

VIRTUAL LEADERSHIP IN UNCERTAIN TIMES

VIRTUAL LEADERSHIP IN UNCERTAIN TIMES: A CASE STUDY OF HIGHER
EDUCATION LEADERS' RESPONSE TO THE COVID-19 PANDEMIC

by

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WE, THE UNDERSIGNED MEMBERS OF THE COMMITTEE,
HAVE APPROVED THIS DISSERTATION

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ACCEPTED AND APPROVED ON BEHALF
OF WILLIAM HOWARD TAFT UNIVERSITY

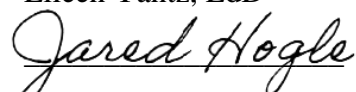
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Abstract

This qualitative case study was designed to explore how student services leaders adapted their leadership behaviors and practices in response to moving to the virtual working environment during the COVID-19 pandemic. The case study site was a midsized university in southwestern Ontario. The data collected for the study came from three sources: interviews, questionnaires, and documentation. Study participants were leaders of teams that delivered student services, including a vice president, associate vice presidents, directors, and managers. Four themes were revealed from the results that reflected the changes leaders made in response to moving their team to the virtual working environment: reimagining communication, reconstructing work using technology, reframing team support, and reorienting toward hybrid work. This included changing the ways they communicated with their teams (e.g., modality and frequency), updating processes for service delivery and work within the team to suit the virtual modality, and an emphasis on team support to suit the new needs of the team that resulted from the stresses of the pandemic as well as working physically apart from each other. At the time of the study, teams were moving forward to work in a hybrid capacity. Leaders shared how much of what they changed to suit the virtual-only environment has continued but some nuanced challenges have emerged. More research is recommended to study hybrid work teams, specifically, additional research would be beneficial regarding work conventions and communication practices in hybrid teams.

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Chapter 1

The Study

Northouse (2019) described leadership as “a process whereby an individual influences a group of individuals to achieve a common goal” (p. 30). To understand virtual leadership, this definition could be changed to suggest that virtual leadership is a process whereby an individual influences a virtual team to achieve a common goal. This would include influence carried out virtually.

Since virtual leadership takes place with a specific type of team and uses a specific type of modality, the types of behaviors and practices for this type of leadership are nuanced. Pullan (2016) discussed the unique aspects of virtual leadership and virtual teams highlighting strategies that help these types of teams thrive. In particular, the characteristics of teams, communication, and technology use are areas that distinguish virtual teams from those that work predominantly in person.

To date, research on virtual leadership has focused on virtual teams that were developed out of necessity because of the geographical distance between team members. This study investigated virtual leadership and virtual teams that were developed because of the move to remote work during the COVID-19 pandemic.

Background of the Problem

The COVID-19 pandemic changed the world and with it the landscape of higher education. At the outset of the pandemic, most of the university work (including instruction and student services) moved online (Bao, 2020; Blankenberger & Williams, 2020; Parnia, 2020). Parnia (2020) highlighted that this change in modality has meant that universities needed to rethink their operations to support the virtual delivery of instruction and services. For student

services leaders, this meant that not only did they need to find creative solutions to adapt their service delivery, but it also changed how they engaged with their teams. Specifically, student services departments that used to work as teams in person were working entirely remotely.

Prior to the pandemic, virtual teams were usually made up of employees that were too far apart geographically to work together in person. Pullan (2016) explained that for this reason, virtual teams of the past were often made up of diverse people from around the world. Virtual teams that were created because of work moving remotely at the beginning of the pandemic were made up of employees who were close geographically but who worked from home and did not interact in person (Parnia, 2020). While this new type of virtual team may have experienced some of the same challenges of a traditional virtual team, little was known about how these new virtual teams were managed.

Researchers have been studying virtual team leadership for some time, and much of this work could be applied to the new environment in which higher education leaders found themselves. Student service delivery in higher education is supported by various teams and departments. Researchers are trying to understand what changes to leadership practices were made because of this change in modality and surmising how the changes made will continue to shape university work after the pandemic (Gurukkal, 2020). Parnia (2020) emphasized that higher education leaders will have to adapt to remote and online program delivery, while Rehm et al. (2021) argued that more research is needed to understand better how school leaders acted in response to the pandemic.

To this end, higher education leaders could benefit from considering how virtual teams differ from in-person teams. Understanding what leaders in higher education implemented during

the pandemic will help determine what strategies work in their nuanced situation, what strategies they have yet to attempt to implement, and what practices they would like to maintain.

At the time of this study, many considered the pandemic ongoing, while others might have said we were transitioning to a new normal. Either way, researchers are tasked to determine how the pandemic impacted higher education (Toquero, 2020) and what it means for the future. COVID-19 provided an opportunity to test how effective remote learning is on a large scale as well as a unique opportunity to reimagine education (Azorín, 2020). Gurukkal (2020) suggested that in higher education, online modes of learning are here to stay. Blankenberger and Williams (2020) argued that there will be continued demand for online learning, while some students and programs will return to in-person instruction as soon as possible. Blankenberger and Williams suggested that the unknown is where the equilibrium will lie between online and in-person learning, but regardless, institutions may need to adjust operational procedures accordingly. Blankenberger and Williams emphasized that online tools will not be optional anymore but will be expected to include virtual meetings and webinars.

Related to student services, Gurukkal (2020) argued that universities will need to consider how organizational structures will support the new normal. Programming and service delivery will need to be adjusted in response to how the academic program is delivered and student preference for engagement. This might include modifying how services are delivered to support the continued use of online tools. For instance, students have grown accustomed to connecting virtually with student services departments and may have an expectation that this type of engagement will continue to be available to them. Departments will need to consider thoughtfully their approach to how to organize their teams.

For student services staff, the move to remote work brought to light several advantages of working from home. McMurtrie (2021) discussed that many workers have interest in continuing hybrid work (i.e., some in-person work, some remote work) and highlighted many benefits to hybrid work for both the worker (save time and money on the commute, better work/life balance) and the employer (increased productivity). Furthermore, while before the pandemic there was a belief that student services should only be offered in person, the plausibility and benefits of virtual service delivery were tested during the pandemic. With evidence to suggest that employees have some preference for remote work and the demonstrated viability of virtual service delivery, many staff are calling for and expecting remote work to continue to be available to them in some capacity.

The move to remote working and online program delivery, paired with the push toward a hybrid work model in future has emphasized the need for leaders to be able to adapt to complexity. Uhl-Bien (2021) highlighted how the pandemic demonstrated that effective leaders create adaptive environments and respond with creative solutions when faced with complexities such as those introduced by the pandemic. Changes in how higher education is delivered will continue as institutions come out of the pandemic. Understanding how leaders managed their teams during the pandemic can clarify what strategies and practices could be helpful in a hybrid learning and working environment.

Problem Statement

The COVID-19 pandemic caused much of the world to move its work and studies remotely, this included higher education (Parnia, 2020). As a result, leaders in higher education found themselves responsible for managing virtual teams, something most had never done. Researchers have been studying virtual leadership for some time and have identified differences

in virtual teams compared to in-person teams, including use of technology, communication, and leadership practices. Traditionally, virtual teams were formed because distance made working in person impossible and may have faced different challenges than teams that moved to remote work because of the pandemic. Little is known about how leaders in higher education adjusted their practices and behaviors to manage their virtual teams during the pandemic.

Purpose of the Study

This qualitative study examined how student services leaders changed their leadership behaviors in response to moving to a virtual work environment during the COVID-19 pandemic. The purpose of this case study was to understand the practices used by higher education leaders to manage their virtual teams at a midsized university in southern Ontario during the COVID-19 pandemic and how these practices differ from their prepandemic practices. More specifically, this study considered how differences between virtual and in-person teams (e.g., team characteristics, how communication occurs, and how technology is used) affect how a team is led.

This study addressed gaps in the literature regarding virtual leadership as identified by researchers. To this end, Robert and You (2017) recommended that research be done to find what level of shared leadership and satisfaction helps or hinders a virtual team. Marlow et al. (2017) suggested that further research be done to understand better how communication impacts processes in virtual teams such as building trust or shared knowledge. Several researchers believed more research is needed to understand better and make recommendations related to training virtual leaders (Alward & Phelps, 2019; Darics, 2017; Friedrich, 2017; Gamero et al., 2021; Purvanova et al., 2020). Finally, researchers suggested research on virtual leadership be

conducted in alternate settings (Han et al., 2017; Kuscü & Arslan, 2016; Newman et al., 2020; Robert & You, 2017).

Furthermore, this study addressed gaps in the literature related to leadership during the COVID-19 pandemic. Attieha and Zouhairi (2021) recommended that additional research be conducted to understand how a crisis, such as the COVID-19 pandemic, can change leaders' behaviors. Likewise, Bartsch et al. (2020) suggested that more research is done to determine how leaders adjusted their behaviors during the COVID-19 pandemic.

Research Questions

A clear set of research questions can help a researcher focus their study and set clear goals for the outcomes of the study. Yin (2018) suggested that for case study methodology, research questions focus on how and why questions. For this exploratory case study, the following questions were used as a guide:

- RQ1. How did leaders adapt their leadership practices during the COVID-19 pandemic to suit the virtual working environment?
- RQ2. How did leaders support their teams in the virtual working environment?
- RQ3. How did leaders' communication practices change to suit the virtual working environment?
- RQ4. How did leaders leverage technology in the virtual working environment?
- RQ5. How might leaders implement new practices they adopted in an in-person or hybrid working environment?

Importance of the Study

Much of the work on virtual leadership focuses on multinational teams that are virtual because of geographical barriers. However, the COVID pandemic restrictions meant that most

teams that had worked in an office setting were working virtually since the onset of the pandemic in some capacity. There was also a strong belief that work in higher education and other settings would never go back to being completely in person but instead would continue remotely or with a hybrid approach (McMurtrie & Kostya, 2021; Smith, 2021). Understanding how leaders changed their practices to lead virtual teams provided insight into what practices might be helpful in the future both for teams that continue exclusively remote work and those that transition to a hybrid approach.

Harris and Jones (2020) suggested that the way schools are led has been irreversibly changed. It was thought that this study could reveal how leadership in higher education changed because of the COVID-19 pandemic. Further, understanding these changes could equip leaders to determine which practices have resulted in positive change and which should not be maintained.

Some researchers have suggested that virtual teams are more difficult to manage than teams that work together in person (Flavian et al., 2018; Hoch & Kozlowski, 2014; Liao, 2017), while at a minimum there is consensus that there are different challenges for both types of teams. Virtual teams in the context of higher education are an area that has not been well studied, meaning this study provided new information to help better understand this topic.

Definitions of Terms

Virtual team: Virtual teams are groups of people who work across organizational boundaries and communicate primarily through electronic means and are often geographically dispersed (DuFrene & Lehman, 2016; Friedrich, 2017). In the context of this study, a virtual team is a group of people that work together in an employment situation within an organization

predominantly or exclusively in a virtual capacity. The COVID-19 pandemic shifted many teams that worked predominantly in-person to be completely virtual.

Leadership: Northouse (2019) defined leadership as “a process whereby an individual influences a group of individuals to achieve a common goal” (p. 30). Northouse explained that leadership can be formal or informal, with formal leadership pertaining to an assigned role within an organization. The leaders in this study were assigned a leadership role over a team that delivered student services. They influenced their teams to achieve goals relevant to the student services they delivered.

Virtual leadership: The concept of virtual leadership is one that looks at the nuances of leading a virtual team in comparison to a nonvirtual team. Many authors argued that leading a virtual team is more challenging than a regular team (Flavian et al., 2018; Hoch & Kozlowski, 2014; Liao, 2017). This study explored the nuances of virtual leadership in higher education during the pandemic and how leaders in this setting changed their leadership practices.

Virtuality: Virtuality refers to the extent to which a team is virtual and can be described as a continuum (Ford et al., 2017; Liao, 2017). This implies that a team is rarely completely face-to-face or completely virtual but uses a mix of work modalities.

Remote work: Remote work is work done in an employment capacity at a location that is not where the employer conducts its business or services. While remote work traditionally has been reserved for multinational companies where in-person work was impossible, the COVID-19 pandemic saw most office work, including student services in higher education, move remotely (Bao, 2020; Blankenberger & Williams, 2020; Parnia, 2020). Remote workers make up virtual teams that communicate and collaborate using technology.

Student services: In this study, the participants were leaders in student services at an institution of higher education. Student services departments are those that the primary goal of which is to deliver a service to students that is necessary or beneficial to them in completing their postsecondary programs.

Trust: Ford et al. (2017) described trust as:

...willingness of one to be vulnerable to another based on the expectation by a trusting party that the party being trusted will perform a particular action important to the trusting party, regardless of the ability to monitor or control the other party. (p. 3)

In regard to virtual teams, many researchers have emphasized the importance of trust to the team's success because of the dispersion of the team (Alward & Phelps, 2019; Ford et al., 2017; Liao, 2017; Pullan, 2016).

Swift trust: This describes a phenomenon that has been found in newly formed virtual teams or teams that are only together for a short time (Liao, 2017). Ford et al. (2017) and Liao (2017) explained that this is trust that is built quickly when a team is formed based on initial interactions of the team members. This type of trust might be built on stereotypes or perceptions of personality types.

Communication: Marlow et al. (2017) described communication as a process by which teams develop shared meaning. Since virtual teams are not in the same location, communication is facilitated by technology: text-based formats (e.g., email, instant messages), audio format (e.g., audio-only call, phone call), or video format (e.g., video call).

Hierarchical leadership: This type of leadership, also sometimes referred to as vertical leadership, focuses on providing division of power and roles, coordination of tasks, vision, oversight of a team, and performance assessment (Eisenberg et al., 2016).

Transformational leadership: Transformational leadership is a subtype of hierarchical leadership. Friedrich (2017) explained that this type of leadership focuses on shared vision and intellectual stimulation as a way to motivate a team. Transformational leadership is inspirational, affirms individualized consideration, promotes respect and trust, as well as encourages new ideas and innovative problem-solving (Zeuge et al., 2020).

Shared leadership: In a team with shared leadership, team members take turns being leaders. Northouse (2019) explained that it occurs when members take on leadership behaviors to influence the team by stepping forward when the situation warrants it and then stepping back to let others lead. This is informal leadership, as it is not an assigned role.

Limitations of the Study

This study investigated strategies adapted by student services leaders in higher education during the pandemic to support the remote work of virtual teams. Many institutions are moving to a hybrid or flexible work model. While many strategies discussed in this study may be applied in the hybrid environment, it cannot be assumed they are completely transferable. More research will need to be done to determine which strategies can be effectively applied in the hybrid working environment.

Furthermore, the complexities of leading in higher education are constantly changing. Responding to market needs for education and the service needs of students means that institutions must continually be adapting their approaches to learning. Blankenberger and Williams (2020) suggested that while online instruction is here to stay, in-person programming will still be important and where the equilibrium between the two will be is yet to be determined. As a result, how the results of this study can be applied are tentative. Once there is a better

understanding of the future of higher education delivery, how leaders will respond may be clearer.

Another limitation of the study was the possibility that the findings were not generalizable because the case study approach focuses on a specific system, in this study, a midsized university in southwestern Ontario. However, some researchers such as Yin (2018) argued that case study methodology does provide generalizable results because the study is focused on a particular setting and there may be variability in the experiences of leaders at other institutions.

