DISSERTATION

ORGANIZATIONAL ADAPTABILITY IN HIGHER EDUCATION: AN EXPLORATION OF HOW SENIOR LEADERS OF ONLINE LEARNING UNITS INFLUENCE ADAPTABILITY TO A CHANGING ENVIRONMENT

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ABSTRACT

ORGANIZATIONAL ADAPTABILITY IN HIGHER EDUCATION: AN EXPLORATION OF HOW SENIOR LEADERS OF ONLINE LEARNING UNITS INFLUENCE ADAPTABILITY TO A CHANGING ENVIRONMENT

Due to advancements in information and communication technology and the increasing student demand for online education, online learning units and their leaders are becoming central to the future of the larger institutions in which they reside. The current study was motivated by the imperative to understand how senior leaders influence the ability of their online learning units situated within residential public universities to adapt to the changing environment.

This qualitative interpretive study provides empirical evidence for, and expands the understanding of, the ways senior leaders of online learning units influence organizational adaptability. It identifies a combination of interacting leadership practices senior leaders employ for creating conditions for adaptability, which include shaping networks, regulating tension, and navigating organizational context. The study also provides insights into the application of the Complexity Leadership Framework of Leadership for Organizational Adaptability (Uhl-Bien & Arena, 2018) in the specific context of online units situated within residential public universities. The findings suggest modifications to the original framework to include navigating context as a fundamental element for creating conditions for organizational adaptability. Additionally, the study highlights a need for further applied research. The study also provides current insights into practical implications of the findings, underscoring the importance of strategic leadership in enabling organizational adaptability.

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"Learning is not supposed to be comfortable."
~ Susan A. Lynham, Ph.D. ~

Dr. Sue Lynham, one of my favorite professors in the Higher Education Leadership doctoral program, shared the above wisdom in her class. These seven words became my reassurance and motivation as I progressed through my doctoral program that challenged me beyond my expectations. I would have not reached the end of this journey to earning my degree without the many people who educated, supported, and encouraged me along the way.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE: INTRODUCTION

This chapter reviews several forces of change that are influencing the higher education enterprise, including individual colleges and universities. The overview of these interrelated forces of change highlights how imperative it is for higher education institutions to develop a capability to adapt to the changing environment. The chapter further explores the research problem and the research question and proceeds to discuss the purpose of this study and its significance. The chapter concludes with definitions of key terms.

Background

The higher education industry in the United States generates around $990 billion in annual revenues (NCES, 2023) and serves about 19 million students (NCES, n.d.). In addition to its large size, higher education is a complex industry with overarching social missions to teach, advance knowledge, and provide public service (Gumport, 2000; Kezar, 2001; Pucciarelli & Kaplan, 2016; Weisbrod et al., 2008). Public universities receive public funding to help accomplish these social missions that would be underprovided if profitability were the only issue considered (Weisbrod et al., 2008). The 21st century, however, has brought an ever-changing environment where higher education is being forced to evaluate its relations with society and how to respond to the many forces acting upon it (Bok, 2003; Deem, 2001; Kezar, 2001; Pucciarelli & Kaplan, 2016; Slaughter & Rhoades, 2004; Weisbrod et al., 2008).

The list of forces affecting higher education has become so common that it is almost unnecessary to name them (Kezar, 2001). At the same time, these trends are complex and challenging to understand due to their dynamic nature (Altbach et al., 2010). These varied forces are interrelated and include the demands of the knowledge economy (Altbach et al., 2010; Gibb

et al., 2013), changes in funding (Altbach et al., 2010; Li, 2014; Li, 2017; Pucciarelli & Kaplan, 2016), changing student demographics (Altbach et al., 2010; Cohen & Kisker, 2010; Pucciarelli & Kaplan, 2016), changing student expectations (Bastedo, 2012; Pucciarelli & Kaplan, 2016), new technologies (Altbach et al., 2010; Christensen & Eyring, 2011; Kezar, 2001), increased competition (Cohen & Kisker, 2010; Kezar, 2001; Pucciarelli & Kaplan, 2016), and the effects of the COVID-19 pandemic on various aspects of universities, including student mental health (Khan, 2021), international student mobility (Altbach & de Wit, 2020; Fisher, 2020), and university financials (Altbach & de Wit, 2020). Following is a brief description of these forces of change acting upon higher education institutions.

Today's changing economy, which has become dependent on intellectual capital, is one of the significant forces that is impacting the current higher education enterprise. The knowledge economy of the 21st century has increased demand for higher education (Gibb et al., 2013). The increase in demand, in turn, has contributed to insufficient public funding, as states are not able to support the larger number of students attending colleges and universities (Altbach et al., 2010; Gibb et al., 2013).

The growth in demand for higher education is only one of several reasons for insufficient public funding of colleges and universities. Another reason is the decrease of public funding that has resulted from the Great Recession in 2008 when state budget allocations for higher education decreased while enrollments increased because of poor market conditions (Barr & Turner, 2013; Zumeta et al., 2021). Additionally, the public view of higher education has shifted from higher education being viewed as a public good to higher education being viewed as an individual benefit (Altbach et al., 2010; Slaughter & Rhoades, 2004). This change in public view has motivated a transfer of the burden of financing higher education from the state to the individual

student (Altbach et al., 2010; Kezar, 2001; Manning, 2018; Slaughter & Rhoades, 2004). Furthermore, public funding of higher education has changed and may be insufficient because some states that have traditionally funded higher education are now implementing funding models based on performance (Li, 2014; Li, 2017). These performance-based models are changing the distribution of funds.

Further driving colleges and universities towards change is an increased competition among institutions of higher education (Altbach et al., 2010; Pucciarelli & Kaplan, 2016), which has resulted from a growing number of proprietary institutions and globalization (Cohen & Kisker, 2010; Kezar, 2001; Pucciarelli & Kaplan, 2016). The trend toward globalization is partly due to the Internet and rapidly improving technology that enables easier connections between people and organizations across the world. In addition to facilitating global connections, the Internet is now undermining the monopoly of knowledge that has traditionally been enjoyed by universities (Altbach et al., 2010; Gibb et al., 2013). This wider access to knowledge through the Internet challenges the historical roles of universities.

The Internet and new technologies are also changing instruction, which can now be delivered online. Online education is growing in strength and has become a significant part of higher education (Altbach et al., 2010). Many higher education institutions are expanding their online academic offerings to better meet the needs and expectations of new student populations (Afzal, 2020; Wotto, 2020), including the digital native millennials (Pucciarelli & Kaplan, 2016) and nontraditional students (Singh et al., 2021).

Changing student demographics and student expectations are also among the forces that are acting upon higher education institutions and driving them to change. Student expectations are changing as students from upper-income families who pay full tuition increasingly demand

luxury services (Bastedo, 2012). Additionally, today's tech savvy students expect their learning experiences to incorporate social networking and other digitally based delivery systems, which are convenient, immediate, and personalized (Pucciarelli & Kaplan, 2016). As access to higher education expands, more students with diverse demographics attend colleges and universities and, consequently, their needs are changing (Altbach et al., 2010; Cohen & Kisker, 2010; Pucciarelli & Kaplan, 2016). Related to diverse backgrounds is the desire of today's students to be exposed to diversity in the classroom (Pucciarelli & Kaplan, 2016).

The change in student demographics is partly due to the changing knowledge economy that requires adults to continue to update their education throughout their careers (Folkers, 2005). Forty percent of college students are now 25 or older (Hewlett, 2022). These non-traditional students are generally more diverse than traditional-age students, attend school part-time, live off-campus, and have full-time jobs and families (Afzal, 2020; Folkers, 2005). As such, they look for convenience, flexible schedules, quality, lower cost, and student services (Folkers, 2005; Zamecnik et al., 2022). To fulfill their unique needs, non-traditional students increasingly seek online education offerings (Folkers, 2005; Singh et al., 2021), which can provide the needed flexibility.

