with transformational leadership (independent variable) predicting job satisfaction (dependent variable). The regression results suggested that transformational leadership explained 85.3% of the variance, $R^2 = .853$, $F(1, 413) = 2392.323$, $p < .001$. Transformational leadership significantly predicted the direct effect on job satisfaction in the virtual workplace, $B = .347$, $t = 48.911$, $p < .001$. The results meet Step 1 of the Baron and Kenny mediation method.

Baron and Kenny's (1986) Mediation, Step 2 – IV must be related to MV

For examining Step 2, the researcher conducted a simple linear regression with transformational leadership (independent variable) predicting organizational trust (mediator). The regression results were statistically significant, $R^2 = .018$, $F(1, 413) = 7.723$, $p = .006$. The results suggest that transformational leadership was statistically associated with organizational trust, $B = .087$, $t = 2.779$, $p = .006$. The results meet Step 2 of the Baron and Kenny mediation method.

Baron and Kenny's (1986) Mediation, Step 3 – MV must be related to IV while in the presence of DV

The researcher conducted a multiple linear regression with transformational leadership and organizational trust (independent variables) predicting job satisfaction (dependent variable). The regression results were significant, $R^2 = .856$, $F(2, 412) = 1221.940$, $p < .001$. That suggests that transformational leadership and organizational trust collectively have a significant positive effect on job satisfaction. The results also suggest a statistically significant indirect effect between organizational trust ($B = .032$, $t =$

2.906, $p = .004$) and job satisfaction in the presence of transformational leadership. The results meet Step 3 of Baron and Kenny's (1986) mediation method.

Baron and Kenny's (1986) Mediation, Step 4 – the effect of the IV on the DV should no longer be significant in the presence of MV

According to Baron and Kenny (1986), mediation occurs when the transformational leadership and job satisfaction beta value in Step 4 decreases from Step 1 (when the mediating variable is absent). The study met Step 4 since transformational leadership is no longer a significant predictor of job satisfaction ($B = .350, t = 49.289, p = < .001$) in the presence of organizational trust. The beta value in Step 4 decreased from .923 to .921; therefore, Step 4 is met. Table 21 represents Baron and Kenny's (1986) mediation method.

Table 21

RO3 – Baron and Kenny's (1986) Mediation Method

Dependent	Independent	<i>B</i>	<i>SE</i>	β	<i>t</i>	<i>p</i>
Regression 1 JS	TFL	.347	.007	.923	48.911	< .001
Regression 2 OT	TFL	.087	.031	.135	2.779	.006
Regression 3 JS	TFL OT	.350 .032	.007 .011	.921 .055	49.289 2.906	< .001 .004

Note. Job satisfaction = JS. Transformational Leadership = TFL. Organizational Trust = OT.

All four of Baron and Kenny's conditions were supported. Transformational leadership has a direct and an indirect effect on job satisfaction in the virtual workplace. However, in the presence of the mediator, the beta value decreased, and transformational leadership is no longer a significant predictor of job satisfaction. Organizational trust does influence the relationship between transformational leadership and job satisfaction.

To confirm the analysis, the researcher performed a Sobel test to examine whether the indirect effect of the independent variable on the dependent variable through the mediator is significantly different from zero. According to Preacher (2010), a researcher can obtain the p -values using a two-tailed z -test from the standard normal distribution, assuming the mediated effect is zero in the population. The test ratio's critical values, which include the central 95% of the standard normal distribution, are ± 1.96 . The results estimated an indirect effect of 2.0198, $SE = 0.0014$, and $p = 0.0043$, which is statistically significant because the p -value is $< .05$. Table 22 represents the results of the indirect testing using Sobel's algorithm. The results support that organizational trust influences the relationship between transformational leadership on job satisfaction. Preacher and Hayes (2004) suggest using bootstrapping for greater statistical power. Hayes' PROCESS macro (Hayes, 2022) helped identify mediation's indirect effects. The PROCESS tool is a logistic regression path analysis used to observe variables and to calculate the direct and indirect effects in models with one or multiple mediators (Hayes, 2022). The only requirement for mediation is that the indirect effect "a * b" be significant (Preacher & Hayes, 2004). In Table 23, the upper and lower confidence intervals are positive, indicating they do not cross zero. Therefore, the indirect effect is statistically significant, and mediation is present. The researcher can conclude that organizational trust influences the relationship between transformational leadership and job satisfaction.

Table 22

RO3 – Sobel Test

Sobel Method	Effect	SE	Z	P
Organizational Trust	.032	.001	2.019	.004

Table 23

RO3 – Hayes’ PROCESS Macro

Bootstrap Method	Effect	SE	95.0% Confidence Interval	
			Lower Bound	Upper Bound
Organizational Trust	.028	.001	.0006	.0060

Summary

The current research study used a quantitative design to examine the perceived mediating influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace. This chapter analyzed the distribution and variation of the data collection and analysis from 415 surveys. Using Pearson's correlation, the study revealed a positive relationship between job satisfaction and transformational leadership in the virtual workplace. To address RO3, the researcher employed mediation analysis and utilized regression models to test hypotheses. Baron and Kenny's (1986) mediation results meet all four conditions. The researcher performed a Sobel test to test the indirect effect, which was statistically significant. The researcher also used Hayes' PROCESS macro (Hayes, 2022) to increase the study's statistical power, which produced consistent results of an indirect effect. Findings indicate that organizational trust influences the relationship between transformational leadership and job satisfaction in the virtual workplace. The subsequent chapter will provide an overview of the results. The chapter will also discuss the findings, limitations of the study, implications, recommendations for future research, and the overall conclusion.

Chapter V – FINDINGS

Chapter 5 discusses the research findings and recommendations for further studies, highlighting the limitations and implications of the findings. The chapter also presents how to apply findings to the virtual workplace to improve job satisfaction. Lastly, the conclusion summarizes the purpose, findings, and connections to existing literature and the results of this study.