Nature of the Research

A case study approach allows researchers to pursue an in-depth understanding of the problem within a bounded system. Specifically, Yin (2018) explained that the case study approach allows for the study of a contemporary issue in its real-world context. For this study, using a case study research methodology allowed the research questions to be explored for a unique issue (response to the COVID-19 pandemic) in a specific system (a university in southwestern Ontario). Yin also argued that case study research relies on multiple data sources that can be triangulated to describe the issue in a holistic way. In this study, multiple data sources were used to understand better how student services leaders adapted their behaviors in response to their team becoming virtual because of the pandemic. Finally, Creswell and Poth (2018) emphasized that a case study describes the case, including themes identified in the data collection. In this study, themes related to leadership practices and behaviors were highlighted as reflected in any data collected.

Summary

This chapter includes an introduction, background, statement of the problem, purpose of the study, research questions, importance of the study, definition of terms, and limitations to the study. The justification for a study investigating how student services leaders in higher education adapted their leadership skills in the pandemic was examined. The context for the study and how findings would be applied were described.

This study is divided into five chapters. Chapter 1 introduced the study and the problem to be addressed. The next chapter reviews the literature relevant to the study.

Chapter 2

Literature Review

The COVID-19 pandemic instigated change in the working world, necessitating that a large majority of the workforce work from home. This sudden move to a completely virtual working environment created many challenges for teams that were turned into virtual teams and leaders who were now virtual leaders.

The body of literature on virtual teams and virtual leadership predated the pandemic and continues to be augmented. This literature review considered all current literature on virtual teams with a substantial portion of the literature being from before the pandemic. The topics reviewed include a closer look at virtual teams, virtual leadership, virtual work during COVID-19, and the future of virtual work.

Virtual Teams

Virtual teams are teams that work together on a common purpose while being physically apart. They use technology to support their communication and to collaborate on tasks and many virtual teams span the globe and are composed of individuals of different time zones and cultures (Friedrich, 2017). Literature on virtual teams often focused on how these differences affect teams; however, this review focused on issues that are common to all virtual teams (instead of just those that are geographically dispersed).

This review considered the unique opportunities and challenges faced by virtual teams, virtuality, team member competencies, trust, communication, conflict, and using technology. While there are many facets of virtual teams that have been researched, there are still many things about virtual teams that need to be better understood. Schulze and Krumm (2016)

suggested that their findings and others need to be validated through more studies. It is still not clear whether virtual teams are as successful as nonvirtual teams (Friedrich, 2017).

Opportunities and Challenges

Virtual teams can present different opportunities and challenges compared to teams that operate face-to-face. Working on a virtual team can have many advantages for employees. Often individuals who are working on a virtual team are working from home. These people reported that they benefit from the lack of commute (which saves time and money) and a better work-life balance (McMurtrie & Kostya, 2021; Owl Labs, 2020). They also reported their work improves as they have more ability to focus, be productive, and experience less stress (Owl Labs, 2020). This could be a result of the ability to control their work environment, including minimizing interruptions and controlling with whom they interact: there is more ability to avoid team members with whom they do not have a good relationship. While working from home may be the most common location for virtual team members, Liao (2017) pointed out that many individuals may enjoy the ability to conduct their work from wherever they choose on any given day.

Likewise, employers may enjoy many benefits by allowing their employees to work virtually. Owl Labs (2020) reported that employers that allow their employees to work from home and do their work virtually experience improved employer-employee relationships. This could lead to higher employee satisfaction, better employee retention, and leverage for employee recruitment. In addition, employers may see benefits in the work that employees complete when they work virtually. Chamakiotis et al. (2021) argued that virtual teams are more likely to find creative and innovative solutions to problems because of their inherent use of technology in their work. To this end, employers also have a unique opportunity to employ experts in the field of

work because the virtual team is not bound by geography. (Friedrich, 2017; Liao, 2017). This could increase the effectiveness of the team by contributing to its cognitive abilities and content knowledge.

While there are several opportunities and advantages of virtual teams, there are also challenges to be considered. There are common challenges of virtual teams identified in the literature: trust, conflict, communication, use of technology, and leadership (DuFrene & Lehman, 2016; Flammia et al., 2016; Friedrich, 2017; Gamero et al., 2021; Liao, 2017; Purvanova & Kenda, 2018). Each of these challenges will be considered in more detail in this review.

Virtuality

Virtuality refers to the extent to which a team is virtual. Rather than look at teams as virtual or face-to-face, all teams can be understood on a continuum of virtuality (Ford et al., 2017; Liao, 2017). Ford et al. (2017) explained that even face-to-face teams use technology to do their work and communicate, making them somewhat of a virtual team, while Liao (2017) argued that few teams are completely virtual. Many opportunities and challenges are impacted by the virtuality of the team. For example, researchers proposed that trust is more important in teams with higher virtuality (Marlow et al., 2017).

Team Member Competencies

Researchers have found that individuals who work on virtual teams benefit from certain competencies that support virtual teamwork and can offset some of the common challenges experienced in virtual teams. Virtual team members need to have skills and abilities related to communication, trust, conflict management, and self-management (DuFrene & Lehman, 2016; Flammia et al., 2016; Ford et al., 2017; Schulze & Krumm, 2016).

Self-management is an important competency for virtual team members to have (Bartsch et al., 2020; Ford et al., 2017; Liao, 2017; Schulze & Krumm, 2016). Schulze and Krumm (2016) described self-management as “the skill to manage oneself effectively (e.g., self-, time-, and project-management)” (p. 69) and pointed out that it is important to support work-life balance of virtual team workers (e.g., setting boundaries for work hours), to allow workers to schedule collaboration with others on their team, and overall being more productive. Since leaders are not in the same location as their workers and cannot use the same methods to motivate and influence their teams, self-management skills are crucial to a virtual team’s success (Liao, 2017).

Individuals on a virtual team need to have the technical skills necessary to complete their work. Bartsch et al. (2020) highlighted the need for team members to have digital maturity, meaning they can work to solve a variety of technical issues without assistance as well as use the technology, and they must develop solutions to task-based needs. Younger workers may have an advantage when it comes to this competency because their generation tends to be well versed in technology, may learn new technologies more quickly, and are more likely to be open to innovative ideas of how to use technology in their work (DuFrene & Lehman, 2016).

Finally, virtual team members should have competencies that are of a personal nature that will lend themselves well to virtual work. DuFrene and Lehman (2016) argued that individuals on virtual teams should be flexible and adaptable as well as be able to be patient, empathetic, and nonjudgmental. These competencies will allow team members to work collaboratively and reduce the likelihood of conflict or miscommunication.

Trust

Building trust in virtual teams is identified by many researchers as a challenge that needs to be addressed (Alsharo et al., 2017; DuFrene & Lehman, 2016; Flammia et al., 2016; Ford et

al., 2017; Friedrich, 2017; Liao, 2017; Marlow et al., 2017; Pullan, 2016; Zeuge et al., 2020).

Ford et al. (2017) emphasized that trust is what holds virtual teams together and ties them to the organizational mission. Trust is needed in all teams, but more so in virtual teams than in face-to-face teams since team members cannot physically see others working, requiring trust to believe others are contributing to the team as their role requires. As the virtuality of the team increases, trust becomes more important (Marlow et al., 2017).

Trust in virtual teams is important for several reasons. Flammia et al. (2016) pointed out that virtual team members need to trust that their colleagues can and will perform their jobs competently. Without trust, team members may be hesitant to collaborate with others, which could lead to poor team performance. Trust has also been identified to mitigate conflict and promote creativity (Friedrich, 2017; Zeuge et al., 2020). When team members trust each other, Zeuge et al. (2020) argued that teams are more efficient and effective because individuals can work and experiment without worrying about mistakes or perception.

Swift trust is a phenomenon that researchers have identified in newly formed virtual teams. This phenomenon may be more prevalent for teams that know they will only be together for a brief time (Liao, 2017). Swift trust is trust that is built quickly at the time a team is formed based on initial interactions, stereotyping, and perception of personality types (Ford et al., 2017; Liao, 2017). DuFrene and Lehman (2016) explained that this type of trust is assumed out of necessity at the outset of the relationship and then is adjusted over time based on further interaction between team members.

While in face-to-face teams, trust is often built on physical cues, in the virtual environment, trust must be built differently and may take longer to develop (Pullan, 2016). Marlow et al. (2017) found that as virtuality increases, the importance of trust also increases

because there are fewer opportunities for physical cues. Rather than using physical cues, one way that virtual teams build trust is through observing the competencies of others on the team (Alsharo et al., 2017). DuFrene and Lehman (2016) wrote that team members will monitor how others do their work to determine their trustworthiness, including whether they meet deadlines, attend meetings, participate in meetings, follow through on promises, and respond to communication.

Finally, even though much is understood about the importance of trust, Alsharo et al. (2017) suggested that more research is needed to understand how trust is built in virtual teams and any differences in how it is built in teams that are globally dispersed compared to those with the team all residing in one county.

Conflict

While every team is subject to conflict from time to time, virtual teams have a nuanced experience with this challenge. Pullan (2016) pointed out that conflict is often detected through body language or verbal cues making it harder to notice in virtual teams because these are not possible or less obvious in the virtual setting. Conflict can be more prevalent in virtual teams because individuals may attribute malfunctioning team processes to personal factors rather than situational (Liao, 2017). When this happens, team members may avoid collaborating among themselves and, therefore, impact team effectiveness.

Conflict prevention in virtual teams is vital. Teams can implement strategies to minimize the likelihood of conflict occurring (Pullan, 2016). For example, inviting feedback early and often can prevent team members from harboring negative feelings but instead allow for collaboration in response to concerns about team tasks. In addition, conflict should be framed positively whenever possible, posing it as a way to clarify processes and procedures (Liao, 2017;

Pullan, 2016). Finally, Flammia et al. (2016) suggested using an online forum as a tool to facilitate discussion about problems as they arise. This can prevent points of contention before they fester into conflict.

Communication

Communication in any team is essential for success, but in virtual teams, extra care needs to be taken to ensure it is effective. Communication is the process by which a team develops shared meaning, and this process can impact team members' satisfaction as well as the effectiveness of the team (Marlow et al., 2017). DuFrene and Lehman (2016) found that virtual teams need double the amount of communication when compared to a regular team and that high-performing teams communicate more than lower-performing ones. This demonstrates how important it is to be mindful of communication practices in virtual teams.

In virtual teams, communication happens only using technology, whether via text-based formats (e.g., email, instant messages), audio format (e.g., audio-only call, phone call), or video format (e.g., video call). These formats are more challenging to coordinate than face-to-face communication and, as a result, are less fluid (Flavian et al., 2018). Each of these formats poses unique challenges when compared to face-to-face communication that happens in teams that work together in person.

In their study, Laitinen and Valo (2018) used a frame category analysis to consider the meanings attached to technology-based communication in virtual teams. The researchers studied three virtual teams and analyzed recordings of their virtual meetings. They found four frames that define technology-based communication in virtual teams: practical frame, work frame, user frame, and relational frame. Within these frames, nine technology-related meanings were defined, including entity of technological properties, challenge, and subject of guidance

(practical frame); tool and useful benefit (work frame); object of competence and reason for uncertainty (user frame); as well as a way to express affection and shared space (relational frame). These results help conceptualize the importance of communication in the day-to-day function of a virtual team and suggest that virtual teams should intentionally define how technology is to be used for their team to avoid frame confusion. Laitinen and Valo emphasized that communication practices should be customized depending on the needs of the team.

A challenge that technology-based communication has is that it hinders the use of typical nonverbal communication. Instead, team members are likely to rely on other types of nonverbal signalling such as speed of response or lack of response (Flammia et al., 2016). Darics (2017) explained that nonverbal communication in text is always voluntary and can be used to emphasize, clarify, or communicate hierarchy. Within virtual teams, the use of text-based nonverbal communication can create confusion since it can be prone to misinterpretation (Darics, 2017). Communication through video meetings can provide some ability for nonverbal communication and provide richer communication than the other formats (Marlow et al., 2017).

In their study, Darics (2017) used a grounded practical theory approach to analyze the communication strategies and techniques used to communicate by a virtual team working from a global consulting company. The researcher analyzed computer-mediated communication in the form of text-based conversations collected from the team to understand better how nonverbal communication is used in virtual work. They found that many communication strategies used by team members were relationally oriented with the goal of explaining a thinking process, encoding emotions and informality, or to evoke sound effects. In comparison, they also found that many strategies used were transactionally oriented. These strategies were used by someone in a higher position in the team to solicit action from subordinates. Darics reported that leaders

often used these types of strategies to communicate hierarchical status or to emphasize and clarify meaning and intentions.

Flammia et al. (2016) highlighted the need for care in written communication, including word and phrasing choices as well as choice of modality. They suggested that writers check for understanding by requesting a response to any written communication. It is also important to consider how the modality of communication (e.g., email, computer-mediated message, video call) can alter its effectiveness (Flammia et al., 2016; Grzeskowiak, 2020). Virtual team members must thoughtfully consider the purpose of communication to choose the most appropriate modality. For example, if a short quick response is needed, a computer-mediated message could be best. If there are detailed instructions that need to be communicated and followed up on, an email would be best. Finally, if two team members need to clarify a process, scheduling a video meeting for further discussion might be the most appropriate modality.

Some work has been done to suggest practical tools for effective communication in virtual teams. In the book *The Virtual Team Maturity Model*, Friedrich (2017) shared their study in which they worked to develop and implement a virtual team evaluation method called virtual team maturity model (VTMM) that uses 11 processes for virtual team communication. To develop the model, the researcher observed virtual teams of students conducting a project together and analyzed their reflections. Using the data collected, the VTMM process was developed. The VTMM uses inputs, methods, outputs, and key performance indicators to determine virtual team maturity. Friedrich then piloted the model and found that as teams worked to develop their process with VTMM, their team performance improved. This would suggest that VTMM is a useful tool for virtual teams to implement to ensure effective communication practices. Friedrich suggested more research is needed to determine if virtual teams are

productive as face-to-face teams and proposed that this could be done through a longitudinal study comparing a virtual team to a face-to-face team doing a similar task. Furthermore, more research is needed to understand how communication impacts the other processes that go on in virtual teams such as building trust or shared knowledge (Marlow et al., 2017).

Technology Use

Virtual teams are reliant on technology to do their work, including communicating with others or performing their job functions. Eisenberg et al. (2016) pointed out that virtual work is becoming increasingly complex, making technical skills in virtual teams more a requirement rather than an asset.

Flammia et al. (2016) identified several challenges that may arise in virtual teams related to technology, including poor computer literacy of team members, poor electronic communication proficiency of team members, or poor availability of tools (possibly as a result of budget restraints). DuFrene and Lehman (2016) highlighted that team members should be prepared to work with others with varying technical skills. They explained that an individual's level of technical skills might impact their ability to perform tasks or their openness to new ideas. Besides, a team member's perception of a technological tool (including their expectations of or previous experience with the tool) might impact their willingness to use the tool (Laitinen & Valo, 2018)

Having proper technology that supports the work of the team is essential for the virtual environment. Ford et al. (2017) pointed out that without these tools in place, the team will struggle to trust their organization. Similarly, Friedrich (2017) wrote that technology can be used to build trust by providing a communication avenue as well as to affirm the work of the team.