One of the most recent forces of change was the novel coronavirus, which had caused the world-wide COVID-19 pandemic and temporarily shut down colleges and universities. The pandemic affected mobility of international students due to international travel restrictions (Altbach & de Wit, 2020; Fisher, 2020). University financials were also affected due to lower enrollments and investments of funds to mitigate virus spread (Altbach & de Wit, 2020). The pandemic negatively affected student mental health (Khan, 2021); this challenge persists today. The various consequences of the pandemic on higher education institutions further demonstrated

that the higher education enterprise is susceptible to external dangers (Adedoyin & Soykan, 2020).

While the academy had derived its strength from tradition rather than change, it is now being forced to rethink its place and purpose (Beaudoin, 2003). External forces have combined to challenge the academy's resistance to change (Folkers, 2005; Khan, 2021). Today's ever-changing environment demands that colleges and universities change to remain relevant to students and the society.

Statement of the Research Problem

In 2011, Christensen and Eyring argued that "for the vast majority of universities, change is inevitable" (p. 19). Even though this statement was made over a decade ago, it is still relevant today. In fact, from a complexity perspective, change is a constant in organizations (Burnes, 2005; Lawrence, 2015; Styhre, 2002). To prevent change from being imposed by external regulation or pressure from new competitors and to cope effectively with change, it is imperative for organizations, including universities, to position themselves for adaptability (Uhl-Bien & Arena, 2018).

Due to the advancements in information and communication technology that are influencing online instruction in universities, online learning units and their leaders are becoming central to the future of the larger institutions in which they reside. Leaders and other administrators of online units "should no longer see themselves as protectors and survivors of isolated programs for which they have labored mightily, but rather as valued strategic partners who can enable the larger institution, often long seen as the enemy, to catch up with them and emulate their practices and successes" (Beaudoin, 2003, p. n/a). To position online units, and

consequently the larger institution, for adaptability, it is imperative that senior leaders understand how to develop their online unit's ability to adapt through systems, structures, and people.

Purpose of the Study

To inform the scholarship and improve practice, this study aimed to provide new insights on leadership for organizational adaptability, which "involves enabling organizations and people to cope effectively with change and uncertainty" (Uhl-Bien & Arena, 2018, p. 89). Leadership for organizational adaptability differs from leading change. Rather than focusing on how leaders drive change top down (i.e., how they lead change), leadership for adaptability addresses how leaders position organizations and people to be adaptive in response to complex challenges (Uhl-Bien & Arena, 2018).

The current study explored the various ways senior leaders of online learning units situated within residential public universities create conditions that influence their unit's ability to adapt to the many forces of change acting upon it. It is important to note that "organizational adaptability" is an academic term and leaders may not intentionally consider how their practices relate to adaptability. Rather, senior leaders may influence adaptability of the unit they lead intuitively or incidentally through their leadership practices. To explore these leadership practices, the current study was guided by the research question, *"How do senior leaders influence organizational adaptability of their online learning units situated within residential public universities?"*

Significance of the Study

Contemporary leadership studies propose that leadership is comprised of dynamic, complex systems and processes (e.g., Bradbury & Lichtenstein, 2000; Lichtenstein et al., 2006; Uhl-Bien et al., 2007). However, there is insufficient research on how senior leaders develop and

manage such organizational systems and processes to position their organizations for adaptability to complex challenges and, ultimately, for effectively coping with change and uncertainty. This conclusion is consistent with other researchers who have also argued that there is a lack of understanding of how leaders develop organizations capable of adapting (Boylan & Turner, 2017; Uhl-Bien & Arena, 2018).

Scholars propose that adaptability is essential to the survival of organizations in changing and competitive environments (Cohen & Kister, 2010; Kezar, 2001; Uhl-Bien et al., 2007). Perhaps the most salient illustration of how imperative organizational adaptability is in the higher education industry was the COVID-19 pandemic. The pandemic has made it clear that even higher education, which has historically derived its strength from tradition rather than change (Beaudoin, 2003), is susceptible to external dangers (Adedoyin & Soykan, 2020).

The highly contagious virus that causes COVID-19 was first identified in humans in late December 2019 and spread around the world within just a few months. By March 2020, the initial epidemic was declared a pandemic by the World Health Organization (WHO, 2020). In response to the fast-spreading deadly coronavirus, authorities worldwide issued stay-at-home orders. These unprecedented lockdowns and social distancing orders forced higher education residential institutions to temporarily close their campuses. To continue their educational activities, many universities managed to switch to remote instruction (Khan, 2021). In many cases, the pivot from face-to-face courses to online teaching and staff telecommuting was enacted within a week (Khan, 2021).

Higher education institutions, especially residential universities, faced the challenge of reimagining instruction during the pandemic and likely beyond. A literature review by Khan (2021) found evidence that online instructional delivery will continue within the education sector

post COVID-19. This is the case globally. For example, most institutions from the European Higher Education Area have confirmed that they plan to explore new ways of teaching and enhance digital capacity beyond the crisis (García-Morales et al., 2021).

Colleges and universities are increasingly competitive on the global stage in serving a substantial population of online students. In the United States, 60 percent, or about 11 million students, enrolled in at least one distance education course in fall 2021 (NCES, n.d.). There is clearly an interest in distance education, which is defined by the U.S. Department of Education (Federal Student Aid, n.d.) as education that uses technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between students and the instructor. Distance education in the United States is typically delivered online via the Internet. To accommodate the interest in distance education, residential universities often rely on the expertise of their online units, which are experienced in providing online instruction. These online units must be able to respond to the digitalization of the higher education system, which was accelerated by the pandemic (García-Morales et al., 2021). They will need to continuously address ongoing technological advancements, which provide both opportunities for new ways to teach and learn, as well as challenges to keep up with the advancements (Folkers, 2005).

Faculty and students are increasingly realizing the potential of online teaching and learning (Talib et al., 2021). Consequently, online units will need to respond to these evolving attitudes toward online education. Furthermore, online units will need to accommodate changing student needs for lifelong and flexible education (Folkers, 2005; Singh e al., 2021). As reviewed earlier, online units, along with the entire higher education enterprise, will also need to continue addressing the demands of the knowledge economy (Gibb et al., 2013), changes in funding (Li,

2014; Li, 2017; Zumeta et al., 2021), increased competition (Cohen & Kisker, 2010; Kezar, 2001; Pucciarelli & Kaplan, 2016), and changing student demographics (Afzal, 2020; Cohen & Kisker, 2010; Wotto, 2020) and expectations (Bastedo, 2012; Pucciarelli & Kaplan, 2016).

Despite the numerous forces of change, higher education institutions have traditionally been slow to change; they measure change in years and even decades (Folkers, 2005). Indecision and immobility, however, could prove fatal to colleges and universities (Beaudoin, 2003). For example, a failure to keep up with developments in information and communication technology could pose a serious risk of obsolescence to higher education institutions (Pucciarelli & Kaplan, 2016). In addition to the already-changing environment that had been forcing higher education to adapt, the pandemic has exposed problems with the system, pushing educators and administrators to evaluate current models of education (Talib et al., 2021). The glimpse into what online education and the remote work environment look like is accelerating change and can be viewed as an impetus for the reform of higher education (Talib et al., 2021).