Introduction

The shift towards virtual modes of operation is causing changes in leadership and organizational structure, as seen in the increasing number of organizations adopting virtual workplaces. This quantitative research study aimed to examine the mediating influence of organizational trust on the relationship between transformational leadership style and job satisfaction in the virtual workplace. Previous research supports that transformational leadership positively correlates with employee job satisfaction (Miller, 2020). The study also determines the influence of organizational trust on the relationship between transformational leadership and job satisfaction in the virtual workplace. Organizations cannot underestimate the significance of leadership behaviors on workers' perceptions of job satisfaction (Hidayat et al., 2021) and trust (Mackey, 2022). This study utilizes the GTL (Carless et al., 2000) to determine the degree of influence that transformational leadership has on job satisfaction in the virtual workplace. The study uses the JSS (Spector, 1997) to measure employee job satisfaction. This study also uses the OTI-SF (Cummings & Bromiley, 1996) to assess the participant's trust in the leadership and organization. Using Pearson's correlation, this study uses a quantitative

cross-sectional research approach to test the relationship between transformational leadership and job satisfaction.

The researcher selected the approach for its strength in examining relationships between variables, essential to answering the research questions (Shadish et al., 2002, p. 7). This study also employs mediation analyses to examine organizational trust's influence on the relationship between transformational leadership and job satisfaction. The respondents are virtual workers in the United States recruited via Amazon Mechanical Turk. A Human Intelligence Task (HIT) in MTurk contained a link directing participants to the survey in Qualtrics. Before participants could access the surveys, they gave their informed consent. It took respondents approximately 15 minutes to complete a 63-item survey collecting perceptions of transformational leadership, job satisfaction, and organizational trust. After reaching the sample size, the researcher exported the raw data into SPSS for data analysis and interpretation. The study's results fulfilled its goal through three specific research objectives.

RO1 - Describe the demographic characteristics of respondents by age, race, gender, education, industry type, length of virtual employment, and length of time working for the current leadership.

RO2 - Determine the relationship between transformational leadership and job satisfaction in the virtual workplace.

RO3 - Determine if organizational trust influences the relationship between transformational leadership and job satisfaction in the virtual workplace.

Chapters I to IV of this study focus on comprehending the research study, which includes a literature review, methodology, data collection, and results. Chapter V

summarizes the outcomes, conclusions, and recommendations based on the findings presented in Chapter IV. The conclusion is the researcher's interpretation of the participant responses obtained from the collected survey data, descriptive statistics, and the outcomes derived from the correlation and mediation analyses. Afterward, the chapter discusses the implications, limitations, and recommendations for future research.

Findings

This section presents the study's findings, conclusions, and recommendations, which provide valuable information about the relationships between variables.

Findings 1 – As leaders demonstrate transformational leadership behaviors, workers' job satisfaction increases within the virtual workplace.

This study's findings indicate a positive relationship between transformational leadership and job satisfaction in the virtual workplace. As transformational leadership behaviors increase, the perceived feeling of job satisfaction increases in a virtual workplace. This study's findings suggest that virtual workers often feel uncertain about job satisfaction.

Conclusion 1. Previous research studies (Jaffe & Lordan, 2020; Maduka et al., 2018; Miller, 2020) support findings that transformational leadership positively relates to job satisfaction in the virtual workplace. Additionally, working virtually with limited social interaction with employees can lead to mixed attitudes toward job satisfaction. According to Spector (1997), ambiguity may suggest that virtual workers have a neutral outlook toward their overall job satisfaction. The ambiguity could also indicate that leaders struggle to lead effectively in a virtual setting, which suggests that transformational leadership training may be necessary. Northouse (2019) points out

several drawbacks of transformational leadership, including an unclear definition. The author states that the numerous attributes and actions link to transformational leadership make it difficult to determine its parameters. The results of this study conclude that the findings on transformational leadership in the virtual workplace are consistent with the results of other studies (Boamah et al., 2017; Miller, 2020) that transformational leadership is positively related to job satisfaction in the workplace.

Additionally, the current study's results support the Motivation/Hygiene theory, which emphasizes the importance of fulfilling motivators and hygiene factors. Herzberg et al. (1959) emphasize that an absence of extrinsic hygiene factors can result in high job dissatisfaction. The author suggests that transformational leadership stems mainly from intrinsic factors. Furthermore, intrinsic motivators can increase employee job satisfaction when present and decrease when not (Herzberg et al., 1959). The results of the current study imply that physical separation between leaders and virtual workers may obstruct productive communication and social interaction (Sinclair et al., 2021). The study results indicate that an increase in transformational leadership practices results in a corresponding rise in the job satisfaction of virtual workers.

In contrast, a reduction in transformational leadership practices causes a drop in job satisfaction. The study results did find consistency with the literature. Al Amour (2018) suggests that transformational leadership is related to higher employee job satisfaction. Other studies also conclude that transformational leadership has a statistically significant relationship with the job satisfaction of virtual workers (Maduka et al., 2018; Miller, 2020).

Recommendations 1. Organizations should be more intentional in creating an empowering virtual workplace with leaders that maximize transformational leadership behaviors, resulting in improved performance, higher job satisfaction, and improved employee retention. Organizations should collaborate with human capital development practitioners to create formal leadership development programs focusing on the advantages of using transformational leadership techniques in the virtual workplace. This study has practical implications for leaders, highlighting the importance of promoting transformational leadership in these work environments. Leaders should perform consistently in their words and actions as they inspire employees to achieve their goals (Pranitasari, 2020). That includes establishing close consistent communication and providing feedback. To enhance the skills of virtual leaders in fostering teamwork and facilitating positive change, practitioners involved in human capital development should introduce training in transformational leadership. This approach develops leaders to look beyond their interests and focus on recognizing a need for change, devising a vision to guide the transformation, and motivating the virtual workplace to collaborate and implement the change. By prioritizing workplace needs, leaders can foster a sense of purpose among their team members and inspire them to achieve increased productivity and job satisfaction.

Finding 2 – Organizational trust is a fundamental aspect of transformational leadership.

The finding shows a relationship between transformational leadership and organizational trust in the virtual workplace. The findings imply that the more effectively leaders perform their responsibilities, the more trust employees have in the organization.