Virtual Team Leadership

In the literature, there is debate about the impact of leadership on virtual team effectiveness. For instance, Friedrich (2017) found in their study that effective leadership is not essential for virtual team performance. In contrast, other researchers discussed how effective virtual leadership can positively impact team performance. These researchers considered how working and leading in the virtual environment poses unique challenges for leaders and how they need to adapt their usual strategies and practices to be effective.

Pullan (2016) suggested that it is more than just strategies and practices that make an effective virtual leader. They explained that those participating in virtual work environments do not simply need to adjust, they need to “develop the mindset, attitudes, skills, and knowledge” to work in this environment (p. 58). They went further and stated that leading and meeting through technology is “about developing the sort of facilitative leadership that can connect, collaborate with and motivate others in ways that command-and-control can’t” (p. 58). In other words, virtual leadership requires a specialized approach.

In addition, virtuality impacts the type of leadership needed in teams. The impact of a leader’s behavior on a team is stronger as virtuality increases (Liao, 2017). In particular, hierarchical leadership can be more effective in highly virtual teams because they are more complex (Eisenberg et al., 2016).

Furthermore, Purvanova et al. (2020) used a quantitative methodology with experimental design to study the impact on virtuality on leadership emergence. Using undergraduate students as participants, they generated data by conducting a simulation where the students were grouped into virtual teams and had to perform a given task. The researchers found that in teams with high virtuality, task-based leadership behaviors (achievement) were seen as more important while in

teams with low virtuality, relationship-based leadership behaviors (ascription) were seen as more important. They suggested that further research is needed to determine the effects of team configuration on this phenomenon. For instance, does the physical location of the team member compared to the leader or their relationship with the leader within the team impact leadership emergence?

One gap in the current literature about virtual leadership is training virtual leaders (Alward & Phelps, 2019; Darics, 2017; Friedrich, 2017; Gamero et al., 2021; Purvanova et al., 2020). While the literature has insight into what type of leadership is more effective in the virtual environment, how best to prepare these leaders has still yet to be confirmed. Likewise, while researchers identified training as a need, only a few wrote about what that training would include. Gamero et al. (2021) suggested training leaders for emotional intelligence and emotional communication while Darics (2017) suggested training related to nonverbal communication in the virtual environment.

Leadership Competencies

To be successful in leading virtual teams, leaders need the skills necessary to capitalize on the opportunities while addressing the challenges that come with this type of team. Every virtual team will require a leader who can support excellent communication (e.g., high level of verbal and written communication competency, ability to provide constant feedback), build trust, and deal with conflict (Maduka et al., 2018; Pullan, 2016; Zeuge et al., 2020). Along with this, Zeuge et al. (2020) suggested that virtual leaders must be self-confident, supportive, and visionary while Maduka et al. (2018) highlighted the need for personal characteristics such as self-efficacy, hope, optimism, and resilience.

Maduka et al. (2018) conducted an exploratory case study at a manufacturing organization that used survey data, literature review, and interviews to determine desirable leader competencies. They found that team members perceived leaders who have effective communication skills (including providing constant feedback), build trust, provide task clarity, offer clear direction, are reliable, and have desirable personal characteristics to be more successful. They also reported that transformational leadership traits, such as self-reflection and behaviors that emphasize shared team values, are found in effective virtual leaders.

Additionally, Han et al. (2017) considered what behaviors leaders performed that enabled or inhibited their teams as well as what behaviors fostered creativity. They interviewed nine virtual leaders of global virtual teams. They found that issues that inhibit team success are distrust, personality differences, generational differences, scheduling issues, and technology. On the other hand, they found that strategies that enable success include trust building, setting guidelines and expectations, regular communication and feedback, psychological safety, task-oriented or shared leadership, relational-oriented leadership, and technology. Overall, they found that teams were positively impacted by an environment where interpersonal relationships and socioemotional relationships were supported. These researchers suggested that this topic should be researched further with a more diverse sample.

Furthermore, Kuscu and Arslan (2016) sought to understand the perception of virtual leadership in distance learning teams. They studied three types of teams in a university that had distance education programs: academicians, technical support team members, and distance education students. They used a qualitative approach, collecting data from 44 interviews of individuals on these teams. From their data analysis, Kuscu and Arslan suggested that virtual leaders require different skills compared to leaders of other types of teams. They found that

virtual leaders require specific communication skills, technological competency, as well as the ability to motivate, guide, and build the confidence of their team. Finally, they suggested that more research is done on virtual leadership at other institutions and, since virtual leadership is a relatively new leadership approach, virtual leadership in general.

The virtuality of the team will impact the types of skills the leader will need and whether they need to be an expert in task-based leadership, relationship-based leadership, or a mix of both. Considering virtuality as a continuum, the low virtuality end of the continuum will require a leader with more relational-based skills while the high virtuality end will require a leader with more task-based leadership skills (Purvanova et al., 2020). As virtuality increases, the leader will need skills to support team integration that will increase the self-management of the team (Maduka et al., 2018). Technical skills are important for virtual leaders, and as virtuality increases, they will need to be able to produce and monitor technical solutions that maintain relationships and facilitate tasks (Maduka et al., 2018).

Some researchers have studied the impact of emotional intelligence on leadership in virtual teams. Emotional intelligence skills in virtual leaders such as self-awareness, self-regulation, and the ability to motivate have been found to be helpful in the virtual environment (Zeuge et al., 2020). These skills are also a predictor of transformational leadership, the self-efficacy of the leader, and a leader's ability to support emotionally their team (Alward & Phelps, 2019). Likewise, Gamero et al. (2021) found that managers could improve the emotional intelligence of their team by modelling it, and an emotionally intelligent team will experience an improved team climate (in which the team would experience less anxiety and work-related tension), more effective interpersonal interactions, increased trust, less conflict, and better decision-making.

Finally, the virtual world is constantly changing as new technologies are constantly developed. As a result, strong technical skills are essential for virtual leaders (Campion & Campion, 2019; DuFrene & Lehman, 2016; Laitinen & Valo, 2018; Pullan, 2016; Schulze & Krumm, 2016). Maduka et al. (2018) emphasized that virtual leaders need to be competent in their ability to monitor changes in the virtual environment and consider the impact they may have on the team's work. How leaders can support their team and their use of technology is discussed later in this review.

Leadership Styles

Three leadership styles dominate the literature related to virtual leadership as being effective: hierarchical leadership, transformational leadership (often grouped under hierarchical leadership), and shared leadership. As with any leadership approach, there is not one that suits virtual teams in every situation.

While not a specific leadership style, researchers also discussed the advantages and disadvantages of a relational-based approach versus a task-based approach to leadership of virtual teams. Bartsch et al. (2020) discussed how relational-based leadership behaviors are more enabling to the team compared to task-oriented behaviors, which are more of a management approach. They explained that while neither approach is better than the other, a leader would have to adapt their style to suit the virtuality of the team and the needs of the team members. As previously outlined, which approach is most beneficial may also be impacted by the virtuality of the team (Purvanova et al., 2020).

Hierarchical Leadership. Hierarchical leadership (sometimes referred to as vertical leadership) is thoroughly discussed in the literature. Eisenberg et al. (2016) explained that this type of leadership focuses on providing division of power and roles, coordination of tasks,

vision, oversight of the team, and performance assessment. They went on to explain that hierarchical leadership can be helpful for virtual teams with complex issues such as geographical dispersion, dynamic structure, and cultural diversity because it puts the leader in a better position to provide direction, deal with conflict, and attempt to facilitate relationship building within the teams. However, Hoch and Kozlowski (2014) argued that hierarchical leadership is more difficult to maintain in the virtual working environment compared to in-person working environments because it focuses a lot on interactions that do not happen as naturally as they do in a team that works together in person (i.e., a virtual leader would rely on technology-mitigated communication).

Transformational leadership is seen as a subtype of hierarchical leadership and is highlighted in the literature. Many authors argued that the virtual environment lends itself well to transformational leadership (Eisenberg et al., 2016; Friedrich, 2017; Hoyt & Blascovich, 2016; Maduka et al., 2018; Pullan, 2016; Purvanova & Kenda, 2018; Zeuge et al., 2020). One reason is that the virtual environment favors a facilitation approach that focuses on shared vision and intellectual stimulation as the best form of motivation, which is emphasized with a transformational leadership style (Friedrich, 2017). A transformational leader is inspirational, affirms individualized consideration, promotes respect and trust within the team, and encourages new ideas and innovative problem-solving, which is effective for virtual teams that are most often composed of professional workers (Zeuge et al., 2020). Likewise, a transformational approach focuses on the social presence of the leader, which has been found to have a positive impact on virtual team performance (Ben Sedrine et al., 2020).

Shared Leadership. Shared leadership in teams occurs when team members take turns being the leader without it being formally assigned. A team with shared leadership is often

referred to in the literature as a self-managed team (Eseryel et al., 2020; Hoch & Kozlowski, 2014; Maduka et al., 2018; Marlow et al., 2017). The success of shared leadership relies on a team that is willing to participate in this type of leadership format. Teams with shared leadership often still have a hierarchical leader and this leader would also have to be willing to have this type of setup (Hoegl & Muethel, 2016).

In their study, Robert and You (2017) surveyed 163 participants spanning 44 virtual teams. They studied graduate students who were working virtually on a collaborative project by surveying them during and after project completion. The researchers sought to determine the impact that shared leadership had on team member satisfaction and team performance. From their data, they found that shared leadership had a positive correlation with trust and autonomy, which moderated an increase in satisfaction as well as resulted in an improvement in team performance. Robert and You suggested that more research be done to determine what level of shared leadership and satisfaction helps or hinders a virtual team. Furthermore, this study was limited to an education environment and should be considered for replication in an employment environment.

Shared leadership in virtual teams is beneficial for several reasons. This leadership style promotes collaborative decision-making, can increase trust, is helpful in creating a positive team environment, and may facilitate improved knowledge sharing (Zeuge et al., 2020). Since this type of leadership relies on different team members to lead, the ability to have the team member most suited to lead a project or task can result in improved team performance (Eisenberg et al., 2016).

There are certain types of virtual teams that work well with shared leadership. Teams that perform complex task work lend themselves to shared leadership because the team is made up of

content and process experts who can direct their own work and others (Eisenberg et al., 2016; Hoch & Kozlowski, 2014). Likewise, shared leadership can be helpful for teams with task interdependence because it can foster collaboration and knowledge sharing, which can lead to creativity and innovative solutions (Eisenberg et al., 2016). There is a convincing argument that both hierarchical leadership and shared leadership can be helpful in the same virtual team. To this end, Eisenberg et al., (2016) suggested that leaders should not approach their team with an either-or mindset but use both styles. This suggests that a hierarchical leader could support shared leadership within the team, delegating leadership to a team member or allowing a leader to emerge naturally.

In contrast, some virtual teams would not be compatible with a shared leadership approach. Shared leadership may be difficult to implement in teams with complex dynamics such as geographical dispersion and dynamics structures. Eisenberg et al. (2016) explained that this is because communication can often be difficult with more diverse or fluid teams in which an informal leader may not have the time or expertise to manage. Hoch and Kozlowski (2014) reported that shared leadership is helpful on teams with any level of virtuality, but Eisenberg et al. (2016) argued that teams with higher virtuality often have more complex dynamics (geographical dispersion, dynamic structure, national diversity) and so may not be as suited to this leadership style.

Building Trust

Trust has been identified as a critical component of virtual teams, making it important for virtual leaders to consider. Trust can help teams be more efficient and effective because the leader and team members have positive expectations about others' work and know they are accountable to each other (Alward & Phelps, 2019; Zeuge et al., 2020). In particular, Ben

Sedrine et al. (2020) found that trust in the leader led to increased team performance. Zeuge et al. (2020) argued that trust within a virtual team fosters creativity because people feel emboldened to experiment and make mistakes without worry. Pullan (2016) explained that without trust, leaders cannot feel confident in delegating work and would view giving autonomy to team members as dangerous.

Furthermore, Flavian et al. (2018) used a qualitative approach to study the antecedents and consequences of trust on a virtual team leader. They conducted an online survey garnering 241 responses and analyzed the results. They found that the physical characteristics of a leader (attractiveness) as well as leadership behaviors of empathy and justice positively impacted the team's trust in the leader. They also determined that when team members trust in the leader, they have a higher commitment to the team and organization. Flavian et al. suggested that more research is done to determine what other physical characteristics and behaviors of virtual team leaders are antecedents of trust. Likewise, they wondered if virtual leaders require special skills because of the virtual environment compared to leaders of face-to-face teams. Finally, they encouraged additional research to analyze how the degree of virtuality of a team may impact how trust in the leader is developed.

Virtual leaders must consider how the virtual environment impacts their ability to build trust between them and their team. Pullan (2016) explained that in the virtual environment, community and social capital are not as easily built and maintained because there is less opportunity for informal conversations or meetings. They suggested this could be mitigated by intentionally scheduling time for the team to connect socially. In the virtual setting, leaders cannot rely on physical cues but instead need to consider how trust is built cognitively (Pullan, 2016). Consequently, leaders should consider using communication that is intended to build

trust, focusing on media-rich communication channels and facilitating opportunities for synchronous information exchange (Liao, 2017). According to Ford et al. (2017), leaders can develop the trust of their team by being visible (including virtually), equipping their team with the proper tools, being consistent, developing processes for common team asks, and by being transparent in their work and decision-making. Honesty is a practice that leaders can use to instill trust, meaning that their team will be more likely to accept what they say in the future (Pullan, 2016).

Within the team, leaders should look to support practices that have been demonstrated to build trust and adapt them to the virtual environment. Knowledge sharing is one way that researchers have identified that teams can build trust. Alsharo et al. (2017) conducted a study in which they tested a research model with virtual teams in the information technology industry. Using data collected through a survey, they found that knowledge sharing leads to the formation of trust. Alsharo et al. explained that knowledge sharing builds trust by promoting collaboration and appreciation for others' competence and expertise. Leaders should consider how they can promote knowledge sharing within their team. For example, the leader could require the team to share documents through cloud-based solutions so more than one team member could work on a document at once and to share resources that might be helpful for the rest of the team. Alsharo et al. identified that further research is needed to determine if the environment affects how trust may influence a virtual team as well as what types of team-building strategies can be used to build trust through collaboration.

Marlow et al. (2017) emphasized that trust in virtual teams should be developed early on through intentional team building. Furthermore, providing opportunities for team members to engage socially can support trust building. Flammia et al. (2016) suggested that trust in teams is

built through social communications such as hobbies, interests, and family. Leaders may consider scheduling a virtual coffee break meeting where the team can meet to take a break from their work tasks and connect socially.

Communication

Communication is an essential component of leadership and can make virtual leaders more effective (Attieha & Zouhairi, 2021). It is through communication that leaders perform essential leadership tasks such as demonstrating empathy, sharing vision, soliciting motivation, and facilitating task completion (Flammia et al., 2016; Laitinen & Valo, 2018). For virtual leaders, communication is always mitigated by technology. This means that there are fewer possibilities for informal conversations and a leader must be intentional about using communication to connect with those on their team (Pullan, 2016).