To ready themselves for responding to the various, interrelated, and complex forces for change, it is imperative for online units to develop adaptability to the changing environmental conditions. Organizational adaptability is the ability of organizations to adjust practices, processes, or their structures in response to changes, as well as in anticipation of change (Boylan & Turner, 2017) to effectively cope with change and uncertainty (Uhl-Bien & Arena, 2018). The capability to develop the conditions that enable organizational adaptability has been identified as one of the essential competencies of leaders (Boylan & Turner, 2017). Even though effective online education leadership could make the difference between success or failure (Beaudoin, 2003), there is no research on how leaders of online learning units influence organizational

adaptability that allows their units to anticipate and effectively respond to changing environmental conditions.

Through the exploration of the research question of *how senior leaders influence organizational adaptability of their online learning units situated within residential public universities*, this study addressed the gap in empirical research on leadership for organizational adaptability, as most literature on this topic is theoretical. The study provided missing empirical evidence for how senior leaders influence organizational adaptability in the specific complex context of higher education institutions and their centralized online learning units. Additionally, the study explored how the theoretical framework that guided the study might be applied by senior leaders in practice, whether consciously or intuitively. The framework that guided the current study is the Complexity Leadership Framework of Leadership for Organizational Adaptability developed by Uhl-Bien and Arena (2018).

Definition of Key Terms

- *Organizational Adaptability.* The ability of organizations to transform from one state to another by adjusting their practices, processes, or structures in response to changes, as well as in anticipation of change (Boylan & Turner, 2017), to effectively cope with change and uncertainty and to ultimately strengthen their fit with the environment (Uhl-Bien & Arena, 2018).
- *Leadership.* "A multi-layered dynamic system of collaboration and coordination" (Uhl-Bien, 2021, p. 158).
- *Planned Change.* The action of moving from one fixed state to another through pre-planned steps with the intent to anticipate and respond to changes in the environment,

pursue new opportunities, and, consequently, increase an organization's effectiveness (Cummings & Worley, 2015; Lawrence, 2015; Livne-Tarandach & Bartunek, 2009).

- *Emergent Change.* A continuous, evolving, unpredictable, complex, nonlinear, dynamic, and cumulative process (e.g., Lawrence, 2015; Styhre, 2002; Uhl-Bien & Marion, 2009; Weick & Quinn, 1999) of continuing adaptations that produce essential change without prior plans (Livne-Tarandach & Bartunek, 2009).
- *Online Learning.* Institution-based, formal education that uses interactive telecommunications systems to connect learners, resources, and instructors (Coleman, 2016).
- *Online Learning Unit.* The organizational unit within a university that oversees the various functions required to centrally administer online academic programs for the university within which it is located.
- *Organizational Ambidexterity.* The dual function of exploring new ideas and exploiting existing resources.
- *Exploitation.* An organization's ability to utilize existing resources to improve what is already established and to increase efficiency (Beckman, 2006; Jansen et al., 2006; March, 1991).
- *Exploration.* An organization's ability to explore and innovate, which are activities that result in new knowledge and capabilities (Jansen et al., 2006; March, 1991).
- *Dynamic Capabilities.* An organization's "ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al., 1997, p. 516).

CHAPTER TWO: LITERATURE REVIEW

The literature review examines organizational adaptability and how it relates to Complex Adaptive Systems, dynamic capabilities, organizational development and change, organizational ambidexterity, and leadership (Figure 1). It concludes with an overview of the Complexity Leadership for Organizational Adaptability Framework, which guided the current study. The literature review discusses how these theoretical constructs and the theoretical framework informed the study's topic of leadership for organizational adaptability.

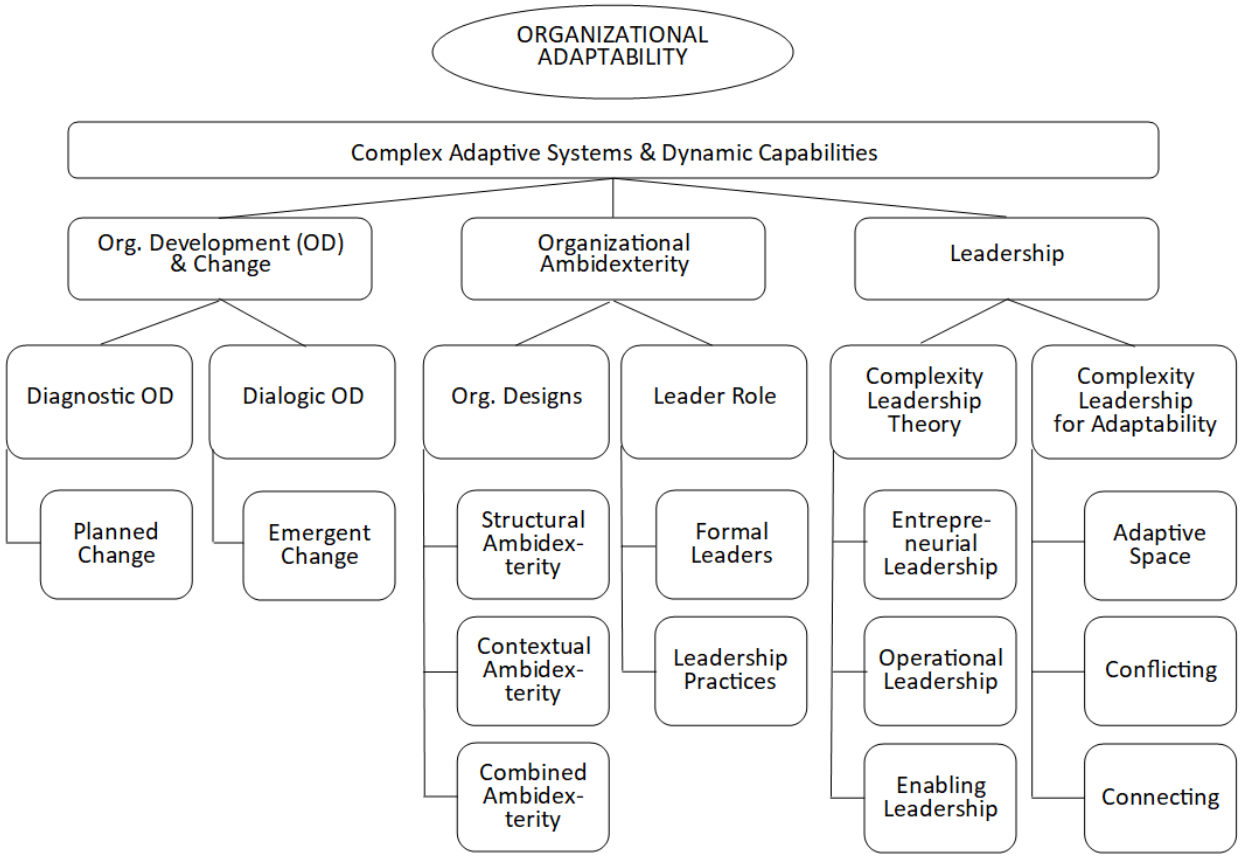


Figure 1
Literature Review Map

Organizational Adaptability

Organizational adaptability is defined as the ability of organizations to transform from one state to another by adjusting their practices, processes, or structures in response to changes, as well as in anticipation of change (Boylan & Turner, 2017), to effectively cope with change and uncertainty and to ultimately strengthen their fit with the environment (Uhl-Bien & Arena, 2018). Scholars have proposed that organizations demonstrate adaptability when they expect change, develop a plan with a variety of options, assess and reframe particular problems, and develop feasible solutions, while expecting to make adjustments after execution has begun (Boylan & Turner, 2017). Organizational adaptability has also been conceptualized as the capacity to reconfigure activities quickly to meet changing demands in the environment, take advantage of new opportunities, and to avoid complacency (Gibson & Birkinshaw, 2004). Additionally, adaptability has been proposed to promote ongoing change in organizations (Uhl-Bien & Marion, 2009). Adaptability, accompanied by speed, flexibility, and high rates of learning and innovation, has been associated with organizations' competitive advantage (Uhl-Bien et al., 2007).