Conclusion 2. The results of this study are consistent with previous studies (Coun et al., 2019; Guzzo et al., 2021; Pranitasari, 2020) that transformational leadership positively relates to organizational trust. Pranitasari (2020) suggests that organizational trust is a crucial component of leadership since it enables leaders to establish enduring connections among the various components of an organization. The author stated that leaders' primary role is to solve workplace issues using their knowledge and expertise, and their effectiveness is reliant on employees' trust in both the leader and the organization. Avolio et al. (1999) sought to comprehend the concept of trust and suggested that trust was inherent in operative transformational leadership practices. This study's findings validate this assumption, as using their interpretation, people evaluate trust according to the authors (1999). This study did not define trust in the survey instrument, which permits respondents to use their definitions. The data collection aligned with the research questions and objectives and determined a relationship between transformational leadership and organizational trust, as previously noted by the authors of the GTL scale (Carless et al., 2000). Similar studies validate the relationship between trust and transformative leadership (de Lima Rua & Costa Araújo, 2016). Having confidence in an organization is a crucial element in creating organizational trust. Employees' faith in the organization and its leadership can enhance their performance. Leadership and organizational culture shape employees' actions (Lay et al., 2020). The messages that leaders convey to their employees can significantly affect crucial attitudes toward the organization (Guzzo et al., 2021).

During the ongoing recovery from COVID-19, organizations must build and maintain trust among their employees, as it is vital for the survival and success of the

organization (Guzzo et al., 2021). Organizational trust has various dimensions and encompasses several organizational characteristics that contribute to creating an environment of trust. These characteristics foster trust by providing a safe space for individuals (Adams & Wiswell, 2007). According to Guzzo et al. (2021), an organization's degree of trust can impact how leaders express emotions while communicating with their staff. That involves evaluating the circumstances, adhering to protocols, and ensuring that all leaders appropriately comprehend and convey the strategy to their employees. The results of this study align with a previous study by de Lima Rua and Costa Araújo (2016) which explored the relationship between transformational leadership and organizational trust. The authors also found transformational leadership positively related to organizational trust. These outcomes were in line with these findings. Transformational leadership stimulates, drives, and articulates a clear vision of the organization (Bass & Avolio, 1993). Pranasari (2020) states that organizational trust includes not only trust in the organization but also trust in the leader.

Recommendations 2. Culture, personal experiences, and understanding may influence trust (Cummings & Bromiley, 1996). In order to foster trust, transformational leaders must create a conducive culture for their employees in the virtual workplace. Leaders should aim to enhance transformational leadership practices. The transformational leader gives the workplace a vision and inspires the organizational mission (Bass, 1995). The degree to which a leader is effective can significantly impact employee motivation and commitment to an organization (Pranasari, 2020). Avolio et al. (1999) emphasize the importance of leaders in creating a culture but do not provide a method for understanding the culture. Therefore, leaders should establish a collaborative

environment that promotes trust, where followers work together, express their opinions, and feel safe in a creative organization (Mackey, 2022). These leadership behaviors influence the organization and impact employees' trust. To establish a culture of trust, human capital development practitioners should help organizations to develop leaders to comprehend the virtual workplace culture.

Finding 3 – Organizational trust improves the relationship between transformational leadership and job satisfaction in the virtual workplace.

The findings of this study show that organizational trust does influence the relationship between transformational leadership and job satisfaction in the virtual workplace.

Conclusion 3. The previous literature on organizational trust and transformational leadership (de Lima Rua & Costa Araújo, 2016; Mackey, 2022) and transformational leadership and job satisfaction (Hidayat et al., 2021) are consistent with the results of this study. According to Adams & Wiswell (2007), when measuring aspects of organizations, such as climate and culture, it is impossible to quantify the level of trust within an organization directly. Instead, researchers depend on the subjective perspectives of individuals within the organization with unique situations and contexts based on their personal experiences. De Lima Rua and Costa Araújo (2016) state that to attain organizational trust, the leader should possess a compelling personality that is highly regarded and trusted. Employees may view supervisors as trustworthy when exhibiting transformational leadership behaviors consistently. Organizational distrust requires more time and resources (Gilstrap & Collins, 2012). When an individual feels understood and appreciated, their perception of trust in the organization grows. This study's findings

identify a relationship between transformational leadership and organizational trust in the virtual workplace. Having confidence in an organization is a crucial element in creating organizational trust. Employees' faith in the organization and its leadership can enhance their performance and satisfaction because leadership and organizational culture shape employees' actions (Lay et al., 2020).

Guzzo et al. (2021) found that the level of trust employees have in their organization can be impacted by how leaders communicate with them through emotions. That involves analyzing the circumstances, adhering to policies and procedures, and ensuring that leaders understand and convey the plan to employees effectively. This result is consistent with previous research (de Lima Rua & Costa Araújo, 2016; Mackey, 2022) that examines transformational leadership and trust in the virtual workplace. The study's outcomes align with those findings that effective leaders must bind virtual employees to meet the organization's goals. Bass's (1999) transformational leadership theory suggests that organizations can strengthen relationships with leaders and workers, improve results, and increase organizational outcomes. Employees who feel satisfied and engaged have greater confidence in an organization. Satisfaction may also be possible through a transformational leader who consistently exerts the energy to resolve issues and listens to the followers' concerns and ideas. Leaders should continue offering encouragement and inspiration to virtual workers to develop trust within the organization (Newman & Ford, 2021).

Recommendations 3. Trust is vital to job satisfaction in the virtual workplace. Furthermore, trust is crucial for sharing information, networking, and developing productive workplace relationships (Adams & Wiswell, 2007). The organization and its

leaders are responsible for cultivating higher levels of trust within the workplace. As individuals' perceptions differ, organizations must implement specific measures that enable leaders to enhance employee job satisfaction. Their trust determines employees' confidence in the organization and their leaders. Therefore, human capital development practitioners should collaborate with leaders to help them to understand how leadership behaviors can facilitate increased employee trust. These professionals should design and facilitate interventions to boost trust levels. Practitioners should adopt a straightforward approach to providing virtual workplace training that centers on establishing and sustaining an environment of trust within the organization. This can improve social interaction and transparency through effectively communicating important information about the organization's mission, vision, and values and connecting it with critical organizational goals. By doing this, virtual workers can feel more engaged and have a clearer understanding of the organization, which in turn helps them perform their roles better. Such interventions can improve productivity and help achieve strategic objectives (Adams & Wiswell, 2007).