Likewise, Newman et al. (2020) considered how virtual team members' perceptions of their leaders' communication affected team performance perceptions and outcomes. To investigate this issue, they conducted a survey questionnaire garnering 458 responses representing 68 teams. The questionnaire assessed the participants' perception of the tools and techniques their leaders used to communicate, their leaders' trustworthiness, as well as their perception of their teams' performance. The communication tools and techniques considered include those proposed by Marlow et al. (2017) in their framework: frequency, predictability, responsiveness, clarity, and mode. Team performance was measured subjectively through the questionnaire but also objectively using a balanced scorecard for each team. The researchers performed a quantitative analysis of the data collected and found that team members who perceived their leaders' communication to be effective also perceived their team to have higher performance and that trust in the leader further strengthened this correlation. However, a

significant gap in alignment was found, as the results showed that team members' perception of team performance and actual team performance (as measured on the scorecard) often did not match. The researchers explain that this may mean that some leaders may not be communicating what is most important to the organization and team's success, creating a disconnect between the team's perception and reality. Newman et al. (2020) suggested more research could consider this phenomenon in other organizations and environments, using different scales to measure team effectiveness, as well as to look at how leaders communicate for different tasks.

While communication is of utmost importance in virtual teams, more communication is not always better. Friedrich (2017) argued that leaders should focus on quality, not the quantity of communication. Too much or too little communication can create issues within the team (Grzeskowiak, 2020). For example, if the leader communicates too much, it will convey that they do not trust their team (Friedrich, 2017). Instead of risking communication being too frequent, leaders could set up a regular contact schedule (e.g., email, memos) that is sent out to create predictability and to highlight vital information without filling the teams' in-boxes (DuFrene & Lehman, 2016). Too little communication may leave the team unsure about what is expected of them, leading to poor productivity and engagement (Grzeskowiak, 2020).

Virtual leaders should be careful to ensure their communication is effective in conveying the desired tone and information as well as eliciting the desired response (team member follows through with the desired task; DuFrene & Lehman, 2016). Creating a balance of relational-oriented and task-oriented interactions is critical (Darics, 2017; Laitinen & Valo, 2018). Poor communication can lead to team members experiencing anxiety, confusion, and miscommunication that could then impact team effectiveness (Flammia et al., 2016). While conveying certain emotions virtually, such as empathy, can be difficult, leaders should be

diligent in their attempts (Grzeskowiak, 2020). When trying to convey emotion, leaders should be careful in their choice of communication format. DuFrene and Lehman (2016) suggested that phone calls might be the preferred method because it would allow the leader to check for understanding more easily.

Similarly, leaders should consider how their chosen modality may impact the response from the team. Leaders should consider what type of communication format their team might prefer (e.g., email, messages, one-to-one meetings, phone calls) and consider how that might impact their responsiveness (Han et al., 2017; Pullan, 2016). If team members do not respond well to computer-mediated messages, a leader might be more successful in getting a quick response if they were to call that person on the phone.

Related to task completion, leaders should use communication as a tool to summarize the team's work as well as keep track of ideas in progress (DuFrene & Lehman, 2016). Documenting processes and decisions is important to keep everyone on the same page and ensure shared understanding. Leaders should consider how they can utilize technology as a tool to support this type of communication (Laitinen & Valo, 2018).

Leaders should also consider how their team might be communicating with them in the virtual environment in nonverbal ways. This might require them to ask more explicit questions and take more time in interpreting and analyzing responses and behaviors (Flammia et al., 2016). Instead of displaying their confusion in frustration visually, individuals' lack of response may be what communicates this information to their leader. In these cases, leaders might consider following up with staff who are unresponsive and ask if there is anything preventing them from continuing with the task in question. Intentional follow-up may be helpful because in the virtual environment, there are a few opportunities to clarify through casual conversation, which is a

common tool used in face-to-face teams. Leaders should also consider that everyone has their own communication style, and this could impact their nonverbal communication (Darics, 2017). For example, DuFrene and Lehman (2016) found that women are more likely to use computer-mediated communication more often and more effectively (including socioemotional communication in a group).

Likewise, leaders must be careful about what they are communicating nonverbally, both through text and through behaviors. For example, leaders who respond quickly to staff inquiries communicate that they value their team (Flammia et al., 2016). On the other hand, leaders can communicate nonverbally through text. In their study, Darics (2017) analyzed a variety of nonverbal cues in computer-mediated communication, finding that the meanings of these cues are not always clear. While Darics argued that these ambiguous cues are not necessarily a negative thing, leaders should have superior communication skills to ensure they do not result in miscommunications with their staff. Darics encouraged further research on text-based nonverbal cues and the meanings they communicate in computer-mediated communication.

Finally, leaders should find ways to ensure communication is effective within their team (between team members). One way to do this is to develop clear guidelines for communication. This could include standards for email etiquette, timelines for responses, choosing appropriate modalities for communication, and follow-up practices (DuFrene & Lehman, 2016; Grzeskowiak, 2020; Han et al., 2017).

Preventing and Responding to Conflict

Some researchers focus on what leaders should do to prevent conflict in virtual teams. Pullan (2016) encouraged leaders to be clear and transparent about decision-making and team

processes. For example, the leader should be clear about how they will handle conflict when it does arise.

Liao (2017) suggested that leaders focus on strategies that ensure effective communication as a way to prevent conflict. They explained that this might include organizing meetings to allow for discussion of issues, establishing communication routines, and clarifying channels of communication. Leaders should be aware that poor communication, including a lack of prompt responses to team member communication, has the potential to create or exacerbate conflict (Flammia et al., 2016).

Another strategy suggested by Pullan (2016) is that leaders should closely monitor their teams for behaviors that indicate conflict may be developing and deal with the situation quickly. In virtual teams, they explain that communication surrounding a conflict must be more intentional than in face-to-face teams. This could be through a meeting, phone call, or written communication since face-to-face or impromptu conversations are difficult or not possible. Pullan (2016) suggested clarifying both sides of the conflict to promote understanding and that the leader should also share how the conflict impacted them.

Another way to reduce instances of conflict is for the leader to facilitate intellectual stimulation within the team (Friedrich, 2017). Friedrich (2017) explained that by focusing on stimulating the team, they will approach problems curiously and collaboratively rather than skeptically and defensively. With this approach, team members will naturally look to work together to solve problems and improve processes.

Finally, each time a conflict occurs, leaders should take time to learn from it, so it is less likely to happen again. Pullan (2016) suggested that conflict can be a way to move toward being a high-performing team, as it can help transform teams and build deeper relationships.

Supporting Technology Use

Since virtual teams rely on technology for all task work and team communication, leaders should be equipped to support their staff with using any technology required for their jobs. This would include responding to any staff who are anxious or resistant to using technology, providing guidelines for technology use, and troubleshooting technical issues that arise.

In their study, Liu et al. (2018) implemented a model, the E-leadership communication adoption model, that focuses on the role of the leader in technology adoption and the traits that leaders have that support this adoption. Specifically, they considered technology that supports virtual communications. This quantitative study included the development of a tool to measure the successful use of the model. Using a phone survey of 318 public service employees, the researchers found that energy, responsibility, and analytical skills are the most important leadership traits that positively influence their intentions and adoption of technology. The researchers explained that leaders with these traits are more likely to have awareness of technology, the ability to evaluate it, expend effort on its adoption, and facilitate positive conditions within the team that support its adoption. More research is needed to understand better this topic: Liu et al. suggested that qualitative methods are used in future studies for a more robust understanding of the issue. Furthermore, they recommended that future studies use the model in different settings to refine it and do more testing.

Leaders should be aware that some of their teams may struggle with technology use more than others. DuFrene and Lehman (2016) pointed out that younger workers often have the advantage when it comes to technology use in their jobs because they have been trained in the most up-to-date technical skills throughout their schooling. In contrast, some team members may have technology anxiety or poor perceptions of technology that could affect their ability to

complete their work tasks (either they do not know how to complete tasks, or they avoid completing tasks) as well as communicate with other team members (Laitinen & Valo, 2018). Schulze and Krumm (2016) suggested that leaders respond to this type of team member by encouraging a “playfulness” approach to allow them to better understand the usefulness of each technology without feeling pressure (p. 78). Finally, providing clarity about expectations for technology use may also be a helpful approach to combat anxiety and avoidance (Laitinen & Valo, 2018; Schulze & Krumm, 2016).

Virtual leaders should have clear expectations for their team about how to use technology. This might include specifying what technology to use for types of communication or for work tasks. For example, DuFrene and Lehman (2016) suggested that leaders consider how they could promote collaboration by requiring the team to use cloud-based solutions for documents that have multiple team members who need to contribute to them. Pullan (2016) also provided examples suggesting leaders provide guidelines for how documents should be shared, named, tracked, and archived. In addition, leaders should also take the time to make meaning of technology to allow for its more successful use (Laitinen & Valo, 2018). This means clarifying why the team is using the technology for a particular task and addressing any negative perceptions in hopes of creating buy-in. Laitinen and Valo (2018) cautioned leaders that if staff have a negative perception of technology, they may avoid completing tasks that require it.

Leaders should always be prepared for technology failure: Champion and Champion (2019) suggested it is inevitable. When issues arise, their response should include being patient and empathetic with their team while they work through them (Champion & Champion, 2019). Pullan (2016) proposed that leaders always have a backup plan for each technology they use. For

example, if video calls are not working, team members should be equipped to use a phone to call into a meeting.

Holding Effective Virtual Meetings

Virtual meetings, meaning those facilitated by video conferencing technology, are a helpful tool for virtual teams because they provide a media-rich form of communication (Ben Sedrine et al., 2020). Lindner and O'Brien (2019) found that teams that videoconference regularly are more satisfied, while Attieha and Zouhairry (2021) argued that virtual meetings are an effective way for leaders to pass along their charismatic attitude to their teams. Since virtual meetings are used in most virtual teams, leaders should be well equipped to host and conduct them (Campion & Campion, 2019).

Leaders can use several strategies to make the most of the virtual team meetings. Campion and Campion (2019) explained that leaders are intentional about preplanning for their meetings to set the direction and ensure meetings are welcoming and productive. They proposed that leaders tell the team ahead of time the purpose of the meeting, how the meeting will be structured, and how they can participate in the meeting. Following predetermined guidelines could help everyone on the team feel more comfortable and improve meeting productivity. Pullan (2016) suggested that meetings be kept short to improve engagement.

The role of the leader is to be a coach and a facilitator, helping people do their work themselves or to come to their own decisions (Pullan, 2016). During a virtual meeting, this is done through conversation facilitation. Pullan (2016) argued that this is done differently in virtual meetings compared to traditional face-to-face meetings. They explained that the leader must use strategies to keep participants engaged because distractions (including attempts by participants to multitask) are more prevalent in virtual meetings. For example, the leader could

engage participants using a variety of technologies to facilitate the meeting including chat, shared screens, video, smart whiteboards, cocreation tools, or breakout rooms. Another idea Pullan posed to promote engagement is ensuring that any presentation of information is short (5 minutes or less) so the focus of the meeting can be on participation.

Virtual leaders should consider how they can create an inviting atmosphere in a meeting. This might include considering the personal characteristics of the team members to use strategies that might allow them to get more involved (Campion & Campion, 2019). Campion and Campion (2019) also encouraged virtual leaders to consider their team members' comfort level with the technology being used and provide any information needed to participate beforehand as well as provide coaching during the meeting. This might include using a new feature of the meeting software providing an explanation and demonstration before the outset of the meeting. With this intervention, team members should feel more equipped to participate in meetings.

Leaders may find it helpful to set ground rules for virtual meetings to address issues that are unique to the virtual setting. Pullan (2016) offered several suggestions, including participants muting themselves when not speaking, raising their hand (virtual or otherwise) to indicate a participant would like to speak, as well as a clear agenda about how time will be spent during the meeting. DuFrene and Lehman (2016) suggested that not multitasking during meetings is a helpful expectation to ensure productivity. Ground rules may vary depending on the number of participants in the meeting. For example, in a meeting with fewer than five people, there may not be a need to have someone raise their hand when they would like to speak.

Virtual Work During COVID-19

The COVID-19 pandemic began in North America in March 2020. At that time, businesses that could support remote work had employees work from home, and schools at all

levels closed and moved their instruction online. Research on how teams and leaders adjusted is still emerging. In particular, researchers are looking to answer questions about what strategies for virtual work and virtual leadership were successful and what teams adjusted the best (Attieha & Zouhairry, 2021; Bartsch et al., 2020; Chamakiotis et al., 2021; McMurtrie & Kostya, 2021; Owl Labs, 2020; Uhl-Bien, 2021).

There is little literature on virtual leadership during crises, and the response to the COVID-19 pandemic could be helpful to understand better this topic (Bartsch et al., 2020). Specifically, how leaders responded to the pandemic could give insight into how leaders respond to complexity and implement adaptive solutions (Uhl-Bien, 2021).

Some studies have been completed about virtual work during the pandemic. Related to virtual leadership, Attieha and Zouhairry (2021) studied how leadership was perceived in virtual teams during the COVID-19 pandemic. For their qualitative study, they surveyed members of various universities, including professors, teaching assistants, and instructors, to determine the impact a leader's charismatic style had on virtual teams. Based on their results, they found that charismatic leaders were perceived by their team to be effective during a crisis, as they were able to inspire and motivate their teams in the virtual environment. Specifically, they found that charisma can be dissipated from the leader to their team through virtual means such as virtual meetings and email. The researchers recommended that more studies should be done to understand how a crisis such as the COVID-19 pandemic can change leaders' behaviors.

Bartsch et al. (2020) also studied leadership during the COVID-19 pandemic, hoping to understand how leadership effectiveness was impacted and how any changes impacted team performance. The researchers used survey data collected from 206 service employees that transitioned from in-person work to virtual work because of the pandemic. They found that

leaders adjusted their leadership behaviors to include a balance of task oriented and relational oriented. These behaviors resulted in improved team performance that was mitigated by team cohesion and job autonomy. Bartsch et al. suggested more research is done on how leaders adjust their behaviors in a crisis such as the COVID-19 pandemic.

In other literature, Uhl-Bien (2021) highlighted the complexity of the pandemic demanded leaders provide adaptive responses that were entrepreneurial and creative. Kniffin et al. (2021) recommended more research is needed to understand how leaders adapted their styles when their team moved virtual.

Working From Home

At the outset of the COVID-19 pandemic, many employees were ordered to work from home as a measure to prevent the spread of the coronavirus. Work from home and virtual work was becoming more prevalent before the COVID-19 pandemic, but the pandemic accelerated this shift (Kniffin et al., 2021). The literature outlined many challenges and benefits to working from home for both the employer and employee. Before the COVID-19 pandemic, the perceived challenges may have prevented this type of working model from being implemented, but the pandemic response left little choice but an embrace of this type of work (Kniffin et al., 2021).

While working from home during the COVID-19 pandemic, workers have discovered there are benefits and challenges to virtual work. Some of the challenges to this work were related to other factors brought about by the pandemic such as children doing their schooling online from home as well as others working in the home. This created some practical challenges such as time needed to support children, limited Internet bandwidth, and other distractions (Owl Labs, 2020). Similarly, many workers reported difficulty maintaining boundaries with their

work, often resulting in working more hours than they would have in the office (Kniffin et al., 2021).