Competitive advantage is becoming essential to higher education institutions that are facing increased competition, which is characterized by globalization and the rising number of proprietary institutions (Cohen & Kisker, 2010; Kezar, 2001; Pucciarelli & Kaplan, 2016), as well as increased demands from students and society (Bastedo, 2012; Gumport, 2000; Pucciarelli & Kaplan, 2016). The recent COVID-19 pandemic highlighted how imperative it may be for colleges and universities to be able to effectively adapt in response to changing environmental conditions.

Complex Adaptive Systems

Organizational adaptability can be understood as synonymous with the concept of emergent order, which is central to complexity theories (Uhl-Bien & Arena, 2018). Complexity theories transcend the physical, biological, and social sciences (Lichtenstein et al., 2006; Uhl-Bien et al., 2007; Uhl-Bien & Arena, 2018). Some scientists propose that the benefits of complexity sciences go beyond metaphors and analogies; they aid in understanding of organizational phenomena (Mathews et al., 1999). For example, principles of complexity theories are useful for describing social processes in organizations (Marion, 1995).

Complexity theories contain the tenets of Complex Adaptive Systems, which are central to literature on organizational adaptability. Complex Adaptive Systems are "neural-like networks of interacting, interdependent agents who are bonded in a collective dynamic by common need" (Uhl-Bien & Marion, 2009, p. 631). Following is a brief summary of the principles of complexity theories and Complex Adaptive Systems. These are mostly ideas and assumptions, as literature on complexity is largely theoretical and unexamined by empirical research.

Complexity theories encompass the dynamic notions of Complex Adaptive Systems (Schneider & Somers, 2006). According to complexity theories, the world is nonlinear and organic rather than linear and mechanistic (Marion & Uhl-Bien, 2001). A key concept in Complex Adaptive Systems is emergence, in which order emerges from actions and repeated interactions of interdependent agents who pursue change based on local knowledge and feedback from others without a directive from authorities (Cilliers, 2000; Marion, 1995; Osifo & Omoregbe, 2011). The process of emergence (i.e., adaptability) involves social dynamics, such as tension/conflicting and integration/linking (Uhl-Bien et al., 2007; Uhl-Bien & Arena, 2018;

Uhl-Bien & Marion, 2009). Emergent order is enabled by the characteristics of Complex Adaptive Systems (Burnes, 2004a; Styhre, 2002).

A Complex Adaptive System is defined as a dynamic system that adapts to, and evolves with, a changing environment (Lichtenstein et al., 2006). Complex Adaptive Systems are able to learn and adapt quickly (Uhl-Bien et al., 2007). Scholars have proposed that Complex Adaptive Systems adapt through self-organization, which results from the inter-dependency of the system's parts (Schneider & Somers, 2006; Osifo & Omoregbe, 2011). A complex organization tends to self-organize toward a critical state that allows it to be sensitive to issues in its environmental context (Cilliers, 2000) and, consequently, to survive the changes in the environment (Osifo & Omoregbe, 2011). In Complex Adaptive Systems, order emerges (i.e., it is not predetermined), the history of the system is not reversible, and the future of the system is often unpredictable (Uhl-Bien et al., 2007).

Furthermore, a complex organization is an open system, which means that energy and information flow between the organization and its environment. Because multiple parts of an organization interact with the environment (Osifo & Omoregbe, 2011), the organization cannot be understood independently of its context (Cilliers, 2000). Additionally, for a Complex Adaptive System to function properly, it must possess complexity that equals that of its environment (Uhl-Bien et al., 2007).

In addition to context, the nature of a complex organization is co-determined by its history (Cilliers, 2000). An organization's history is distributed throughout the system and is contained in individual interactions (Cilliers, 2000). Relationships between elements of a complex organization are fundamental because "things" (events, ideas, etc.) happen during interactions, not in isolation (Cilliers, 2000; Osifo & Omoregbe, 2011). Experiences of an

organization result in organizational learning, which tends to influence future behaviors (Osifo & Omoregbe, 2011).

Complexity theories suggest that system behavior often results from complex, nonlinear interactions between its components that include feedback mechanisms (Cilliers, 2000; Marion, 1995; Osifo & Omoregbe, 2011). Human Complex Adaptive Systems, such as organizations, consist of individual agents who act in unpredictable ways and who are interconnected, which means that one agent's actions change the context for other agents (Grobman, 2006). Because of the complexity and nonlinearity of a system, actions may not result in a proportional response; rather, actions may elicit no response, dramatic response, or response only at certain levels (Marion, 1995). Often, small causes can have large effects, and vice versa. This means that outcomes of a certain cause in a complex organization may be difficult or impossible to predict (Cilliers, 2000; Marion, 1995).

Complexity is based on rich connectivity in which agents of a system interact and, through this interaction, change one another in unpredictable and irreversible ways (Lichtenstein et al., 2006). Complex organizations can, therefore, give rise to unpredictability and novelty, which can be beneficial and should not be suppressed (Cilliers, 2000). Because individuals and ideas interact in Complex Adaptive Systems, conflict between competing needs may result. However, conflict in Complex Adaptive Systems is not necessarily detrimental. On the contrary, scholars argue that agents must experience tension to develop (Uhl-Bien et al., 2007). These resulting tensions have been proposed to generate system-wide emergent learning, capabilities, innovations, and adaptability (Lichtenstein et al., 2006).

A complex organization thrives when control is distributed throughout the system rather than centralized (Cilliers, 2000; Morgan, 2006). A complex organization functions best with

shallow structures that allow for rich interactions (Cilliers, 2000). Furthermore, because agents in Complex Adaptive Systems are interdependent, their success depends on the success of others (Uhl-Bien et al., 2007). Unlike "survival of the fittest" that is based on competition, complexity theories propose that the most effective behavior for fitness is cooperation (Marion, 1995).

Scholars provide an important distinction between complex and complicated (Lichtenstein et al., 2006; Uhl-Bien & Arena, 2018). Complicated things, such as machines, have many parts that interact but do not change one another. Complex things, on the other hand, consist of parts that change each other through interaction; this process is irreversible. For a complex system, this means that it can never be reversed back to its original components.

There is a distinction between complexity theories and the more traditional theories for understanding organizations. Many traditional theories view organizations as machines that are predictable and replicable; their parts can be isolated and manipulated (Boylan & Turner, 2017). Under this view, organizations have rigid structures that are controlled by hierarchical relations; forces that act upon organizations are believed to be mainly external; change and stability are viewed as mutually exclusive and alternating from one state to another; focus is on norms; and feedback loops are minimal (Jennings & Dooley, 2007). Additionally, the machine metaphor assumes that organizations can be changed to a predetermined end state by those with formal authority; that change efforts will encounter resistance that will need to be managed; and that change can be executed well when it is well planned and well controlled (Cameron & Green, 2020).

The machine metaphor is consistent with Frederick Taylor's scientific management (Cameron & Green, 2020; Cutright, 2001). Conventional approaches to organizations that align with scientific management principles strive to routinize behavior, which is hypothesized to

ensure stability and predictability. Routines, however, may cause the system to be insufficiently sensitive to environmental demands for change, which may reduce the system's ability to change (Plowman & Duchon, 2007).