Implications

The study's findings could have several implications that could benefit virtual workers, leaders, and organizations, in light of the COVID-19 pandemic and the increasing adoption of virtual workplaces. According to the U.S. Census Bureau (2022), the number of people working from home increased threefold from 2019 to 2021. Results suggest that virtual work is shifting from a pandemic-era policy to a permanent business solution (Howington, 2023). The current study could be advantageous for organizations in terms of facilitating changes to the workplace. These changes could aid in recognizing

and defining the leadership traits that enhance job satisfaction among virtual workers, thereby promoting the overall success of virtual workplaces. Miller (2020) states that when leaders use transformational leadership behaviors with their virtual workers, they can potentially enhance job satisfaction in the workplace. A better comprehension of transformational leadership behaviors can lead to motivated and engaged virtual workers, positively affecting job satisfaction.

The COVID-19 outbreak brought about changes in daily work routines and social interactions, which have had short and prolonged effects on the workforce. Bagga et al. (2022) state that with the accelerated growth of virtual workplaces, it is vital to understand how to develop leaders to lead from a distance. Organizations must understand leadership behaviors to lead the virtual workplace effectively. The study suggests that successful virtual leaders utilize transformational leadership to inspire the virtual workplace. Jaffe and Lordan (2020) state that organizations overlook leadership's crucial role in enhancing job satisfaction and organizational trust in the virtual workplace. This study's findings can aid organizations in pinpointing the most suitable individuals for leading the virtual workplace. Leaders who exhibit transformational leadership behaviors may lead to higher satisfaction among virtual workers, leading to greater job satisfaction and organizational trust. Also, research has shown challenges for virtual workers, such as communication, feelings of disconnect, and isolation (Sinclair et al., 2021). These challenges can result in a decrease in employees' job satisfaction and organizational trust. Organizations must understand virtual workers' needs for optimal job satisfaction and productivity. Moreover, rethinking strategies for cultivating, managing, and sustaining human capital can result in a satisfied virtual workplace.

Finally, the results enhance the understanding of transformational leadership in the virtual workplace. The study aligns with previous research indicating that transformational leadership is related to job satisfaction (Abelha et al., 2018; Miller, 2020; Sinclair et al., 2021) and trust (Mackey, 2022) and will help fill the gap in the research on transformational leadership's impact on virtual workplace success.

Limitations of the Study

Limitations refer to aspects of a research study that can impact the results or the ability to extend the findings to a larger population (Roberts & Hyatt, 2019). This study has several limitations. The first of which is its generalizability to the population. According to (Meltzoff & Cooper, 2018, p. 60), generalizability limitation occurs when a study's findings should stay within the study's criteria. People who met the criteria for the study but were not part of the sample may hold different perspectives from those involved in the current research. The study's sample population was limited to MTurkers recruited through Amazon Mechanical Turk (MTurk). There is also an overrepresentation of White and Asian American individuals in MTurk samples and an underrepresentation of Hispanic and African American participants, consistent with Berinsky et al. (2012). Most respondents were Caucasian males, 20-39 years of age, with at least a bachelor's degree, and working in the information technology industry. Literature supports these limitations (Aguinis et al., 2021) and states that MTurkers are younger and more educated. Berinsky et al. (2012) argued that an MTurk sample might not precisely reflect the demographic and attitudinal traits of the US population, but it is not excessively distorted either.

Next, the time of the data collection process may influence the study's results. The researcher conducted the study when the world was still recovering from the COVID-19 pandemic, which may still impact daily operations and social interactions and result in short or long-term effects on the workplace. The respondents' jobs may have been affected, potentially leading to increased stress and decreased job satisfaction.

Study limitations frequently result from factors outside the researcher's control (Roberts & Hyatt, 2019). Factors may include stressful or busy work settings influencing respondents' responses. It is essential to note that the study's results may imply that transformative leadership is even more critical during this uncertain and stressful period for influencing employee perceptions of job satisfaction and organizational trust. Employers should assess how COVID-19 has affected the lives of their employees and ensure that they meet their needs. Before employees return to work, it is essential to comprehend the requirements of virtual workers to ensure maximum job performance (Hidayat et al., 2021; Newman & Ford, 2021).

Recommendations for Future Research

Previous research has shown a gap in the literature regarding transformational leadership and its effect on the virtual workplace. The researcher's objective was to broaden the existing body of literature by providing insights that could prove advantageous for developing transformational leaders for the virtual workplace. As more and more organizations adopt virtual modes of operation and communication, it is affecting how leadership exercises within the structure of the virtual environment. Transformational leaders demonstrate their support by appreciating employees' input and being available and accessible, which can help develop transformational qualities with

their supervisor. Transformational leadership supportive behaviors can help foster a sense of trust among subordinates, and trust is a vital foundation of the high quality of leadership. Nemiro (2016) described the importance of creating an environment that brings out the best in employees working in these virtual workplaces.

Moreover, research suggests that the quality of transformational leadership can affect an employee's perception of organizational trust (Mackey, 2022). This study provided new insights into the virtual workplace in the U.S., revealing limitations and potential areas for future research. Based on this study, multiple opportunities exist for future researchers.

The study suggests future research on the relationship between transformational leadership and job satisfaction. Firstly, future studies could delve deeper into the underlying mechanisms behind the relationships found in this study. For instance, the Transformational Leadership Theory was the conceptual model to explain the relationship between transformational leadership and job satisfaction. Future studies may want to examine the mediating influence of organizational trust on the relationships between transformational leadership's four dimensions—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Avolio et al., 1995) and perceptions of job satisfaction. Transformational leaders demonstrate their support by showing appreciation for their employees' ideas and being accessible and approachable. These attributes allow subordinates to learn and develop transformational qualities alongside their leader. These actions of support from transformational leadership can foster trust among subordinates, a critical aspect of effective leadership. Another aspect that future research could look into is the empirical

examination of the quality of the leader-member exchange as another potential underlying mechanism between transformational leadership and the job satisfaction of virtual workers. Additionally, research suggests that transformational leadership's effectiveness may impact an employee's perception of trust within the organization.