In contrast, workers also discovered many of the benefits of working from home. Current research has reported that workers saved money working from home (no money spent on commute) and a better work-life balance (e.g., saving time on the commute and being able to attend to household tasks intermittently on their breaks and lunch hour; McMurtrie & Kostya, 2021; Owl Labs, 2020). Related to work tasks, researchers report that workers found that their work effectiveness improved because they had more ability to focus on their work, be more productive, and experience less stress (Owl Labs, 2020).

Employers also noticed some benefits to having their staff work from home. Many employers found that they benefited from improved employer-employee relationships when their staff worked from home, mostly because it allowed workers to experience the benefits already outlined (Owl Labs, 2020). Owl Labs (2020) reported that working from home also increased the likelihood that staff would stay with their employer, recommend the company to a friend, and choose an employer over another that did not offer a work-from-home option.

The Future of Virtual Work

Even as there is no clear end to the COVID-19 pandemic, the work world has irreversibly changed because of the pandemic. As a result of the move to work from home in response to the COVID-19 pandemic, many workers got a taste of virtual work who would have never before had that option. After experiencing many of the benefits to virtual work, many workers are pushing for the ability to continue working virtually, at least in some capacity (Kniffin et al., 2021; Owl Labs, 2020; Smith, 2021). Some of this push from virtual work is related to the

benefits of this type of work for the employee, while some of it stems from continued concerns about COVID-19 (Owl Labs, 2020).

How virtual work will continue in the future is unclear. Some companies may never go back to in-person work, some may choose a hybrid approach, while others may return to work as it was before the pandemic. Owl Labs (2020) reported that employees will expect that they can continue with a virtual work option to some extent and would be looking for this option when considering a new job. As a result, employers will need to balance carefully these expectations with their operational needs to optimize employee recruitment and retention.

The COVID-19 pandemic has provided an opportunity to reimagine how work is done. This includes rethinking how services are provided within education. Azorín (2020) pointed out that education professionals have taken the opportunity to connect and network with other professionals more because of the pandemic, and this trend is likely to continue. Now that workers have had the experience of participating in meetings and professional development remotely, this is likely to continue.

Summary

Virtual work is not new, but it has become more prominent in the last few years, especially since the COVID-19 pandemic. Virtual teams experience many opportunities and challenges that are unique to the virtual environment. As a result, members of virtual teams must be equipped with skills that will allow them to work effectively considering these conditions.

Likewise, virtual leaders must adapt their styles and behaviors to suit virtual work. While there is some debate in the literature about what style is best, transformational leadership, hierarchical leadership, and shared leadership all show some merit in their application with

virtual teams. A balanced approach, focusing not just on task-oriented leadership behaviors but also on relation-oriented leadership behaviors, is encouraged.

Since the virtual environment requires technology-mitigated work and communication, virtual teams and virtual leaders must take care to address some unique challenges, including building trust, preventing and responding to conflict, using technology, as well as facilitating effective communication. While there are many challenges, virtual work comes with many opportunities for employers and employees. Employers can save on office space, and benefit from more productive employees. Employees often enjoy virtual work because it provides some benefits compared to working in an office setting, including saving time and money on a commute as well as more flexibility in their workday.

Virtual work is here to stay; however, to what extent is uncertain. The COVID-19 pandemic gave many employees the opportunity to work from home who would not have otherwise had the chance. Even as some work has returned to an in-person format, most employees enjoy the benefits of virtual work and expect to be able to work from home in some capacity. Organizations will need to balance their operational needs with providing flexibility for their staff.

Understanding literature on virtual teams, virtual leadership, and the COVID-19 pandemic gives context as to why this study is needed and a basis for interpreting the findings. There is a call for more research to be done to understand better best practices for virtual leadership as well as more research on how the COVID-19 pandemic impacted leadership practices. In the next chapter, the methodology for this study will be outlined.

Chapter 3

Methodology

The purpose of this qualitative case study was to examine how student services leaders managed their virtual teams during the COVID-19 pandemic. By considering how these leaders changed their behaviors because of the move to a virtual work environment during the pandemic, the difference between leading virtual teams and in-person teams can be better understood.

Chapter 2 contained a literature review that highlights studies from the last 7 years related to virtual teams, virtual leadership, and virtual work during the COVID-19 pandemic as well as discussed what academics are saying about the future of virtual work. Although the studies presented covered a wide scope of topics, there was a clear call for more studies related to the COVID-19 pandemic and how teams and leaders adapted their work to the virtual environment. Furthermore, researchers recommended that additional research be done on virtual leadership in varied settings. This study focused on understanding virtual leadership in the postsecondary setting and gave context to the impact of the COVID-19 pandemic on teams that were required to work virtually for the first time.

This study focused on a midsized university in southwestern Ontario to explore how student services leaders there adjusted their leadership practices and behaviors because of the move to virtual work during the COVID-19 pandemic. As with almost all educational institutions, this university moved its instruction online in response to the March 2020 start of the COVID-19 pandemic. Since that time, it had been offering student services completely online or with a hybrid model. Guidance from the human resources department was offered along with a library of resources to leaders at the institution to support their work in the virtual environment.

This chapter outlines the methodology and design of the study used to address the research questions. Included is a description of the sample population, how data were collected and analyzed, as well as ethical considerations for the study. This case study addressed the following research questions:

- RQ1. How did leaders adapt their leadership practices during the COVID-19 pandemic to suit the virtual working environment?
- RQ2. How did leaders support their teams in the virtual working environment?
- RQ3. How did leaders' communication practices change to suit the virtual working environment?
- RQ4. How did leaders leverage technology in the virtual working environment?
- RQ5. How might leaders implement new practices they adopted in an in-person or hybrid working environment?

Description of the Methodology

This study utilized a qualitative approach. Merriam and Tisdell (2015) explained that qualitative researchers seek to understand how people interpret their experiences and construct their worlds using words for data rather than numbers (such as is used in quantitative research). Qualitative research should be used to understand a topic of interest from the perspective of the participants and not the researchers (Creswell & Creswell, 2018; Merriam & Tisdell, 2015). A qualitative approach was used for this study because the goal of this study was to understand how student services leaders at a university changed their behaviors to manage their teams in the virtual environment during the COVID-19 pandemic. The study was designed in a way to understand this topic from the perspective of the participants.

Qualitative research is the best approach when a study is conducted in a natural setting (Creswell & Creswell, 2018). In this study, the setting was a university in which virtual teams were being used to deliver student services during the COVID-19 pandemic. Studying this setting allowed information to be gathered from people who were naturally experiencing the issue being studied and gave insight into their experiences.

In a qualitative approach, the researcher is a key instrument (Creswell & Creswell, 2018; Merriam & Tisdell, 2015). Creswell and Creswell (2018) explained that when using a qualitative methodology, researchers collect data themselves by interacting with documents and participants and do their own interpretations. In this study, the researcher was solely responsible for performing the data collection and analysis. Merriam and Tisdell (2015) wrote that having the researcher as the instrument for data collection is ideal for these types of studies because they can be immediately responsive and adaptive. This might include clarifying and summarizing material, checking with participants for accuracy of information, or further exploring unusual and unexpected responses.

For qualitative research, Creswell and Creswell (2018) argued that research questions are used to help focus the study on learning deeply about a specific topic rather than using hypotheses such as in quantitative research. These authors suggested that research questions for qualitative studies are reflective of the study design. For case study design, they proposed that questions should give rise to a description of the case and themes related to it. For instance, they explained that questions that start with what or how are helpful for an open design that can lead to descriptive and explanatory responses from participants. For this study, the research questions used how in hopes of understanding more about the case being studied. In particular, the research

questions focused the study efforts on understanding how leaders adapted to the virtual environment during the COVID-19 pandemic as they became virtual leaders.

Design of the Study

This research study used a case study design. Yin (2018) wrote that case studies should be used when a researcher is looking to explain a contemporary social issue. They emphasized that case studies should seek to answer how or why questions and be used when an in-depth description of the issue is needed. Merriam and Tisdell (2015) highlighted that “the case” is the object to be studied and it must be a bounded system: “a single entity, a unit around which there are boundaries” (p. 38). They suggested this could be a person, a program, a group, an institution, a community, or a policy. In this study, the case considered was the student services division of a university in southwestern Ontario. Participants for the study were from within this bounded system.

Yin (2018) explained that for case study research design there are four tests to ensure the quality of the study: construct validity, internal validity, external validity, and reliability. The author suggested that to ensure construct validity, multiple sources of evidence should be used as well as to have key informants review the case study report. For this study, evidence was collected through interviews, questionnaire responses, and documentation. Yin stated that internal validity is not a necessary test for descriptive or exploratory studies and, therefore, it does not need to be considered for this study. According to Yin, external validity ensures that the findings from the case study can be generalized and that this can be addressed by having clear how and why research questions to support the theoretical proposition of the study. For this case, how research questions were developed to support the proposition: understanding how student service leaders changed their behaviors and practices in response to moving to the virtual

working environment since the beginning of the COVID-19 pandemic. Finally, Yin emphasized the need to ensure study reliability, which relates to being able to replicate the study with the same results. Yin proposed that this can be done by developing a case protocol and case database. This chapter outlined the protocol used and how a database was used to support the repeatability of this study.

Sample and Population

When using qualitative methodology, site and participation selection should be purposeful (Creswell & Creswell, 2018). For this study, student services leaders at a university were chosen to be participants because they lead teams that would have been providing in-person services prior to the COVID-19 pandemic that would have moved to the virtual environment because of the pandemic. This gave the researcher the opportunity to have access to a set of leaders within one bounded system so there could be quality data collection. Furthermore, this set of participants provided data to answer the research questions for the study, which were related to virtual team leadership.

The site for this study was a university in southwestern Ontario that serves approximately 20,000 students on multiple campuses. The university employed approximately 1,000 staff and 500 faculty. Of these staff, approximately 300 worked to deliver student services. Student services leaders were chosen from the managerial level or higher (manager, director, vice-president, etc.) to be participants in the study. Each leader chosen for the study oversaw a team that was providing student services at the university. For this study, the researcher contacted a gatekeeper to gain permission to approach prospective participants. In total, 68 leaders were invited to participate in the study.

Creswell and Creswell (2018) suggested that when recruiting participants, the researcher should provide information about the study so they can make an informed decision about whether they would like to participate. This information might include the benefits and risks of participation as well as how their personal information will be kept secure. For this study, the researcher emphasized how their information would be kept confidential and precautions would be taken to report information in a way to keep their identity anonymous. All data files were maintained for a maximum of 3 years, at which time they were deleted from cloud storage. Data were coded anonymously, not tying them to any names of participants.

Instrumentation and Data Collection

For a case study design, Yin (2018) emphasized that multiple sources of data are required. This is important so a rich description of the case setting, and the issue being studied, can be created. This study collected data from three major sources: a questionnaire, individual interviews, and varied documentation. Another principle of data collection highlighted by Yin is creating a case study database. This included data and evidentiary base as well as a researcher's report. Yin explained that this helps the researcher maintain a chain of evidence to support their findings. For this study, the researcher created a database to organize the documents collected as well as compiled notes created from the interviews and questionnaire responses.

Questionnaire

Mills et al. (2010) explained that questionnaires can be used for case study design to gather information through self-reports of participants. This could include information related to knowledge, beliefs, opinions, or attitudes about the issue being studied. These authors suggested that questionnaires are a helpful tool because they remove researcher bias (compared to during an interview), allow for participants to remain anonymous (which may increase participation),

and allow respondents as much time as they wish to answer the questions. Mills et al. emphasized that questionnaires should be used with participants who have sufficient knowledge about the topic as well as the necessary reading and writing skills to understand the questions and convey their thoughts.

In this study, the questionnaire included questions pertaining to the research questions of the study and was reviewed by a panel of experts before the study was conducted. The questionnaire gave participants the opportunity to share documents that supported their transition to leading in the virtual environment. Participants were prompted in the questionnaire to indicate whether they would be willing to participate in an interview. The questionnaire was facilitated through a web-based form with the questionnaire and resulting responses only being available to the researcher via a password-protected account. Responses were not associated with the identities of participants. Questionnaire questions can be found in Appendix A.

Interviews

Interviews can play a vital role in data collection for qualitative case studies. Merriam and Tisdell (2015) explained that interviews can be used to obtain a special kind of information and should be used to collect data about things that are not easily observed such as behaviors, feelings, or how people see the world around them. In addition, they emphasized that interviews would be helpful for past events that cannot be replicated. Yin (2018) argued that interviews are particularly helpful in getting information about the how and why questions of a case.

Interviews can vary in the amount of structure they have. Structure refers to the amount of flexibility built into the interview protocol, with highly structured interviews having standardized questions that are determined ahead of time (Merriam & Tisdell, 2015). Yin (2018) suggested that case study methodology should use interviews that resemble guided conversations

rather than highly structured interviews. For this study, because the research questions were focused on hows, a semistructured interview structure was used. Merriam and Tisdell (2015) highlighted that semistructured interviews include questions that incorporate opportunities to be flexible in the conversation, may require specific data from the respondents, and most of the interview is guided by a list of questions or issues to be explored.

For this study, the researcher conducted 10 interviews. Interviewees were leaders at the university in the student services division. Participants were interviewed once. Interviews focused on any leadership changes that had occurred since March 2020 when the COVID-19 pandemic began. The interview questions examined the experience participants had of leading a student services team that moved their work to the virtual environment because of the COVID-19 pandemic. Participants were asked to explain how their leadership behaviors and practices changed for virtual work as well as what strategies and behaviors they may carry forward to support a team that works in a hybrid format (some in-person work and some virtual work). The interview questions used can be found in Appendix B. Interview recordings and notes were stored electronically in cloud storage only available to the researcher. All interview files were to be maintained for a maximum of 3 years, at which time they will be deleted from cloud storage.

Documentation

Yin (2018) argued that our society has become highly dependent on record keeping, meaning that documentary information is relevant to every case study. They explained that documentation can include email, memoranda, letters, agendas, announcements, minutes of meetings, administrative documents, or any other record related to the case. Yin suggested that documentation should be used to corroborate and augment the evidence collected from other sources. For instance, it could help confirm spellings, titles, or organizational structure

mentioned in the interview or give more details about processes or procedures mentioned by participants.

This study included data collected from the examination of relevant documents pertaining to changes in leadership practices at the university. This included policy and process documents, resources, and communication (e.g., email, memos). These documents were collected from the human resources department via their employee portal or shared by participants with the researcher. This allowed for corroboration of reports from participants about how they changed their practices and behaviors when moving to the virtual work environment. All documentation was stored electronically in cloud storage that has been vetted for storage of sensitive information. Any documentation shared was to be maintained for a maximum of 3 years, at which time it would be deleted from cloud storage. Documentation was coded anonymously, not tying it to any names of participants.

Data Analysis Procedure

Yin (2018) explained that data analysis in case study research relies on the empirical thinking of the researcher rather than a fixed formula or process. They suggested that this thinking should be supported by sufficient evidence and by considering if any alternate interpretations may apply. More specifically, Yin highlighted a strategy that was used for this study: relying on theoretical propositions.