Some would argue that the machine metaphor dominates the views of higher education organizations because higher education is aligned with the industrial age with its focus on processes and outputs rather than outcomes (Cutright, 2001). This industrial age factory model, however, is characterized by "insufficient flexibility" (Dolence & Norris, 1995). In contrast, some contemporary researchers believe that, unlike machines, organizations can adapt and grow, and it is therefore more effective to view organizations, including universities, as complex organic living systems (Boylan & Turner, 2017; Regine & Lewin, 2000).

The principles of Complex Adaptive Systems are relevant to universities, which provide the context for this study; higher education and individual institutions within the enterprise can be viewed as complex systems. Higher education is considered a complex industry due to its overarching, multifaceted social missions to teach, advance knowledge, and provide public service (Gumport, 2000; Kezar, 2001; Weisbrod et al., 2008). Furthermore, Barnett (2001) identified several additional forms of complexity that are present in higher education institutions. According to Barnett, in addition to a mission complexity, universities deal with often contrasting priorities for their activities, which can be undermined by changing national policies and global forces. Universities also face the complexity of the varied needs of the constituents they serve, including the state, students, potential employers, or society today and in the future. Another complexity stems from the paradox of academic staff being considered autonomous professionals and at the same time being accountable to senior administrators as employees of the university. Barnett (2001) further identified the complex need for universities to make quick

decisions and, simultaneously, a desire for transparency, which requires the inclusion of others and, therefore, slows down decision making. Today's universities must balance their accountability to state agencies, the academic interests of faculty, needs of increasingly sophisticated students, and the institutions' own desires to be innovative, which further increases the complexity of the university's internal and external environment (Barnett; 2001).

The preceding paragraph provides only a few examples of the numerous complexities in higher education that Barnett (2001) has identified. In summary, universities face *conceptual complexities* that are concerned with "values, ends, purposes, ideas, concepts, objectives and goals;" *environmental complexities* that are concerned with the uncertainty and unpredictability of the environment; and *relational complexities* that are concerned with numerous and varied relationships and modes of communication (Barnett, 2001, p. 17). These complexities illustrate that universities are complex entities, operating in complex environments. It can be deducted that the principles of Complex Adaptive Systems, therefore, apply specifically to higher education, which provides the context for this study, in addition to organizational adaptability in general.

In addition to organizational adaptability, complexity theories inform other related constructs, including organizational development and change (e.g., Burnes, 2005; Brown & Eisenhardt, 1997; Grobman, 2006; Higgs & Rowland, 2005; Livne-Tarandach & Bartunek, 2009; Styhre, 2002), ambidexterity (e.g., Diesel & Scheepers, 2019; Havermans et al., 2015), and leadership (e.g., Regine & Lewin, 2000; Schneider & Somers, 2006; Uhl-Bien & Arena, 2017; Wheatley, 2006). Literature on Complex Adaptive Systems, as well as organizational adaptability and related constructs, references dynamic capabilities, which are reviewed in the following section.

Dynamic Capabilities

Dynamic capabilities are referenced in the literature on complex adaptive systems, organizational change and adaptability, ambidexterity, and leadership. For example, Complex Adaptive Systems are understood as *dynamic* systems (Tourish, 2019; Uhl-Bien & Arena, 2017). Similarly, leadership has been defined as a "complex *dynamic* [emphasis added] process" (Lichtenstein, et al., 2006, p. 2) that emerges through *dynamic* interactions (Bradbury & Lichtenstein, 2000). *Dynamic* capabilities have been proposed to be necessary for leadership to appropriately adapt to changing environments by identifying future opportunities or challenges and how to address them (O'Reilly & Tushman, 2008; Teece, 2012). Furthermore, leader decision making can be considered *dynamic* in ambidextrous organizations where leaders shift resources and organizational designs between exploration of new ideas and exploitation of existing resources (Smith, 2014). Organizational ambidexterity, which is the balance between exploration of new ideas and exploitation of existing resources (Beckman, 2006; March, 1991), is conceptualized by scholars as a *dynamic* capability of organizations (O'Reilly & Tushman, 2008; Venkatraman et al., 2007).

Dynamic capabilities determine an organization's ability to adapt, integrate, and reconfigure internal and external resources and competencies to address, and possibly influence, changing environments (Teece, 2012; Teece et al., 1997). Teece (2012) proposed that *dynamic capabilities* include three activities: (1) sensing, which is the identification and assessment of an opportunity, (2) seizing, which is the mobilization of resources to address an opportunity to create value, and (3) transforming, which refers to continued renewal of an organization.

Pavlou and El Sawy (2011) further refined the concept of dynamic capabilities and developed a model that includes four types of capabilities that interact with each other: (1)

sensing capability that helps to spot, interpret, and pursue opportunities; (2) learning capability that revamps existing operational capabilities with new knowledge; (3) integrating capability that embeds new knowledge into operational capabilities with collective sensemaking; and (4) coordinating capability that deploys tasks, resources, and activities in reconfigured operational capabilities.

Dynamic capabilities are conceptualized as strategic and distinct from operational or ordinary capabilities. *Operational capabilities* are defined as "the ability to execute day-to-day activities" (Pavlou & El Sawy, 2011, p. 242). They are based on routines and enable organizations to be efficient (Teece, 2012). Researchers have proposed that there is a relationship between dynamic and operational capabilities. Dynamic capabilities can be layered over operational capabilities to contribute to the competitive advantage of an organization (Teece, 2012). Dynamic capabilities govern the change in operational capabilities by reconfiguring them to achieve congruence with a changing environment (Pavlou & El Sawy, 2011).

It has been proposed that dynamic capabilities enable organizations to adapt and evolve over time (Teece, 2012; Uhl-Bien & Arena, 2018). According to Abankwa et al. (2019), "adaptability offers dynamic abilities such as being able to anticipate problems, keeping up with changes and considering new ways of doing things, coping with crises and adjusting quickly to changes" (p. 2).

Dynamic capabilities represent the capacity to reconfigure organizational activities, resources, and skills. The capacity to reconfigure to meet changing demands in the environment has been proposed to enable organizational adaptability (Gibson & Birkinshaw, 2004). Dynamic capabilities are, therefore, crucial for enabling the capability of organizations to adapt to changing environmental conditions.

Organizational Development and Change

The core principles of organizational adaptability are anticipation of and response to change, along with innovation (Boylan & Turner, 2017). There is a growing need for organizations to change in response to global, economic, and technological developments; these developments constitute an environment that is increasingly complex (Cummings & Worley, 2015; Higgs & Rowland, 2005). Organizational scholars have proposed that "systems that adapt, change" (Marion, 1995, p. 43). More specifically, organizational adaptability has been suggested to promote organizational change that is ongoing (Uhl-Bien & Marion, 2009).

Organizational change is often studied within the field of organization development. A core premise of studies on organization development is the need for organizational adaptability (Uhl-Bien & Arena, 2018), which is the topic of the current study. Organization development is, therefore, relevant to the current study and is reviewed below. Following is also a review of organizational change to contrast planned change with emergent, ongoing change that is enabled by adaptability (Uhl-Bien & Marion, 2009). Leader facilitation of emergent change is also reviewed to inform the research question of how leaders influence organizational adaptability and, consequently, emergent change. This literature review section concludes with an overview of challenges to adaptability and emergent, ongoing change to highlight their complexity.

Organization Development

Organization development focuses on enhancing the capability of an organization to adapt to a changing environment while solving problems that the organization is currently facing (Bushe & Nagaishi, 2018). The study of organization development (OD) addresses a wide range of topics, including factors that influence the success of OD, the effects of change on an organization, and the methods of organizational change (Cummings & Worley, 2015). OD lacks

a consistent definition. Some scholars understand OD as the creation of great teams and organizations (Bushe & Nagaishi, 2018), while others equate it mostly with organizational change (Bartunek & Woodman, 2015; Cummings & Cummings, 2014; Cummings & Worley, 2015).