A study by Kniffin et al. (2020) identifies COVID-19-related risks, such as alterations in economic, social-psychological, and health factors that impact both employees and work environments. It is possible that the pandemic and related risks could have impacted study findings during data collection. The respondents may have experienced changes in employment due to the virus, potentially producing positive or negative feelings and attitudes. Future research could attempt to replicate the findings of this study by conducting surveys when the number of COVID-19 cases in the country has decreased and organizations have returned to standard operations. That will assist in evaluating how much external factors influence employees' emotional reactions to how organizations manage crises (Guzzo et al., 2021).

The quantitative survey provides a snapshot in time and does not delve into the underlying attitudes and perceptions of the respondents. Future researchers could conduct a qualitative study and hold interviews to gain a more profound understanding of the outlooks of virtual workers on transformational leadership, job satisfaction, and organizational trust. The approach can lead to more thorough inquiries and responses, better assessing a candidate's leadership skills and job satisfaction. Additionally, conducting a qualitative study can help to uncover any biases, past experiences, or mood influences that may impact the answers provided in a survey. Instead of solely relying on quantitative methods, researchers should consider using a qualitative method to gain a

deeper understanding of the impact of attitudes and organizational support on employees during times of crisis.

This study found that transformational leadership practices predict job satisfaction in virtual workplaces. The sample's results for the current study showed an ambiguous attitude toward their overall job satisfaction. A follow-up study could explore additional variance to analyze other factors that may have influenced the results. Another avenue for future research includes examining the nine subscales from the JSS (Spector, 1997), (a) pay, (b) promotion, (c) supervision, (d) fringe benefits, (e) contingent rewards, (f) operating conditions, (g) coworkers, (h) nature of work, and (i) communication, which may reveal variables that have a negative impact on transformational leadership. Another recommendation for future studies is to examine the impact of participant demographics on the perceived value of transformational leadership, job satisfaction, and organizational trust. This could provide valuable information on how employee demographics affect the virtual workplace. Future researchers might consider using demographic information such as race, gender, age, education, length of time working virtually, and length of current leadership as potential variables that could reveal differences and their impact on the virtual workplace.

Lastly, it may be advantageous for future research to analyze organizational trust and distrust and identify crucial workplace behaviors that may impact organizational trust. According to the literature (Adams & Wiswell, 2007), understanding the construct could motivate leaders of organizations to examine and modify their behaviors to establish trust in their organizations. The outcomes of the continuous research could contribute to an improved understanding of the contextual elements that impact trust

within organizations (Mackey, 2022). This comprehension can ultimately provide more information about leadership behaviors and the implementation of interventions in organizations to promote trust.

Discussion

Intense competition, high expectations, constant changes, and a drive for better results characterize the current global market. Leaders in the virtual workplace must possess leadership skills to enhance communication, motivate and inspire others, and efficiently manage organizational information. Organizational success requires visionary leadership that can take concrete steps to establish successful and adaptable virtual workplace strategies. According to de Lima Rua and Costa Araújo (2016) and Miller (2020), implementing transformational leadership practices within the organization can increase job satisfaction and improve performance. Understanding human capital development is crucial for organizations since investing in virtual workers' knowledge, and expertise can enhance workplace performance and add economic worth. Talented employees are valuable assets crucial for workplace survival and success in achieving organizational objectives.

The research examined the relationship between transformational leadership and job satisfaction in the virtual workplace. The results reveal respondents' perceptions of how transformational leadership influences job satisfaction. The results are consistent with previous research that has established a relationship between transformational leadership and job satisfaction in the virtual workplace (Miller, 2020; Sinclair, 2021). Research studies by Bagga (2022) and Maduka (2018) highlight the requirement for human capital strategies to equip leaders to lead the virtual workplace effectively.

Additionally, the present study shows that leaders who implement transformational leadership behaviors experience higher job satisfaction. One way to enhance employee job satisfaction is to determine the needs of virtual workers and educate leaders (Sinclair et al., 2021). Organizations seeking to enhance job satisfaction should concentrate on developing leadership training programs and continually evaluating the needs of the virtual workplace.

Summary

With an increasing number of organizations adopting virtual work environments, effective leadership is crucial for the success and continuation of this effort. This quantitative research study examined the relationship between transformational leadership and job satisfaction in a virtual workplace. Demographic data about the respondents were collected and analyzed using descriptive statistics. Pearson's correlation examined the relationship between transformational leadership and job satisfaction. The correlation results show a positive relationship between the two variables. Transformational leadership, which includes inspiring change and fostering positive attitudes and satisfaction, positively impacts job satisfaction (Karem et al., 2019).

Additionally, the study demonstrated the influence of organizational trust on the relationship between the two variables in the virtual workplace, adding valuable insights to the human capital development field. Furthermore, organizational trust influences the relationship between transformational leadership and job satisfaction in the virtual workplace. This study's recommendations come from earlier research studies that are still pertinent to understanding the relationship between transformational leadership and job

satisfaction in the virtual workplace. Recommendations include a data collection process schedule and a qualitative research method based on the GTL, JSS, and OTI-SF quantitative questions. This information may help shape and identify why a more decisive mediating influence does not exist. Future research studies should concentrate on the job satisfaction subscales to overcome generalizability limitations. Replicating the study once the United States has recovered from the pandemic might give a deeper insight into the perceptions of transformational leadership, job satisfaction, and organizational trust of the population of interest. A qualitative analysis might help to gain a deeper understanding of the link between transformational leadership and job satisfaction and the impact of organizational trust on this relationship in the virtual workplace. There is a need to examine further the ambiguities of job satisfaction, different ways of measuring the subscales, and key behaviors that may increase satisfaction levels. Future researchers could consider using a longitudinal design to establish cause-and-effect relationships. Future studies could explore other leadership styles to provide a more thorough understanding of organizational trust.

The implications of this human capital research encourage leaders to prioritize exhibiting transformational leadership behaviors. As a result, these attributes may influence increased employee perceptions of organizational trust and job satisfaction. Previous research has demonstrated that transformational leadership can positively affect organizational outcomes. Organizations with a virtual workplace should incorporate transformational leadership training into their leadership training programs and make it a regular part of their operations. This research has contributed to the existing literature by examining transformational leadership in virtual workplaces. This research study could

be utilized in organizational settings to cultivate transformational leadership and enhance virtual workplace satisfaction.