The researcher used the proposition this case study was designed on, including the research questions, to guide the analysis process. Data collected through interviews, a questionnaire, and documentation were searched and analyzed to determine how student services leaders at the university adapted their leadership practices and behaviors to respond to the move to the virtual environment. This analysis was guided by the research questions already

highlighted in this section. Based on the research questions, the researcher manipulated the data using some of the suggestions highlighted by Miles and Huberman (1994): putting information into different arrays based on themes and subthemes, tabulating the frequency of events, and putting information in chronological order or sequence. Specifically, a chart was used to organize data points into themes and subthemes. For example, a resource shared with the researcher from a participant about effective communication strategies with virtual teams was referenced in the chart under the theme “reimagining communication” and subtheme “modality”

Ethical Considerations

When conducting qualitative research and case study design, there are several ethical considerations. Creswell and Creswell (2018) emphasized picking a site that will allow for quality data collection not hampered by power dynamics or other sources of bias. The university chosen as the site of this study provided the opportunity for quality data collection because it did not have a vested interest in the outcome of the study and did not raise power issues with the researcher. In addition, Creswell and Creswell implored researchers to obtain local permission through gatekeepers. For this study, permission was gained through senior leadership and the researcher confirmed there were no further ethics approvals needed by the site to conduct the study.

Furthermore, participants shared how they changed their leadership behaviors in response to their teams moving to the virtual environment. This included sharing about their successes but also their failures in implementing leadership in the new environment. Some may see this as information that is potentially harmful if it is associated with a particular individual. Creswell and Creswell (2018) suggested that researchers avoid collecting harmful information and be mindful of how reporting and sharing data could harm participants. In this study, the researcher

was diligent to stick to the topic of research to avoid collecting unnecessary information that may be harmful. Furthermore, reports on the data focused on composite data to prevent individuals from being identified.

Last, informed consent was obtained from participants so they understood how their information would be used and stored as well as the risks and benefits of participating in the study. Data collected were stored electronically in cloud storage that was only available to the researcher. Participants were informed that all data files would be maintained for a maximum of 3 years, at which time they would be deleted from cloud storage.

Summary

This chapter details the methodology and design for this study, including an explanation of how the purpose and goals of the study were achieved. Using a qualitative case study approach, data collection and analysis allowed the researcher to investigate and respond to the research questions. The procedures used ensured that the research was carried out in an ethical way and supported the completion of a quality study.

Chapter 4

Results

The purpose of this case study was to explore how leaders changed their behaviors and practices as a result of moving to a virtual working environment because of the COVID-19 pandemic. Data collection occurred through three channels: an online questionnaire, interviews, and documentation. The participants in the study were leaders in student services at a university in southwestern Ontario. Documentation was collected from participants and from human resources staff at the study site. Four major themes emerged from the data: reimagining communication, reconstructing work using technology, reframing team support, and reorienting toward hybrid work. This chapter included a description of the participants and themes that emerged from the data analysis.

Participants

Twenty leaders participated in this study by completing an online questionnaire, and 10 went on to complete an interview with the researcher. Of the 20 participants, two were vice presidents, one was an associate vice president, six were directors, and 11 were managers.

The participants in this study were leaders of teams that delivered student services at a mid-sized university. Student services teams vary in the types of services they provide and as a result, the nature of their work can vary just as much. For example, some leaders had teams that prior to the pandemic provided in-person services to students while others provided services that were delivered mostly virtually. Likewise, the number of staff supervised by the leaders varied from one to 48. A summary of the participants is included in Table 1.

Table 1*Summary of Participants*

Participant number	Level of leadership	Number of staff supervised
1*	Manager	11
2*	Manager	7
3	Manager	15
4*	Manager	4
5	Vice President	9
6*	Associate Vice President	12
7	Manager	1
8*	Manager	4
9*	Director	25
10	Manager	10
11	Director	4
12	Manager	1
13	Director	42
14	Manager	20
15*	Director	9
16	Director	48

(continued)

Participant number	Level of leadership	Number of staff supervised
17*	Manager	8
18*	Vice President	7
19*	Director	2
20	Manager	5

* Leaders who participated in an interview

Questionnaire

A questionnaire was facilitated through a web-based form. The questionnaire questions can be found in Appendix A. Of those invited, 20 student services leaders completed the questionnaire. At the end of the questionnaire, participants were asked if they were willing to do an interview with the researcher.

Interviews

Ten interviews were conducted that were 30 to 60 minutes in length. One was conducted via phone, and nine were conducted virtually. The interview questions used can be found in Appendix B. Interview transcripts were generated for analysis.

Documentation

Documentation was collected from the human resources department at the university that was the study site as well as from participants. In total, there were 55 documents collected, some were duplicates (i.e., more than one participant shared the same document). Documents collected included webinars, websites, handbooks, and technology guidelines produced by the university, university staff, mental health organizations, business organizations, and business experts.

Triangulation

To support the triangulation of data, multiple sources of data were analyzed, including questionnaire responses, interview transcripts, and documentation. A template analytic technique (Crabtree & Miller, 1999) was used: codes generated with one data source were then applied to the remaining data sources to identify additional data points. Fereday and Muir-Cochrane (2006) emphasize that the preliminary codes guide the analysis of the data but do not limit the identification of new codes as needed. After all data were coded, codes were connected to identify themes and patterns in the data (Crabtree & Miller, 1999).

First, codes were generated from the interview data using the method described by Merriam and Tisdell (2015). According to these authors, coding refers to the system that a researcher applies to track and catalogue documents or process other types of data (e.g., questionnaire responses or interview transcripts) to find themes. The authors suggested researchers add annotations to the data that then could be grouped into themes. A process referred to as open coding was applied first to the interview data, as described by Merriam and Tisdell (2015), which allows the researcher to formulate meaning from individual experiences moving to broad concepts related to the study. Next, codes generated from the interview transcripts were applied to the questionnaire responses and documentation to generate additional data points. No new codes were generated from the questionnaire responses or documentation. Data points were organized into a table to allow for themes to be identified. Table 2 shows the codes that were used to identify themes within the data.

Table 2

Themes and Codes

Theme	Code
Theme 1: Reimagining communication	Meetings
	Modality
	Strategy
	Communication work conventions
Theme 2: Reconstructing work using technology	Technical skills
	Work tools
	Services
Theme 3: Reframing team support	Well-being
	Flexibility
	Team building
	Modelling
Theme 4: Reorienting toward hybrid work	Benefits
	Continued strategies
	Challenges
	Unknown

Results

The following research questions guided this study: How did leaders adapt their leadership practices during the COVID-19 pandemic to suit the virtual working environment?

How did leaders support their teams in the virtual working environment? How did leaders’ communication practices change to suit the virtual working environment? How did leaders leverage technology in the virtual working environment? How might leaders implement new practices they adopted in an in-person or hybrid working environment? The data collection performed for this study resulted in an abundance of information related to these questions. Based on the analysis of the data collected, major themes were identified and are discussed in this section. The themes were found in all three data types, which gave confirmation of the analysis through triangulation. Table 3 shows the themes identified and the data sources from which they were drawn.

Table 3

Themes and Supporting Data Sources

	Sources of data		
	Q	I	D
Theme	<i>n</i> = 20	<i>n</i> = 10	<i>n</i> = 55
Theme 1: Reimagining communication			
The number of meetings initially increased, then a scheduled meeting pattern was set	12	8	6
Meeting dynamics changed including the role of chair	6	6	4
Use of one-to-one meetings	11	5	0
Modality of communication changed	20	10	5
Strategic communications	7	8	6

(continued)

Theme	Sources of data		
	Q <i>n</i> = 20	I <i>n</i> = 10	D <i>n</i> = 55
Communication work conventions and boundaries	7	10	12
Theme 2: Reconstructing work using technology			
Improving technical skills	0	9	7
Making processes virtual	20	10	12
Offering services virtually	6	9	4
Using institutional tools	20	10	5
Collaborating with cloud-based solutions	20	9	3
Equipping staff with equipment	0	6	5
Theme 3: Reframing team support			
Increased focus on the mental health and well-being of staff	3	10	11
Providing flexibility as a way to support team	7	10	4
Changes in team building and socialization	10	9	12
Modelling behaviors that support well-being, effective work	1	8	3
Pandemic-related personal issues	4	9	4
Theme 4: Reorienting toward hybrid work			
Benefits of hybrid work	18	10	25

(continued)

	Sources of data		
	Q	I	D
Theme	<i>n</i> = 20	<i>n</i> = 10	<i>n</i> = 55
Strategies that will carry forward to hybrid work: team support, flexibility, varied meeting schedule	18	10	27
Challenges of hybrid work: best practices, equity	0	10	27
Unknown of how hybrid work will be utilized	0	9	9

Note: Q = questionnaire; I = interview; D = documentation

Theme 1: Reimagining Communication

The student services leaders who participated in this study clearly expressed several changes in how they communicated with their team because of moving to the virtual working environment. While working in person, they often communicated through virtual means, but face-to-face communication was also possible. After March 2020 and the pivot to virtual work, all communication was mitigated by technology. Since only virtual communication was possible, leaders shared that their communication practices had to be adapted.

The modality of communication inherently changed for leaders when their work moved to the virtual environment. No longer were they able to walk down the hall to talk to someone or quickly have a private chat after a group meeting. Virtual work meant that leaders could communicate with their staff only through computer-mediated methods: email, text-based chat, or virtual call (video or voice). Leaders in this study reported that because of these reasons they needed to rethink how they communicated with their teams.

Before March 2020, leaders reported via the questionnaire that most of their communication was taking place through in-person meetings (formal), in-person conversations

(informal), telephone, and email. In comparison, after transitioning to the virtual work environment, communication took place mostly through video calls (both scheduled and impromptu), email, and computer-based text messaging (for communicating with the whole team and individual staff). As a result of this shift, all leaders shared that they needed to reconsider which modality lent itself best to the different types of communication needed for their team to conduct its work. For instance, two leaders shared that while working in person they would often compile a list of issues to “save them up” for discussion at a scheduled meeting. However, in the virtual environment, they would often deal with small issues immediately through text-based chats that offered a much quicker resolution. Alternatively, one leader spoke of how email used to be used more informally when their teams worked in person for quick messages, but since moving to virtual work, email is often reserved for more formal communications while text-based chat is used for those informal conversations.

Eight out of 10 leaders interviewed discussed that the number of meetings they had with their team increased at the outset of the move to the virtual working environment. They shared that this was, in part, to address issues related to the COVID-19 pandemic and the information sharing that needed to occur as well as intense work needed to shift their service delivery to a virtual format. Furthermore, since teams were not accustomed to this type of work modality, the leaders reported that their teams needed this type of touchpoint while they settled into their new working environment. Several leaders also highlighted that they started scheduling one-on-one meetings with their team members to ensure their individual needs were being met. Five out of 10 leaders mentioned this during their interviews, and 11 out of 20 questionnaire respondents identified using this strategy. One leader commented that these one-to-ones were a way to replace informal conversations that would often occur in the hallway when the team was working

in person. Another leader recognized that a higher number of meetings felt necessary because of the lack of social exchanges that would often double as work conversations. As time went on, these leaders described a gradual decrease in the number of meetings. They shared that this was because the team formed new habits about communicating in new modalities (e.g., computer-based text chats) as well as an intentional decrease as a result of what has been termed Zoom fatigue. According to the participants, Zoom fatigue refers to the fatigue some experience from taking part in many video-based meetings. They shared staff found the increased screen time more mentally and physically draining than face-to-face meetings.

Meeting dynamics was another change that leaders reported they had to navigate in the move from in-person to virtual work. Six leaders indicated this was an issue in their questionnaire responses and six leaders discussed this in their interviews. One leader highlighted that the role of the meeting chair had to be adapted. More specifically, for in-person meetings, a meeting chair was needed, for a virtual meeting, it was often helpful to have a chair and a moderator. The moderator would monitor the meeting chat for points and questions to add to the conversation, share links or information in the chat, and help resolve technical issues so the chair could focus on facilitating the meeting agenda. Likewise, the meeting chair needed to consider more about how to keep participants engaged. Two leaders mentioned the temptation to multitask when participating in virtual meetings made it important to keep the agenda moving and be creative about how to include all participants. One leader commented that they would try to incorporate virtual meeting tools such as polls to keep their team engaged.

Many leaders shared that the shift in communication practices caused them to experience new challenges with setting boundaries with their work and communication with their teams (10 out of 10 leaders discussed this in their interviews, seven included this issue in the questionnaire

responses). For example, multiple leaders alluded to answering email or messages after their usual working hours, while others mentioned that for a time, they felt that they always had to be available. All leaders shared how they utilized a set of work conventions to ensure that communication expectations were realistic. Eight leaders reported using work conventions sent out by human resources while two others reported that they set their own conventions for their teams. For instance, do not send email outside of work hours, and no multitasking during meetings. A few leaders recognized that for some, this would require increased self-regulation skills when compared to in-person work.

Leaders also shared that text-based communication posed new challenges and opportunities for them and their teams. One leader shared the opportunity to incorporate humor in their conversations by using GIFs and emojis. Two other leaders discussed in their interviews that they honed their written communication skills in response to the increased written communication. One leader shared that their verbal communication was often verbose and written communication required them to be more concise.

Eight leaders discussed in their interviews that when their team moved virtual, communication modality was varied and inconsistent because the staff was just using it organically without guidelines or structure. Seven leaders discussed the need for strategic communication in their questionnaire responses. For example, one leader described how their staff would send email and then a computer-mediated message to confirm if the email was received. Another example was some staff using Zoom video meetings while others were using Microsoft Teams. To address these issues, two leaders explained that they produced a communications strategy for their team. Once this was implemented, they said it resolved the issues they were experiencing. On the other hand, four leaders mentioned that they felt their team

organically developed their communication strategy, which was then clarified through the work conventions suggested by human resources.

Theme 2: Reconstructing Work Using Technology

In March 2020, when staff at the university started to work virtually, all leaders explained a predominant concern was ensuring that their work could be conducted virtually and their services delivered virtually. First, leaders shared that any paper-based processes related to their services had to be made virtual. Furthermore, they needed to determine how to connect with their student populations virtually.

Eight leaders mentioned in their interviews that their teams were already working on making their work and processes more virtual before the pandemic, but they varied in how much they had progressed on this. Four leaders described in their interviews being able to transition seamlessly because they already used an online-based tool for tracking or as a database. Four commented that they were just starting to learn about some of the institution's web-based tools before the shift to virtual work and this shift simply sped up their adoption of it.

Six leaders who participated in an interview spoke about equipping their staffs with the resources they needed to do their work virtually. This included equipment such as laptops, computer screens, headsets, and office chairs. Likewise, some software was adopted by the institution or individual teams to support their virtual work. For example, the institution purchased a Zoom license for teaching and workshops as well as an electronic signature application.

Doing work virtually changed some of the nuances of the workflow and the use of institutional tools. For instance, leaders (nine out of 10 interviewed and all who completed the questionnaire) shared that they were using collaborative documents more in cloud-based versions

of Office 365. One leader shared that they felt this allowed for more transparency and iteration when compared to their practices before the pandemic. This means when working together on a document, rather than sending versions of the document back and forth as an email attachment, staff can all work on a cloud-based document (in this case, the institution supports the online version of Word based in the Microsoft Office 365 suite of applications) that is updated in real time and can tag and notify users when their feedback is requested from another user. Three leaders also commented how using cloud-based documents and files increased transparency among the teams since it became the expectation that most documents would be accessible to everyone on the team.