History of Organization Development

Research on OD began in the 1950s with studies on group dynamics and how these dynamics applied to resolving issues that arose from growing bureaucratic structures. These issues included poor communication, unproductive conflict, and resistance to change (Cummings & Cummings, 2014). Since then, the field of OD has evolved to include, for example, theories of planned change and the management of change, among other topics (Cummings & Worley, 2015). The original research and practice of OD relied on diagnostic models for understanding how organizations function. However, in the past four decades, new dialogic models of OD have emerged (Bushe & Marshak, 2009).

Diagnostic and Dialogic Organization Development

As Bushe and Marshak (2009) pointed out, the original principles of OD were rooted in positivism; they presumed the existence of an objective reality that can be investigated to yield data to influence change. Aligned with the positivist paradigm, *diagnostic organization development* is based on diagnosing problems or areas for improvement (Cummings & Cummings, 2014). Diagnostic OD typically uses rewards, performance norms, and operating routines to change employee behavior to produce change in the organization (Cummings & Cummings, 2014).

With the shift away from positivism toward more interpretive, constructivist understanding of reality, new OD practices emerged. Organizations began using data more for

illustrating multiple perspectives and options than for presenting objective facts (Bushe & Marshak, 2009). In addition to shifting paradigms, the increasing speed of change made it pragmatically more difficult or even irrelevant to collect data and diagnose organizational problems (Bushe & Marshak, 2009). Because the new OD practices intended to produce organizational change through employees' mindsets and discourses (Bushe & Marshak, 2016a; Cummings & Cummings, 2014), they were labeled *dialogic organization development* (Bushe & Marshak, 2009). Table 1 illustrates the contrast between diagnostic and dialogic OD.

Table 1
Diagnostic Versus Dialogic Organization Development (OD)

Comparison	Diagnostic OD	Dialogic OD
Ontology	Positivism Objective reality	Interpretive, constructionist Social reality
Emphasis	Behavior and results	Discourse and generativity
Nature of change	Planned Episodic	Emergent Continuous and iterative
Change processes	Hierarchical Start at top, work down	Heterarchical Start anywhere, spread out

Note. Adapted from Bushe and Marshak (2016a).

Planned Organizational Change

Organization development involves some type of change. The original diagnostic OD conceptualized change as planned. Planned change is viewed as moving from one fixed state to another through pre-planned steps with the intent to anticipate and respond to changes in the environment, pursue new opportunities, and, consequently, increase an organization's effectiveness (Cummings & Worley, 2015; Lawrence, 2015; Livne-Tarandach & Bartunek,

2009). The objective of planned change is to abandon old behavior, adapt new behavior, and move the organization from one state to another (By, 2005). Planned change is driven by top-down control; it is typically initiated and implemented by managers who serve as change agents (By, 2005; Cummings & Worley, 2015; Livne-Tarandach & Bartunek, 2009). Planned change is described as deliberate, more formal, episodic, infrequent, slow, and less complete because it is seldom fully implemented (Burnes, 2004a).

The change model that is fundamental to and provides a framework for the principles of planned, episodic change is Lewin's three-step model of unfreezing, moving, and (re)freezing (Lewin, 1947). Lewin's three-step model is reviewed below.

Lewin's Three-Step Model for Change

The most prominent approach to change discussed by OD scholars is Lewin's three-step model. The original three-step model focused on group performance within an organization. Lewin (1947) proposed that a successful change includes the three aspects of (1) *unfreezing* of the present level, (2) *moving* to the new level, and (3) *freezing* group life on the new level. The idea behind the first step of unfreezing is that it is sometimes necessary to deliberately cause an emotional disruption to break complacency. The moving stage is proposed to occur when forces pressing for change are greater than forces resisting change. The goal of the last step of (re)freezing is to make the new, higher level of performance permanent.

Because of the perception that Lewin's model is linear and based on distinct phases with final outcomes (Palmer and Dunford, 1996), scholars have considered Lewin's three-step model to be more relevant to episodic change (Weick & Quinn, 1999), which is associated with planned change, versus continuous change, which is associated with emergent change. However, others have explored parallels between Lewin's three-step model of change and complexity theories

(Burnes, 2004b), which typically view organizational change as emerging and continuous (Styhre, 2002).

One similarity between Lewin's three-step model and complexity theories is Lewin's recognition of the complexity of the context in which change occurs. Central to the three-step model is the field theory (Burnes, 2020) and its force field, which is a field of comprehensive forces that influence the context of a person's or a group's behavior (Lewin, 1947). The concept of force field takes into consideration the complexity of the context in which behavior occurs (Burnes, 2004b). Another similarity between Lewin's three-step model and complexity theories is that a force field can be understood as parallel to order-generating rules. Order-generating rules are proposed to enable the emergence of order in complex systems (Burnes, 2004b). Lastly, Lewin's focus on group behavior aligns with the principles of complexity theories. From a complexity perspective, change happens at the team (or group) level through self-organization (Burnes, 2004b, 2005). Change theories based on complexity principles focus on group norms, roles, interactions and socialization processes (Burnes, 2005), which are well aligned with Lewin's model that considers group norms and routines.

While Lewin's three-step model of change has been associated with episodic, planned change (Weick & Quinn, 1999), it aligns with the principles of complexity theories as well (Burnes, 2004b) and is, therefore, also relevant to continuous, emergent change. The following section compares traditional approaches to change, often associated with planned change, with complexity approaches to change, which tend to be associated with emergent change.

Comparison of Traditional and Complexity Approaches to Change

To be sure, Lewin's three step model of change is relevant to both planned and emergent change. However, similar traditional approaches to change mostly describe change as a stepwise

implementation (Styhre, 2002), which appears to be discontinuous, episodic, and linear (Lawrence, 2015). Such description seems to contradict the argument that organizations must develop the ability to change themselves continuously to survive (Burnes, 2005). Aligned with this argument is the notion that a system is always in a state of change and that organizational change is an inherent part of the system (Black, 2000), which is the fundamental assumption of complexity theories.

In contrast to the traditional planned change management models, the complexity perspective is based on the principle that "the actual change itself does not occur according to steps" (Burke, 2018, p. 10). Consequently, most change cannot be managed through an action plan, a process flow diagram, or a proposed agenda (Cameron & Green, 2020). Rather, fundamental change in Complex Adaptive Systems happens without a priori plans and emerges through ongoing accommodations, adaptations, and alterations (Burnes, 2005). Because change emerges, it may not be feasible for leaders of complex organizations to determine the focus of change in advance.

There is another distinction between traditional models of change and the alternative perspectives of complexity. Traditional models of change are often classified as rationalist and reductionist (Cameron & Green, 2020). These models explain organizations in terms of their constituent parts and tend to distinguish between three levels of organizational change – an individual, a group/team, or an organizational level (Cameron & Green, 2020).

Contrary to reductionism, complexity principles suggest that change cannot be isolated within one level of an organization; rather, any change effort has the potential to affect individuals, teams, the whole organization, and even its environmental context. Each level of the system can, in turn, influence the other levels of the system because the system's parts are

interdependent (Schneider & Somers, 2006). An analysis of change using a complexity framework therefore does not differentiate between different levels of change. Because of complex interconnections and feedback loops that involve all subsystems concurrently, the whole cannot be understood as a mere sum of its parts (Grobman, 2006). For that reason, scholars argue that complex systems and the interactions within them cannot be effectively analyzed and explained using reductionist approaches typical of traditional models of planned change (Grobman, 2006; Mathews et al., 1999).