The current study demonstrates a rising trend in organizations' adoption of virtual workplaces. Existing research recommends using transformational leadership as the most appropriate leadership behavior likely to influence subordinates' trust in their supervisor in virtual workplaces. These work environments require inspiring and motivating leadership to bind the virtual workplace together. Effective leadership and organizational trust are essential for bringing about change. Leaders who practice transformational leadership use motivation to inspire their followers. That is achieved by instilling a strong purpose, promoting teamwork, and sharing a compelling vision. The study's findings indicate that the level of trust within an organization could impact the relationship between transformational leadership and job satisfaction in a virtual workplace. If organizations want to create a productive and satisfied virtual workplace, they need to look into taking proactive measures with their human capital strategies. The study's findings should prompt a call to action for organizations to understand better the behaviors associated with transformational leadership and organizational trust that are most effective in virtual workplaces. Transformational leadership can help enhance professional human capital practices and strategies and promote a favorable virtual workplace culture that assists employees in developing and maintaining job satisfaction and organizational trust.

APPENDIX A – MTurk Recruitment Materials

MTurk Posting

Title: Answer a survey about your virtual workplace experience

Description: We are conducting an academic research study to understand your opinion about the experience of working virtually. To participate in this research study and receive credit for this Human Intelligence Task (HIT), you must meet the eligibility criteria.

Survey Link Instructions

Overview and Eligibility: We are conducting an academic research study to understand your opinion about the experience of working virtually. This research study will be under the review of the University of Southern Mississippi's Institutional Research Board (IRB protocol number 22-1463). To participate in this research study and receive credit for this HIT, you must meet the following criteria:

- 18 years or older
- Currently reside in the United States
- Employment status 35+ hours per week
- Currently a virtual employee for at least 6 months (e.g., telework, remote, telecommute, work at home)
- Report to current leadership for at least 6 months

Survey Link Instructions: please select the link below to complete the research study. The survey must be completed in a single sitting. In the end, you will receive a unique ID code randomly generated by Qualtrics that you must paste into the box below to receive credit for completing the HIT. Your participation will require about 15 minutes, and you will be paid \$0.50 upon successfully completing the HIT.

Make sure to leave this window open as you complete the research study. When you are finished, you will return to this page to paste the unique ID code into the box below.

Survey link: https://usmuw.co1.qualtrics.com/jfe/form/SV_0o1KP9EIa27Z8ua

Provide the unique ID code here: [e.g., 123456]

Note. Adapted from *MTurk research: Review and recommendations*. Aguinis, H., Villamor, I., & Ramani, R. S. (2021). <https://journals.sagepub.com/doi/full/10.1177/0149206320969787#supplementary-materials>

APPENDIX B – Eligibility Check and Informed Consent Form for Qualtrics Survey

Welcome! To participate in this research study, you must meet the following criteria:

- 18 years or older
- Reside in the United States
- Currently a virtual employee for at least 6 months (e.g., telework, remote, telecommute, work at home)
- Have reported to current leadership for at least 6 months

Before we begin, please confirm that you are eligible to participate

- True
- False

The purpose of this research study is to learn about your virtual work experience. The survey will ask questions about your job, leadership and the organization. Participation consists of completing a questionnaire that should take about 15 minutes.

Participant Rights and Protection

- Although it may not directly benefit you, this research study may benefit society by improving our knowledge of the virtual workplace. There are no risks for participating beyond those associated with normal computer use.
- Your participation is voluntary. You have the right to withdraw your consent or discontinue participation at any time without penalty. To stop, close your browser window.
- Your responses will be confidential and can be identified only by your Amazon Worker ID number, which will be kept confidential and will not appear in any reports or publications in this research study. All of your responses, including responses to demographic information (ex., age, gender, race), will only be analyzed and reported at a group level. You may print this form for your records.

Compensation

If you complete the research study satisfactorily, you will receive \$0.50 to compensate you for your participation. You will be paid via Amazon payment system. Please note that this research study contains checks to make sure that participants are finishing the tasks honestly and completely. In accordance with the policies set by Amazon Mechanical Turk, we may reject your work if you do not complete the HIT correctly or if you do not follow the relevant instructions.

Questions

This approved research study will be under the review of the University of Southern Mississippi's Institutional Research Board (IRB protocol number 22-1463). For information about this research study or your participation, please contact Angela Daniels, College of Leadership at the University of Southern Mississippi at angela.wilson@usm.edu, or please contact me at (302) 399-4292. Questions about your rights as a participant in this research study or any concerns or complaints can be directed to the Chair of the University of Southern Mississippi Office of Human Research at (601) 266-5997

By clicking the "I consent" button below, you indicate that you meet the eligibility criteria, have read and understood the description of the research study, and agreed to participate.

- I do consent
- I do not consent

Note. If either “False” or “I do not consent” are selected, the individual is skipped to the end of the survey form. Individuals were required to select “True” and “I consent.” to participate.

APPENDIX C – IRB Approval Letter

Office of
Research Integrity



118 COLLEGE DRIVE #5116 • HATTIESBURG, MS | 601.266.6756 | WWW.USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident submission on InfoEd IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.

PROTOCOL NUMBER: 22-1463
PROJECT TITLE: Mediating Effect of Organizational Trust on The Relationship Between Transformational Leadership and Job Satisfaction in The Virtual Workplace
SCHOOL/PROGRAM School of Interdisciplinary Studies & Professional Development
RESEARCHERS: PI: Angela Daniels
Investigators: Daniels, Angela R~Brown, Hamett Q.~
IRB COMMITTEE Approved
ACTION:
CATEGORY: Expedited Category
PERIOD OF APPROVAL: 29-Nov-2022 to 28-Nov-2023

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX D – GTL Permission to use

Global Transformational Leadership Scale

Leon Mann <leonm@unimelb.edu.au>

Tue 7/12/2022 10:26 PM

To: Angela Daniels <Angela.Wilson@usm.edu>

Cc: Rosemary Wearing <rosemarywearing@gmail.com>

Dear Angela

Thank you for your request for the GTL for your study of Transformational Leadership and Job Satisfaction of Virtual Employees.

It sounds like a very worthwhile study. I know of no other study using the GTL with virtual teams of leaders/supervisors and followers/employees.

In principle you have permission to use the GTL scale in your research.