Similarly, how services were delivered was adapted to the virtual environment. Leaders shared that they had to determine how best to connect with students as well as produce creative ways to engage with students in place of in-person events. Nine leaders who completed an interview and six who completed the questionnaire referred to this issue. To replace in-person meetings with students, all service areas offered video call meetings, most offered audio virtual calls (i.e., a video call without the video turned on) and few offered phone meetings. Three leaders shared how their teams developed courses to enroll students in the institution's learning management system to provide them with information that they would usually access through an in-person event or resources they would usually access in hard copy when visiting their on-campus spaces. Leaders shared how they tried to mimic how students traditionally used their services in the virtual environment. For example, drop-in times were offered by some through video meetings (i.e., a link to the meeting was shared with students so they could join when needed) or through computer-mediated chat.

Nine out of 10 leaders who participating in an interview described how they gained and improved their technical skills to work in the virtual environment. Most of these were related to conducting work virtually, including speaking on camera, chairing and participating in a virtual meeting, using cloud-based Microsoft 365 applications (most common were Teams, OneDrive, and SharePoint), and using the university's virtual private network. In addition, half of leaders who participated in an interview spoke of having to help their staff troubleshoot technical issues and point them to resources on how to use new tools. One leader described their experience as, "learning on the fly."

Theme 3: Reframing Team Support

From an analysis of the data, it was clear that for student services teams, the move to virtual work cannot be separated from the COVID-19 pandemic experience. According to the leaders in this study, the impact of the pandemic on leaders and their teams was intertwined with the challenges that also came with the migration to the virtual work environment. As a result, some of the challenges of team support were magnified by the experiences staff were having related to the pandemic. This included additional childcare and child schooling needs, having many people in the home during work hours (leading to distractions and more demand on Internet connection quality), stress that was related to pandemic-related concerns, isolation, and increased work demands related to the pandemic response.

One change after the move to the virtual environment that leaders described was an increased focus on supporting their team's well-being and mental health. Every leader who participated in an interview discussed this, and three mentioned this issue in their questionnaire responses. They shared that an increased workload related to moving work to a virtual format as well as pandemic-related stressors created a noticeable need within their teams. From the

resources and links provided by human resources to leaders related to virtual and hybrid work, 46 of them referred to supporting their staff's mental health and well-being. One leader shared how their experiences affirmed their use of an empathetic leadership approach. They explained that using this leadership style required them to consider their staff as complex people for whom work is only one aspect of their lives and how much staff members' overall well-being can impact their ability to do their work effectively. Leaders described an empathetic approach that included meeting one-on-one with their staff, connecting with them more informally (e.g., asking what is going on in their lives outside of work), making sure their workload was manageable, and troubleshooting any work problems. These meetings would allow them to consider what practical ways they could support this person's well-being. Similarly, one leader emphasized the importance of asking about and listening to the needs of their team and staff. They explained that in their experience, other leaders made assumptions about what their staff needed and ended up implementing strategies that were not effective.

Likewise, leaders shared an increased need to affirm the efforts of the team as a whole but also each individual. Since stress was often high, leaders talked about how they felt extra encouragement was needed to keep up team morale. One leader shared how they started the practice of doing "kudos" at the beginning of each team meeting where any team member could share how a teammate had done excellent work recently.

Leaders frequently used flexibility to support their team. Every leader who completed an interview referred to this strategy, as did seven who completed the questionnaire. Sometimes this flexibility was to respond to their staff's home situation (e.g., flexing hours of work to allow for childcare). Other times, flexibility was in response to staff's preferences to support their well-being. One leader spoke about how they relied on their emotional-intelligence skills because

there were times when their staff was not sure what it needed and the leader would have to make suggestions. They shared that to utilize this approach, they increased their contact with staff so they could stay in tune with their staff's needs. Leaders discussed the varied needs of their staff as a result of different circumstances in their personal lives. For instance, some staff would have challenges related to childcare while others who lived alone may have been experiencing challenges related to isolation and loneliness. Some other strategies used to support team well-being through flexibility were meeting-free days, walking meetings (i.e., staff call into the meeting with audio-only from a mobile device so they can walk while they participate), no email sent after working hours, encouraging staff to use personal or sick days to attend to their mental health, or suggesting staff end their days early to do self-care activities.

Team building and socializing changed considering the move to virtual work. This issue was discussed in nine interviews and 10 questionnaire responses. Overall, these leaders described that there was much less team socializing and team building in the virtual work environment. In response, human resources made resources and suggestions available about how leaders could engage their team in team building and socializing virtually. However, leaders shared that they found that the virtual environment does not lend itself well to socialization. Some leaders tried new techniques such as coffee breaks, using gaming platforms (e.g., Kahoots), and virtual celebrations (e.g., retirement, baby shower), but the interest and uptake was often poor. There was a consensus that most group socializing does not translate well to the virtual environment. Leaders identified that Zoom fatigue was also a factor in difficulty with team building and socializing. They explained that staff already spent a significant amount of time doing video calls and would often opt out of virtual social activities if given the option.

One of the important ways leaders identified they could support their team was by modelling the behaviors they wanted to encourage their staff to have. Eight leaders identified that this was important in their interviews and one in their questionnaire response. For example, if the leader was encouraging their staff to take time to do self-care activities during the day, they should be doing that as well. Another example mentioned by participants was in regard to not sending email after regular hours. A few leaders mentioned that they had to be intentional to practice this work convention because they found that if they did not, their staffs were likely to feel that they needed to put in longer hours to match their leader.

Theme 4: Reorienting Toward Hybrid Work

All leaders who were interviewed and 18 out of 20 who completed the questionnaire indicated that their teams would be moving forward with a hybrid approach to work for their team. While three leaders indicated that their services would return to completely in-person in the questionnaire, they indicated in their comments that they would continue to allow their staff to work virtually when possible. There were some differences in how different leaders envision the divide between virtual work and in-person work. Differences were related to service delivery needs, the desire for giving their staff as much flexibility as possible, as well as concerns about equity across their units and the institution. At the time the study was conducted, an institutional policy related to what they termed “flexible work” governed how many days per week employees were required to work in person. There was consensus among study participants that they would like more control over determining what was feasible and best for their teams.

All leaders who participated in an interview discussed some benefits of working virtually that they felt could be maintained by supporting a hybrid work approach. One benefit of working remotely that can continue with hybrid work is the connection between the different campuses.

In the past, leaders shared that meetings held with staff from both campuses were infrequent and time-consuming because of travel time and costs. In comparison, while working virtually, multicampus teams worked together seamlessly. In a hybrid environment, multicampus teams will be able to stay connected and provide support to each other. Another benefit shared by participants was improved meeting quality for multicampus teams. Before the pandemic, staff on the smaller campus would often join multicampus meetings via phone or video conference (only available in certain rooms) and often reported a poor-quality connection and difficulty participating. Four of these leaders shared that they will continue to have large team meetings virtually to allow employees from both campuses to attend. Likewise, leaders shared that most services offered to students virtually will continue to be available to students on both campuses compared to prepandemic when only in-person services were offered.

Leaders shared that their teams would continue to do their work as virtually as possible, regardless of whether they are working in person or remotely. For example, paper-based processes that were moved to a virtual format will remain virtual. Leaders also spoke that their hybrid work approach will continue to rely heavily on video meetings, computer-based text messaging, and cloud-based file sharing and applications. They felt that these virtual work tools allowed their teams to be more efficient and will continue to allow staff to transition quickly from in-person work to virtual work as needed.

When discussing hybrid work, leaders identified that they would continue with several of the team support strategies that they had implemented while working virtually. Specifically, they spoke about continuing one-on-one check-ins with their staff to ensure their well-being, check on their workload, and answer questions. Leaders identified that these would continue to be

essential because both leaders and staff may be working in a hybrid format and, as a result, they may not happen upon each other in the halls as when they were working completely in person.

In addition, eight leaders who participated in an interview indicated they would like to continue to offer their staffs the same type of flexibility in the schedule as they did in the pandemic. This might include allowing them to flex their hours to tend to their children's needs (e.g., pick up from school) or do part of their day in person and another part virtually.

Another aspect that leaders identified they would like to carry forward is the varied meeting schedules. As noted previously, at the outset of the pandemic teams were participating in a large volume of meetings but then eventually most petered out to a more consistent schedule. Leaders shared that they would like to continue a meeting schedule that provided some variation to keep the team connected but not overwhelm them. For instance, a team could meet as a large group every other week and one-on-one with their leader on the other weeks.

Still, some challenges remain from the pandemic experience that will impact the future of hybrid work. All leaders who did an interview discussed this issue. Two leaders shared that some in their staff identified fears about potential exposure to COVID-19 while working in person. Leaders shared that they may need to be flexible to respond not only to public health guidance and university policies regarding COVID-19, but also to what their staffs are experiencing as well.

Another challenge identified by the participants was related to how to conduct meetings. Some reported that they plan to have days where all their team are in person and then have large meetings on those days. Others suggested they would do larger meetings virtually to make it an equitable experience regardless of which staff were in person and which were working remotely

on a given day. Likewise, others suggest they would do one-on-ones in person only while others did not identify this as a priority.

How to promote simultaneously equity and flexibility in a hybrid team was a challenge that leaders shared they were still working out. At the time of the study, the institution was piloting a policy related to flexible work that put limits on leaders' abilities to have their staffs work virtually. Many identified that if, in the future, they were not governed by this policy, they would be willing to provide more flexibility to their team to work virtually when appropriate. Leaders highlighted the need to evaluate service needs and team needs to determine how often, if at all, staff needed to be working in person. They also identified that what flexibility was implemented could depend on the staff's personal circumstances, since this might impact their preferences for hours of work or days in person. Five leaders also spoke about equity in a hybrid environment and recognized virtual work would not be equal for everyone. More specifically, how much virtual work may be possible for different staff and different teams would vary based on several factors (e.g., service needs, staff's personal circumstances). They recognized that this might make some staff (who want to work more virtually but their job functions or team situation will not allow for it) unhappy, but that this would be a necessary challenge to navigate.

Three leaders spoke about the need to continue to develop indicators or best practices to ensure team effectiveness in a virtual or hybrid team. These leaders spoke about a prepandemic culture where if you were in the office, you were presumed to be working. While two leaders challenged this notion, one leader was concerned about how to balance employee wellness and employee preferences while ensuring productivity.

Nine out of 10 leaders who participated in an interview discussed unknowns related to the future of hybrid work. They identified that they were "learning on the fly," or figuring out what

practices worked by trial and error. In other words, they had no training and little support in determining how to lead in the virtual environment. Leaders also suggested they could use additional training on best practices for measuring virtual team effectiveness, training staff to work virtually, as well as how to support their staff's well-being when working virtually.

Summary

This qualitative case study included data gathered from a questionnaire, interviews, and documentation. Of the 20 participants, all completed the questionnaire and 10 completed an interview. The data analysis, which consisted of coding and triangulation, resulted in the identification of four themes that addressed the research questions that guided the study: reimagining communication, reconstructing work using technology, reframing team support, and reorienting toward hybrid work.

Chapter 5 included conclusions to address each of the research questions, a discussion, as well as recommendations for virtual leaders. Practical implications of the research were discussed and ideas for future research were outlined.

Chapter 5

Conclusions, Discussion, and Recommendations

This chapter consisted of four sections: Conclusions, Discussion, Recommendations, and Summary. The purpose was to provide a discussion of the study findings in the context of the literature and research question as well as to make recommendations of areas for further research.

Summary of the Study

The purpose of this qualitative study was to examine how student services leaders adapted their leadership behaviors when they moved to the virtual work environment during the COVID-19 pandemic. The study addressed gaps in the literature related to virtual teams, virtual leadership, and leadership during the COVID-19 pandemic. The belief that work in higher education and other settings would never go back to being completely in person meant that understanding effective leadership practices for virtual and hybrid teams could be helpful for leaders in the future.

Chapter 2 provided a review of the literature about virtual teams, virtual leadership, leadership during the COVID-19 pandemic, and the future of virtual work. Virtual teams have unique experiences related to working in the virtual environment. In particular, they may experience challenges related to trust, conflict, communication, and using technology. Similarly, virtual leadership is nuanced when compared to the leadership of in-person teams. Virtual leaders should focus on balancing task-oriented and relation-oriented leadership behaviors to support their teams. Employers and employees have reported benefits of working virtually, including financial benefits and improved employee well-being. As a result, there is interest in

maintaining virtual work options for workers in the future, but to what extent (e.g., completely virtual or hybrid) has yet to be determined in many organizations.

The methodology of this study was outlined in Chapter 3. A case study approach was used to address the research questions that were designed to understand how student service leaders changed their behaviors and practices in response to moving to the virtual working environment since the beginning of the COVID-19 pandemic. A questionnaire, interviews, and documentation were used to collect data. The questionnaire questions can be found in Appendix A and the interview questions can be found in Appendix B. The participants were student services leaders at a university in southwestern Ontario.

Chapter 4 outlined the findings of the study. Data collected from a questionnaire, interviews, and documentation were analyzed using coding and triangulation. There were 20 participants, all of whom completed the questionnaire and 10 of whom participated in an interview. Participants included managers, directors, an associate vice president, and vice presidents. Four themes were found: reimagining communication, reconstructing work using technology, reframing team support, and reorienting toward hybrid work.

This chapter includes the conclusions that emerged from the data, a discussion of the results, and recommendations for future research.

Conclusions

Based on this study, student services leaders adapted their practices and behaviors when their teams shifted to the virtual working environment during the COVID-19 pandemic. Through analysis of the data collected, conclusions were drawn from each of the research questions identified at the outset of the study.

Conclusions to Research Question 1

How did leaders adapt their leadership practices during the COVID-19 pandemic to suit the virtual working environment? Some of the changes in leadership practices were highlighted in the themes identified in the data. These changes were made to suit the virtual working environment but also were a response to needs related to the pandemic. Leaders shared that they changed how they utilized technology, communicated with their teams, and supported their teams. More about these changes are described in the conclusions to the other research questions.

Seven leaders did not report a change in their leadership style; however, half of those who participated in an interview shared that leading during the pandemic while their teams were working from home required a heightened level of empathy. Having an empathetic leadership approach meant that they were intentional about evaluating the needs of their staff (including job-related and personal needs that intersected with their ability to work because of the pandemic) and offering flexible solutions such as adjusting work hours or responsibilities.

Conclusions to Research Question 2

How did leaders support their teams in the virtual working environment? Leaders who participated in this study led teams that moved to the virtual working environment because of the COVID-19 pandemic. Leaders shared that they needed to support their teams concerning virtual work and pandemic-related issues.

More than half of leaders shared that they supported their team through increased one-on-one engagement to ensure they could evaluate their staff's mental health and well-being and to provide them with resources and information needed for their virtual work. These connections allowed leaders to be intentional about working with staff on solutions and providing staff with attention.