In addition to distinguishing between levels of change, traditional approaches also focus on the potential of a leader to control change by employing a series of planned processes that are based on a predetermined outcome (Cummings & Worley, 2015; Lawrence, 2015; Livne-Tarandach & Bartunek, 2009). There is a possible issue with this planned change approach. Lawrence (2015) argued that, once an outcome has been predetermined, any potential participation from organizational agents in a change process tends to be reduced to efforts to persuade others to align with this predetermined vision. Consensus that is achieved through such process may be fragile or illusory because it did not arrive from a true dialogue that approaches conversations without a predetermined agenda (Lawrence, 2015).

The following section reviews the complexity approach of emergent change. According to Cummings and Cummings (2014), "because emergent change is ongoing and represents an informal approach to continuous change, it can help organizations adapt to changing environments" (p. 148). Because emergent change is proposed to assist with organizational adaptability, this type of change is especially relevant to the current study that will investigate how leaders influence organizational adaptability.

Emergent Organizational Change

Principles of complexity theories, which are rooted in physical, biological, and other natural sciences, can be used as a framework for understanding organizational phenomena, including change (Marion, 1995; Mathews et al., 1999). From a complexity perspective, organizational change is a constant (Burnes, 2005; Lawrence, 2015; Styhre, 2002).

Organizational change in Complex Adaptive Systems is understood as emerging through a fluid process (Styhre, 2002). It is conceptualized as complex, nonlinear, dynamic, and pervasive (Lawrence, 2015; Styhre, 2002). Change has also been described as ongoing, evolving, and cumulative (Weick & Quinn, 1999). Scholars further argue that change is unpredictable (Uhl-Bien & Marion, 2009). According to complexity theories, change is a continuous, vision-governed adaptation to changing conditions (Styhre, 2002).

Change that is continuous and emergent has been suggested as the healthiest for organizations (Kezar, 2001). Contrary to emergent, ever-present change is revolutionary or transformational change that is radical and that tends to disrupt the system of the entire organization (Burke, 2018; Kezar, 2001). However, transformational change, according to Kezar (2001), is unlikely at most organizations. Specifically in higher education, emerging change is especially more common and feasible than the disruptive transformational or revolutionary change due to the stabilizing force of accreditation.

Facilitation of Emergent Change in Complex Adaptive Systems

Scholars propose that, in Complex Adaptive Systems, change happens as a response to an external environment (Morgan, 2006), not as a reaction to a top-down directive with an internal focus (Cameron & Green, 2020). Because new order emerges as a response to changing environmental conditions, it can only be made sense of during or after the process (Cameron &

Green, 2020). In addition to the emerging properties of change, change is also understood as cumulative (Cameron & Green, 2020; Weick & Quinn, 1999). This means that change does not have a clear starting point and leaders are, therefore, generally unable to determine the focus of change in advance.

Furthermore, there is no one best way to design an organization, including a university (Cameron & Green, 2020). There is also no one overall model to follow to enact change because organizations are not governed by the rules of cause and effect (Cameron & Green, 2020). Because of the dynamic and nonlinear characteristics of change in Complex Adaptive Systems and because change cannot be controlled by leaders, leaders may be unable to effectively determine in advance what overall approach to change to pursue.

Scholars contrast traditional, episodic approaches to change with dynamic, continuous approaches that align with the principles of Complex Adaptive Systems (Lawrence, 2015). Empirical research has indicated that top-down linear approaches to change common to traditional, episodic change models are usually ineffective (Lawrence, 2015). A grounded theory study by Lawrence (2015), which explored how change leaders approach change, found that most interviewed change leaders refrained from a top-down approach to change. The study participants, which included 50 business leaders, internal change practitioners, and change consultants, did not develop plans for change in advance. Instead, the change leaders in this study handled the challenge of complexity by incorporating elements of emerging change through the interplay between power and dialogue, which emphasized sensemaking and identity, rather than power alone.

The study's (Lawrence, 2015) results align with an argument that leaders cannot control change because change is unpredictable (Cameron & Green, 2020; Uhl-Bien & Marion, 2009).

Complex Adaptive Systems are theorized to exhibit nonlinear interactions between its components; these complex and nonlinear interactions make it difficult or impossible to predict the outcomes of an action (Cilliers, 2000; Marion, 1995). Scholars propose that the scope of an outcome is determined by the size of its causes, the context, and the history of the system (Cilliers, 2000). However, because these determinants likely cannot be fully identified and understood, an outcome cannot be predicted with certainty (Cilliers, 2000).

Additionally, DeRue (2011) has proposed that the emergence and effect of leadership actions are contingent on the response of other agents in an organizational system. This interdependency further complicates leaders' ability to predict the outcome of their actions. Since leaders are not able to predict a reliable response to change efforts in complex organizations, they are generally not able to directly control change and should therefore refrain from attempting a top-down approach to change (Cameron & Green, 2020; Grobman, 2006).

The proposed inability to control change by planning the focus of, and the overall approach to, change does not imply the hands-off style of a laissez-faire leadership (Northouse, 2016; Hazy & Uhl-Bien, 2014). On the contrary, leaders can and should play an active role in designing their organizations in ways that promote organizational ability to adapt and enable change to emerge. Leaders can influence change indirectly by designing learning experiences and creating a context conducive to change (Schneider & Somers, 2006).

Leaders can create organizational context for emergent change and adaptability by encouraging sensemaking, creating an organizational identity that is neither too rigid nor too flexible, creating conditions that enable interactions between organizational members and their self-organization, and/or keeping the organizations at the edge of chaos where order and disorder are balanced. These interrelated approaches to change are well suited for complex organizations

because they consider the interdependent, nonlinear organizational relationships and the unpredictability of outcomes (Cilliers, 2000; Marion, 1995), which are typical for complex organizations. Rather than attempting to directly control change through planned top-down approaches that are usually ineffective (Lawrence, 2015), the complexity approaches to emergent change described below can create conditions for complex organizations to be able to adapt and change continuously.

Sensemaking. One way leaders are able to influence change is by facilitating the process of sensemaking (Kezar, 2001; Weick et al., 2005). Sensemaking enables the integration of new knowledge into an organization's operations (Pavlou & El Sawy, 2011). A critical part of sensemaking is talking, which is a process that encourages people to discover what they are thinking about (Birnbaum, 1988) and experiment with different identities (Lawrence, 2015). Desired outcomes of sensemaking are the ability to articulate the meaning of circumstances and co-creation of a coherent social view (Lawrence, 2015). Sensemaking ideally results in identity construction and informs action that does not require a top-down directive but, rather, emerges from social interactions (Lawrence, 2015; Weick et al., 2005).

Organizational Identity. Sensemaking and action-taking can both be influenced by organizational identity, which has been associated with organizational adaptability (Schneider & Somers, 2006). Organizational identity is defined as "the central and enduring attributes of an organization that distinguish it from other organizations" (Whetten, 2006, p. 220). Members of an organization refer to the collective understanding of organizational identity when they grapple with profound choices (Whetten, 2006).

To be able to adapt and change, scholars have proposed that organizations need an identity that is neither too rigid nor too flexible. Organizational identity that is too rigid

discourages adaptation, and identity that is too malleable may lead to a hyper-adaptive system that is also not able to successfully adapt in the long term (Schneider & Somers, 2006). An effective organizational adaptability encourages both continuity and change (Schneider & Somers, 2006).