You appreciate the GTL scale is not a Self-report measure but an other-report measure.

The GTL scale is administered to someone who knows or works for the leader.

They rate the leader on transformational leadership.

It is usually administered to several followers of the leader to measure degree of inter-rater agreement.

When administering the GTL you include an introduction:

"Rate your leader in terms of how frequently he /she/they engage in the practice described.

In selecting your answer, be realistic; answer in terms of how the person typically behaves".

You also include: "Use a 5-point scale ranging from "Rarely or never" to "Very frequently, if not always". (You score the responses 1, 2, 3, 4, 5).

I've attached a copy of the GTL scale and the Carless, Wearing & Mann (2000) article.

I'd be interested to hear more about your study.

Who are your virtual employees and who are the leaders or supervisors?

And what do you expect to find?

Also who is your Thesis supervisor.?

Good wishes, keep in touch.

Leon Mann

Professor Leon Mann AO, PhD (Yale), Hon DSc (Melb), FASSA, Hon Life Governor Hebrew University of Jerusalem

Co-coordinator of the University of Melbourne Research Mentors Program

Melbourne School of Psychological Sciences, University of Melbourne

leonm@unimelb.edu.au iPhone: 0418 172596

From: Angela Daniels <Angela.Wilson@usm.edu>
Date: Tuesday, 12 July 2022 at 4:31 am
To: Leon Mann <leonm@unimelb.edu.au>
Subject: [EXT] Global Transformational Leadership Scale

Good afternoon Dr. Mann,

I am a Human Capital Development doctoral student at the University of Southern Mississippi, Gulf Coast campus in Long Beach, Mississippi. I am currently working on my dissertation proposal which is The Mediating Effects of Organizational Trust on the Relationship between Transformational Leadership and Job Satisfaction of Virtual Employees. The purpose of my email is to request permission to use the Global Transformational Leadership Scale for the purpose of this research study.

Thank you in advance for your time and consideration.

Angela R. Daniels

APPENDIX E – JSS Permission to Use

RE: Permission to Use JSS

Paul Spector <paul@paulspector.com>

Wed 5/18/2022 7:41 PM

To: Angela Daniels <Angela.Wilson@usm.edu>

Dear Angela:

You have my permission to use the original JSS in your research. You can find copies of the scale in the original English and several other languages, as well as details about the scale's development and norms, in the [Paul's No Cost Assessments section](#) of my website: <https://paulspector.com>. I allow free use for noncommercial research and teaching purposes in return for sharing of results. This includes student theses and dissertations, as well as other student research projects. Copies of the scale can be reproduced in a thesis or dissertation as long as the copyright notice is included, "Copyright Paul E. Spector 1994, All rights reserved." Results can be shared by providing an e-copy of a published or unpublished research report (e.g., a dissertation). You also have permission to translate the JSS into another language under the same conditions in addition to sharing a copy of the translation with me. Be sure to include the copyright statement, as well as credit the person who did the translation with the year.

The JSS-2 is an improved commercial version for which there is a fee as explained here: <https://paulspector.com/assessments/job-satisfaction-survey-2/>.

For additional assessment resources including an archive of measures developed by others, check out the assessment section of my website for organizational measures <https://paulspector.com/assessments/> and my companion site for general and mental health measures: <https://www.stevenericspector.com/mental-health-assessment-archive/>

Thank you for your interest in the JSS, and good luck with your research.

Best,

Paul Spector, PhD
Adjunct Professor, School of Information Systems and Management
Muma College of Business
Distinguished Professor Emeritus, Department of Psychology
University of South Florida
Tampa, FL 33620
paul@paulspector.com
Website: <https://paulspector.com/>
For more on my Job Satisfaction book: <https://paulspector.com/books/job-satisfaction/>

APPENDIX F – Organizational Trust Inventory: Short Form Permission to Use

RE: OTI-SF Permission to Use Request

Philip Bromiley <bromiley@uci.edu>

Mon 5/23/2022 2:41 PM

To: Angela Daniels <Angela.Wilson@usm.edu>

You are welcome to use the instrument.

Phil

Philip Bromiley

Dean's Professor in Strategic Management

Distinguished Professor

Merage School of Business

University of California, Irvine

Irvine, CA 92697-3125

Phone: (949) 824-6657

Fax: (949) 725-2898

Email: Bromiley@uci.edu

"The subject who is truly loyal to the Chief Magistrate will neither advise nor submit to arbitrary measures." Junius

From: Angela Daniels <Angela.Wilson@usm.edu>

Sent: Sunday, May 22, 2022 9:11 AM

To: Philip Bromiley <bromiley@uci.edu>

Subject: OTI-SF Permission to Use Request

Good afternoon Dr. Bromiley,

I am a Human Capital Development doctoral student at the University of Southern Mississippi, Gulf Coast campus in Long Beach, Mississippi. I am currently working on my dissertation proposal, *The Mediating Effects of Organizational Trust on the Relationship between Transformational Leadership and Job Satisfaction of Virtual Employees*. The purpose of my email is to request permission to use and access the Organizational Trust Inventory-Short Form for my study. Thank you in advance for your consideration.

Angela Daniels

APPENDIX G – Qualtrics Survey

Demographic Questions

Q1

What gender do you most identify?

- Male
 - Female
 - Other
 - Prefer not to say
-
-
-

Q2

Select the length of time reporting to current leadership

- Less than 6 months
 - 1-2
 - 2-4
 - 4-5
 - more than 5 years
-

Q3

Choose one or more races that you consider yourself to be

- White or Caucasian
- Black or African American
- American Indian/Native American or Alaska Native
- Asian
- Native Hawaiian or Other Pacific Islander
- Other
- Prefer not to say

Page Break

Q4

What is the highest level of school you have completed or the highest degree you have received?

- Less than high school degree
- High school graduate (high school diploma or equivalent including GED)
- Some college but no degree
- Associate degree in college (2-year)
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree
- Professional degree (JD, MD)

Q5

Select the length of time working virtually (ie., remote, telework, telecommute, work from home)

- less than 6 months
- 1-2
- 2-4
- 4-5
- more than 5 years

Q6

Which of the following industries most closely matches the one in which you are employed?