Team support also focused on team building and socialization. The majority of leaders shared that there was much less naturally occurring team socialization and team building in the virtual work environment and that, despite their efforts, it continued to be challenging.

Conclusions to Research Question 3

How did leaders' communication practices change to suit the virtual working environment? When leaders in this study moved their teams to the virtual working environment, all communication was mitigated by technology, including email, text-based chat, or virtual calls (video or voice). It is this change in modality that led to a shift in communication practices.

As leaders adapted to the new modality, more than half of them increased the number of meetings they had with their team to deliver vital information, answer questions, and support team morale. While this met the short-term needs of the team, staff found that the number of meetings was excessive and reported Zoom fatigue. As a result, these leaders choose to reduce the number of meetings and follow a meeting schedule that varied (e.g., whole team, subteams, one-on-ones) in hopes of keeping team engagement high. Leaders also changed the way they chaired meetings. They shared that the dynamics of virtual meetings required more organization to keep participants engaged and to monitor multiple avenues of communication (e.g., the speaker and comments in the chat).

Technology-mitigated communication made leaders more readily available for communication compared to when student services teams were working in person. As a result, leaders found that they needed to set boundaries and provide guidelines to their teams around communication to clarify reasonable expectations. All leaders who participated in an interview reported adopting some sort of work conventions to provide boundaries. Leaders shared that they

always had to be available and adding structure helped them compartmentalize their work and home lives.

The modalities used for communication shifted because of the move to virtual work. Questions or directives that might have been previously saved for a meeting were often dealt with quickly through computer-based text chats. Likewise, leaders found that strategizing team communication was necessary. By outlining what modality would be used for specific types of information, clarity and efficiency were improved.

Finally, leaders shared that they grew their communication skills in response to the shift to virtual work. They honed their writing skills because of an increase in text-based communication and some engaged their team through features of computer-based messaging such as GIFs and emojis.

Conclusions to Research Question 4

How did leaders leverage technology in the virtual working environment? The majority of leaders shared how they needed to improve their technical skills when they moved to the virtual working environment. This was necessary for them to do their own work as well as help staff improve their technical skills.

In the virtual working environment, all leaders made their team's work exclusively paperless. Institutional tools such as Office 365 and ConsignO were used to make workflows virtual and more efficient. Using these tools allowed for files to be accessed and shared easily, encouraged transparency of information, and promoted productive collaboration.

Technology was also used by all leaders to connect with and support their teams. Virtual meeting platforms were used to mimic several types of interactions that would have traditionally been held in person. This includes team meetings, one-on-ones, social events, and impromptu

conversations. Likewise, some leaders used other technology to promote socialization and team building (e.g., online gaming platforms such as Kahoots).

Leaders also used technology to connect with the students their teams served. All teams used institutional tools such as Microsoft Teams and Zoom to hold meetings and events.

Likewise, three teams reported utilizing the institution's learning management system to house courses that offered information to students that they would have accessed in person. Finally, three teams offered drop-in times through video meeting platforms.

Conclusions to Research Question 5

How might leaders implement new practices they adopted in an in-person or hybrid working environment? There were several practices that leaders started using in the virtual working environment that they enthusiastically reported will be maintained whether their teams are working in person, hybrid, or virtual. Specifically, maintaining a strong multicampus connection would continue to be possible and prioritized. They shared this could be maintained by continuing virtual meetings so that staff in separate locations could participate. Likewise, student service programming that could be delivered virtually could continue to be offered to students at all campuses.

Leaders also highlighted efficiencies that were discovered when they moved some of their work processes to a virtual modality from paper based. There was no indication that any paper-based processes would be resumed in the future. Likewise, leaders identified that they will continue to use virtual communication in place of in-person communication for most task-oriented issues.

Some practices adopted in the virtual environment related to meetings will be implemented in the hybrid and in-person environments. The implementation of one-on-one

meetings with staff was a practice that leaders identified they would continue. Two leaders shared that they would adapt this practice by prioritizing that these meetings would take place in person in hopes of enhancing the personal connection with their staff. For relational-oriented issues, many leaders identified that they would prefer in-person connections. Similarly, leaders reported that they would be continuing with a varied meeting schedule (e.g., alternating team meetings with subteam meetings and one-on-one meetings).

Discussion

This study provided insight into how leaders responded to moving their teams to the virtual working environment. It provided the opportunity to investigate how they changed their behaviors and practices to suit the new work modality. Although each leader shared a unique approach to their leadership, themes about what changes needed to be made were apparent.

Leaders shared that their communication practices changed when working virtually. These changes align with what other researchers found in their studies. Pullan (2016) argued that virtual teams are impacted by fewer opportunities for informal conversations and, as a result, need to be intentional about communication with their team. The leaders reported several strategies they used to create possibilities for informal conversations with their teams, including coffee times and one-on-one meetings.

Friedrich (2017), Grzeskowiak (2020), and DuFrene and Lehman (2016) highlighted the need for leaders to be thoughtful in how they are communicating with their teams, including frequency and modality. Virtual leaders in this study shared that they had more effective communication with their team once they developed and implemented a strategic communication to address how and how much their teams would communicate. Specifically, they discussed that they found at the outset of the switch to the virtual working environment, a high volume of

communication was necessary to address pandemic-related issues, but that, over time, it became excessive. Eight out of 10 leaders who completed an interview discussed that in response they intentionally created a strategy for how their team would communicate within their team and with students. Similarly, because of feedback from staff, human resources created work conventions resources that were adopted by many teams to guide their communication practices. Communication strategies that leaders found were effective included standardizing what modality to use for what type of information (e.g., having different chat streams in Microsoft Teams for social chat versus work chat; using email for nonurgent issues; using email for interdepartment issues), agreeing on the timing of email (e.g., no email outside of usual work hours), and outlining appropriate response times.

DuFrene and Lehman (2016) suggested that virtual teams use cloud-based documents to improve collaboration within their team. All leaders in this study reported using cloud-based documents. About half of leaders who participated in an interview shared that their teams were expected to use cloud-based documents to improve transparency and collaboration.

Bartsch et al. (2020) found that during the COVID-19 pandemic, successful leaders balanced task-oriented and relational-oriented behaviors to support their teams. Likewise, leaders in this study focused on how to support their teams with their work tasks as well as their well-being. What is not clear in either of these studies is whether relational-oriented behavior or, in the case of this study, supporting the team's well-being, was needed because of working virtually or because of issues related to the pandemic.

In the study findings, ways that leaders supported their teams in changing the way they conducted their work to suit the virtual environment were highlighted. These findings are nuanced when compared to the literature, likely because of the unique circumstance that led to

the transition from in-person work to work for the leaders in this study (i.e., the COVID-19 pandemic). Whereas previous studies focused on teams that were always virtual (i.e., they did not undergo a transition), this study looked at teams that were changing their work modality. Specifically, several team support strategies were related to supporting workers who had additional personal challenges because of the pandemic, including childcare, sharing Internet connection with others in the house, or isolation.

It was reported in prior studies that most workers wanted to continue to work virtually in some capacity (Kniffin et al., 2021; Owl Labs, 2020; Smith, 2021). Similarly, all leaders in this study shared that their teams wanted to continue to work virtually as much as possible and enjoyed the flexibility to work from home. How much virtual work would be allowed for hybrid workers is still unclear. The participants in this study discussed how different units in the institution were piloting different approaches and human resources were piloting a policy that was to be reviewed after a year.

There is agreement within the literature that leaders would benefit from specialized training to address leadership in virtual and hybrid environments (Alward & Phelps, 2019; Darics, 2017; Friedrich, 2017; Gamero et al., 2021; Purvanova et al., 2020). Researchers such as Gamero et al. (2021) and Darics (2017) suggested that training be focused on communication, and leaders in this study also identified this as a need.

When considering student services, leaders recognized that the amount of virtual work offered to staff is highly dependent on the services they offer and student preferences about how services are delivered. One leader discussed how the feedback they had been getting from students was that there were positives to both in-person and virtual services and events. They shared students felt that virtual offerings were more convenient and in-person provided a better

opportunity for connection. Three leaders also pointed out that the modality of events and services will be impacted by student preference. Many students have indicated they prefer workshops virtually, but social events in person. Ultimately, how services are delivered will be determined by students and, in turn, that will dictate the modality staff can work.

Leaders in this study included managers, directors, vice presidents, and an associate vice president. While managers were supervising nonleaders, directors, vice presidents, and associate vice presidents were supervising predominantly other leaders. Although these leadership roles vary, the responses from the study participants were similar and not correlated to their leadership level. In other words, the four themes identified were found in the responses of each leadership level and participants identified similar challenges related to virtual work and reported using similar strategies.

Limitations

While the purpose of this study was to understand better virtual leadership, the findings may not just be related to leadership in the virtual working environment but also could be impacted by how leaders responded to the COVID-19 pandemic. While this does not invalidate the findings, further research should be done to confirm what was found in this study.

Data collection for this study was conducted almost 2 years after the start of the COVID-19 pandemic in March 2020. In this study, participants had to recall their experiences from the beginning of the pandemic to share about changes in their leadership practices and behaviors. Significant time passage between an event and data collection can impact the quality of the results. An appropriate number of participants and triangulation of data can help offset these concerns, both of which were used for this study.

Finally, this study used a case study approach with one site: a university in southwestern Ontario. Further studies could study other universities or organizations to determine if the findings are nuanced to this particular site. Likewise, how leaders adapted their practices and behaviors in organizations in different geographical locations or in different sectors should be considered in future research.

Recommendations

The widespread adoption of virtual work is new and in flux, as organizations continue to shift their working modalities to meet demands for virtual services and the desire of their staffs for virtual and hybrid work. Researchers should evaluate how organizations adapt and on which work approaches they settle.

Likewise, while leaders in this study proposed what practices they would continue to use in a hybrid work environment, this has yet to be confirmed. After some time has passed, researchers should investigate what practices were indeed utilized and measure their effectiveness.

Technological tools for virtual leadership should continue to be investigated by researchers, human resource departments, as well as leaders. For example, leaders in this study discussed the desire to reduce the number of meetings their staff needed to attend. They might consider what technological tools they could use to accomplish this. For instance, they might consider recording video messages with updates and information for their teams to view at their convenience rather than conducting meetings.

Finally, virtual leadership training remains a need. The results of this study align with the gap identified in the literature related to virtual leadership training. Leaders in this study reported that they had to learn by trial and error and that training would have been valuable. Training

information and programming based on leaders' needs, as reported in the literature research, would meet a significant need.

Summary

This study aimed to gain insight into how student services leaders at a university changed their leadership behaviors and practices because of moving their teams to the virtual working environment during the COVID-19 pandemic. A case study research approach was used and data were collected through an online questionnaire, interviews, and documentation. Participants were leaders of teams that delivered student services and included managers, directors, an associate vice-president, and vice presidents. Analysis of the data led to the identification of four themes: reimagining communication, reconstructing work using technology, reframing team support, and reorienting toward hybrid work.

The conclusions drawn in this study align with what was suggested in the literature: while many aspects of virtual leadership are like the leadership of teams that work in person, there are some areas of nuance. In particular, virtual leaders use different practices and behaviors related to communication, use of technology, and team support.

The participants affirmed that the future of work at their university will be hybrid because students are looking to access services in a hybrid format and staff has a desire to work in a hybrid format. Working in a hybrid format, staff will do some work virtually and some work in person. Leaders are encouraged to continue to develop their leadership practices and behaviors reflectively as they settle into hybrid work. The leaders in this study shared that many practices they implemented while working exclusively virtual seem to have promising applications for hybrid work teams. It would be valuable for researchers to investigate leadership behaviors in teams that are implementing a hybrid work model.

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APPENDIX A

Questionnaire Questions

1. How many staff do you supervise?

2.

a) How often did you communicate with your team in the following ways before the pandemic (i.e., when working in-person):

	Never	Sometimes (a few times a month)	Often (once a week)	Frequently (almost every day)
In-person meetings				
Informal conversations (e.g., in the hallway)				
Virtual meetings (e.g., facilitated via Zoom, Microsoft Teams)				
Telephone calls				
Video calls (e.g., Zoom or Microsoft Teams) - not scheduled				
Emails				
Cloud-based document sharing for real-time collaboration (e.g., via SharePoint or OneDrive)				
Computer-based text messaging (e.g., Microsoft Teams chats, Slack, Skype) for messaging your whole team				
Computer-based text messaging (e.g., Microsoft Teams chats, Slack, Skype) for messaging individual staff				

b) Once your team transitioned to virtual work, how often did you communicate with your team in the following ways:

	Never	Sometimes (a few times a month)	Often (once a week)	Frequently (almost every day)
Virtual meetings (e.g., facilitated via Zoom, Microsoft Teams)				
Telephone calls				
Video calls (e.g., Zoom or Microsoft Teams) - not scheduled				
Emails				
Cloud-based document sharing for real-time collaboration (e.g., via SharePoint or OneDrive)				
Computer-based text messaging (e.g., Microsoft Teams chats, Slack, Skype) for messaging your whole team				
Computer-based text messaging (e.g., Microsoft Teams chats, Slack, Skype) for messaging individual staff				

3. Briefly describe how your communication practices changed after your team moved to the virtual working environment. Feel free to use sentences or point form.
4. Please list any new technology you have used with your team since you started working virtually and describe how you utilize it.
5. Please share any new leadership practices you have tried or adopted since working virtually. Explain whether you have found them effective (E.g., monthly one-on-one check-in meetings with staff, scheduled coffee breaks with staff, meeting-free days)
6. Will your team:
 - a) Continue to work completely virtually for the foreseeable future

- b) Work hybrid (some in-person, some virtually), when public health restrictions allow
 - c) Completely in person, when public health restrictions allow
7. If your team will work hybrid or in-person when public health restrictions allow, what leadership practices that you adopted in the virtual environment will you continue to use, if any?
 8. Please share any documents or resources that you used in your transition to the virtual environment. Please include website links in the textbox or upload files.
 9. Would you be willing to participate in an interview 30-minutes interview with the researcher to discuss your leadership practices during the COVID-19 pandemic?

APPENDIX B

Interview Questions

1. How did your team deliver their services and conduct their work before March 2020 when the COVID-19 pandemic started?
2. Thinking back to March and April of the year 2020, what changes did you need to make to offer your services in the virtual environment?
3. What strategies did you use to support your team's virtual work?
4. How have your communication practices (within your team and as a leader) changed since the pandemic started?
5. How has your use of technology changed since the pandemic started?
6. What skills or competencies have you gained or improved since working in the virtual environment?
7. How, if at all, has your leadership style changed since moving to virtual work?
8. What practices do you feel will carry forward to a hybrid working environment? Are there any practices that you used when your team was completely virtual that will not work for a hybrid team?
9. Do you have any documents or resources that you could share that supported your transition to the virtual environment or would demonstrate changes you made?

APPENDIX C

Research Questions

- RQ1. How did leaders adapt their leadership practices during the COVID-19 pandemic to suit the virtual working environment?
- RQ2. How did leaders support their teams in the virtual working environment?
- RQ3. How did leaders' communication practices change to suit the virtual working environment?
- RQ4. How did leaders leverage technology in the virtual working environment?
- RQ5. How might leaders implement new practices they adopted in an in-person or hybrid working environment?