- Real estate or rental and leasing
- Professional, scientific or technical services
- Construction
- Manufacturing
- Educational services
- Health care or social assistance
- Retail trade
- Arts, entertainment or recreation
- Transportation or warehousing
- Food & Hospitality
- Information Technology
- Finance or insurance
- Other

Q7 | List of Countries

In which country do you currently reside?

Afghanistan

Leadership using the Global Transformational Leadership Scale

08-Q14



Please read each statement carefully. Then rate your leader in terms of how frequently he or she engages in the practice described. In selecting the answer, be realistic. Answer in terms of how the person typically behaves.

	1-Rarely or Never	2-Once in a While	3-Sometimes	4-Fairly Often	5-Very Frequently or Always
Communicates a clear and positive vision of the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Treats staff as individuals, supports and encourages their development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gives encouragement and recognition to staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fosters trust, involvement, and cooperation among team members	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Encourages thinking about problems in new ways and questions assumptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Is clear about his/her values and practices what he/she preaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Instills pride and respect in others and inspires me by being highly competent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Job Satisfaction using the Job Satisfaction Survey

Q15-20



PLEASE SELECT THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
I feel I am being paid a fair amount for the work I do.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is really too little chance for promotion on my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor is quite competent in doing his/her job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am not satisfied with the benefits I receive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I do a good job, I receive the recognition for it that I should receive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Many of our rules and procedures make doing a good job difficult.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q21-26



PLEASE SELECT THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
I like the people I work with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I sometimes feel my job is meaningless.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communications seem good within this organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Raises are too few and far between.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Those who do well on the job stand a fair chance of being promoted.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor is unfair to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q27-32



PLEASE SELECT THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
The benefits we receive are as good as most other organizations offer.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I do not feel that the work I do is appreciated.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My efforts to do a good job are seldom blocked by red tape.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I find I have to work harder at my job because of the incompetence of people I work with.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like doing the things I do at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The goals of this organization are not clear to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q33-38



PLEASE SELECT THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
I feel unappreciated by the organization when I think about what they pay me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People get ahead as fast here as they do in other places.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My supervisor shows too little interest in the feelings of subordinates..	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The benefit package we have is equitable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are few rewards for those who work here.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have too much to do at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q39-44



PLEASE SELECT THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
I enjoy my coworkers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often feel that I do not know what is going on with the organization.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel a sense of pride in doing my job.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel satisfied with my chances for salary increases.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are benefits we do not have which we should have.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like my supervisor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Q45-50



PLEASE SELECT THE ONE NUMBER FOR EACH QUESTION THAT COMES CLOSEST TO REFLECTING YOUR OPINION ABOUT IT. Copyright Paul E. Spector 1994, All rights reserved.

	Disagree very much	Disagree moderately	Disagree slightly	Agree slightly	Agree moderately	Agree very much
I have too much paperwork.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't feel my efforts are rewarded the way they should be.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my chances for promotion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There is too much bickering and fighting at work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My job is enjoyable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work assignments are not fully explained.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Organizational Trust using Organizational Trust Inventory: Short Form

51-62



Please circle the number to the right of each statement that most closely describes the opinion of members of your department toward the other department. Interpret the blank spaces as referring to the other department about which you are commenting.

	Strongly Disagree	Disagree	Slightly Disagree	Neither Agree nor Disagree	Slightly Agree	Agree	Strongly Agree
We think the people in ____ tell the truth in negotiations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We think that ____ meets its negotiated obligations.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In our opinion, ____ is reliable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We think that the people in ____ succeed by stepping on other people.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We feel that ____ tries to get the upper hand.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We think that ____ takes advantage of our problems.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We feel that ____ negotiates with us honestly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We feel that ____ will keep its word.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We think ____ does not mislead us.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We feel that ____ tries to get out of commitments.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We feel that ____ negotiates joint expectations fairly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
We feel that ____ takes advantage of people who are vulnerable.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Demographic Question

Q63

What is your age?

Page

MTurk Code

MTurk Code

Thank you for completing the survey. Here is your Amazon Turk Code.

VW- $\{e://Field/MechanicalTurkID\}$ -AD

APPENDIX H – MTurk Pilot Test Recruitment Materials

MTurk Pilot Test Posting

Title: Complete a survey about your virtual workplace experience.

Description: We are conducting a pilot test to understand perceptions in the virtual workplace.

Survey Link Instructions

Overview and Eligibility: We are requesting your participation in pilot testing a survey instrument for a doctoral research project at the University of Southern Mississippi. This research study will be under review of the University of Southern Mississippi's Institutional Research Board (IRB protocol number 22-1463). This research determines if organizational trust mediates the relationship between transformational leadership and job satisfaction in the virtual workplace. The researcher will use the information collected from the survey for administrative purposes and the informational will not be included as data collected for analysis. Your feedback will assist the researcher in ensuring the respondents' survey questions and formatting are easy to understand. The survey will take approximately 15 minutes to complete on any computer or mobile device with Internet access. This online survey will remain open for the next five days. Your participation is voluntary, and your information remains anonymous. If you have any questions about this research, you may contact the researcher at angela.wilson@usm.edu.

To participate in this pilot test and receive credit for this Human Intelligence Task (HIT), you must meet the eligibility criteria:

- 18 years or older
- Currently reside in the United States
- Employment status 35+ hours per week
- Currently a virtual employee for at least 6 months (e.g., telework, remote, telecommute, work at home)
- Report to current leadership for at least 6 months

Survey Link Instructions: please select the link below to complete the pilot test. The survey must be completed in a single sitting. In the end, you will receive a unique ID code randomly generated by Qualtrics that you must paste into the box below to receive credit for completing the HIT. Your participation will require about 15 minutes, and you will be paid \$0.50 upon successfully completing the HIT.

Make sure to leave this window open as you complete the research study. When you are finished, you will return to this page to paste the unique ID code into the box below.

Survey link:

Provide the unique ID code here: [e.g., 123456]

APPENDIX I – Pilot Test Questions for Qualtrics Survey

▼ PILOT QUESTIONS

P1

Were the statements easy to understand?

P2

Were there any statements hard to understand?

P3

How much time did it take to complete the survey?

P4

Was navigation through the survey easy?

P5

Is there anything else that you would like to add?

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