Even though organizational identity can have deep historical roots, it can be consciously influenced (Schneider & Somers, 2006). Manipulating organizational identity is one strategy that leaders can employ to influence change. For example, leaders can foster identity that allows both continuity and change by developing ambidextrous organizations (Schneider & Somers, 2006). Such organizations create a balance between two organizational functions of exploration and exploitation; they simultaneously explore new ideas and exploit existing resources (Beckman, 2006; March, 1991; Schneider & Somers, 2006).

In addition to developing a balanced identity through organizational ambidexterity, there are ways that leaders can change the strength of the identity of their organizations to encourage more change or more continuity. Schneider and Somers (2006) have proposed that leaders can decrease the rigidity of an organizational identity by de-emphasizing symbols, myths, and stories. Schneider and Somers further suggested that increasing the number of organizational sub-units, encouraging external relationships, and reducing inter-organizational connections can add new and varied sources of identity. This leads to a reduction of the strength of an organizational identity, which makes the identity more flexible and allows for change. On the other hand, an opposite set of actions can make a highly chaotic organizational identity more stable, which will encourage continuity (Schneider & Somers, 2006).

Social Interactions and Self-Organization. Organizational identity can affect sensemaking, which is a social process that requires dialogue (Weick et al., 2005). Because it appears that change generally emerges from dialogue, dialogue and social interaction are positioned at the center of organizational change (Lawrence, 2015). Dialogue and social interaction can be encouraged by leaders who have the ability to facilitate such interactions. For example, leaders can encourage dialogue by listening, being open to others' input, being transparent, giving feedback, and addressing others' concerns, as well as reflecting on organizational efforts (Lawrence, 2015).

Furthermore, to position their organization for adaptability and change, leaders should also encourage informal communication and collaboration networks at multiple levels of an organization (Grobman, 2006). Leaders can promote such rich interactions by developing organizations with shallow structures (Cilliers, 2000; Regine & Lewin, 2000) as well as recognizing and rewarding collaboration, such as brainstorming (Diesel & Scheepers, 2019). Leaders can further encourage dynamic interactions by creating shared workspaces or defining job descriptions without strict boundaries (Uhl-Bien & Marion, 2009).

Social interactions are hypothesized to be necessary for, and contribute to, self-organization of a system. Self-organization in Complex Adaptive Systems results from interactions between the system's agents, including people, ideas, information, and technology (Burnes, 2005; Cilliers, 2000; Uhl-Bien & Arena, 2018). These agents are interdependent (Schneider & Somers, 2006) and their interactions can cause tension between potentially competing priorities (O'Reilly & Tushman, 2013; Uhl-Bien & Arena, 2018). These tensions contribute to system instabilities, which may be a necessary prerequisite for system change (Mathews et al., 1999).

It has been proposed that change in Complex Adaptive Systems happens through self-organization, which enables the emergence of new order (Burnes, 2005). Leaders can, therefore, influence change by creating conditions that enable self-organization. One way to foster self-organization and influence change is for leaders to encourage rich flow of information (Uhl-Bien & Marion, 2009). Furthermore, leaders should provide directions with minimal detail; this allows for solutions to emerge (Grobman, 2006). Pushing authority to lower levels of an organization is another way to enable self-organization and encourage change (Bradbury & Lichtenstein, 2000).

Additionally, complex systems contain simple rules that generate order. Self-organization has been proposed to occur through the operation of a limited number of these order-generating rules (Burnes, 2005). When old rules can no longer accommodate a changing environment, complex systems generate new, more appropriate order-generating rules (Burnes, 2005). Leaders can encourage change by purposely changing order-generating rules, such as rules for communication between different levels of an organization (Burnes, 2005; Grobman, 2006).

Positioning at the Edge of Chaos. Organizations need the right context for effective adaptation to occur. Scholars have proposed that complex systems have the highest capacity to adapt and, consequently, change when they operate at the "edge of chaos" (Schneider & Somers, 2006). The edge of chaos is defined as the space between order and disorder where creativity, growth, and self-organization are at their optimum and where organizational complexity and adaptability are maximized (Burnes, 2005; Grobman, 2006).

Chaos has been suggested to play a critical role in adaptation because a system's capacity to evolve depends on its mix of chaos and order (Schneider & Somers, 2006). On the one hand, highly chaotic systems are not able to maintain their behavior because even small forces can result in significant disruptions, which prevents the system's ability to adapt (Schneider &

Somers, 2006). On the other hand, highly ordered systems are too rigid to coordinate new behaviors, which also impedes on their ability to adapt (Schneider & Somers, 2006).

Leaders can positively influence adaptability by keeping their organizations at the edge of chaos where order and disorder are balanced. Leaders can maintain order by providing a vision for the organization (Lawrence, 2015). Including multiple perspectives while developing a vision can help align the organization around a common purpose (Lawrence, 2015) and further encourage order. In contrast, when an organization is too structured, leaders can inject a sense of chaos by generating uncertainty and ambiguity; this will help keep the organization at the edge of chaos where the potential for change is optimized (Regine & Lewin, 2000).

Uncertainty and ambiguity can cause stress that may be uncomfortable for organizations and individuals (Kezar, 2018). However, scholars suggest that organizations benefit from maintaining some anxiety and tension (Uhl-Bien et al., 2007). Embracing tension encourages change because tensions have been proposed to generate system-wide emergent learning that is associated with change (Lichtenstein et al., 2006). Leaders should therefore refrain from "fixing" what they believe does not go according to plan (Grobman, 2006).

To move their organizations closer to the optimal edge of chaos, leaders can also change rules of communication (Grobman, 2006). Grobman (2006) suggested that, to move away from excessive chaos, leaders can reduce or block some communication, especially between departmental units. Conversely, leaders can move their organization away from too much stability by encouraging memos, meetings, and other interactions (Grobman, 2006).

Challenges to Adaptability and Emergent Change

Any change effort, including complexity approaches, may pose challenges. An obvious challenge to the complexity approaches suggested in this literature review is the potential lack of

perceived “control” that leaders are able to impose over the change process (Cameron & Green, 2020). This challenge may be further amplified by beliefs held by staff and the leader about leadership and the role of a leader in change, as they may conflict with complexity principles. Additionally, some leaders may hold implicit theories of change that serve as a barrier to change on college campuses (Kezar et al., 2015). An example of an implicit theory of change that may hinder it is a belief that change is a rational process (Kezar et al., 2015).

Another challenge to creating conditions for adaptability is the management of contradictions and paradoxes, which are inherent in Complex Adaptive Systems (Tourish, 2019; van Nistelrooij & de Caluwé, 2016). In Complex Adaptive Systems, contradictory perspectives are thought to be present, acceptable, and even necessary (van Nistelrooij & de Caluwé, 2016). Some of these contradictions include the need for both order and disorder, an organizational identity that is neither too rigid nor too flexible, exploration and exploitation, change and continuity, conflict and collaboration, and differentiated interests between organizational agents (March, 1991; Smith, 2014; Schneider & Somers, 2006; Tourish, 2019; Uhl-Bien & Marion, 2009). Specific to higher education is the paradox of academic staff being considered to be autonomous professionals and at the same time being accountable to senior administrators as employees of a university (Barnett, 2001). Scholars argue that adopting both/and approaches is necessary for managing paradoxes and that such dialectic approaches are crucial for the success of organizations (van Nistelrooij & de Caluwé, 2016).

Related to the challenge of managing paradoxes is a potential lack of dialectic thinking when developing a context for adaptability. A dialectic perspective embraces contradictions and paradoxes (Bledow et al., 2009), which are considered to be an inherent part of Complex Adaptive Systems and their ability to adapt and change. Rather than resulting in an either/or

choice or a compromise, which are characteristic of a dualistic approach, dialectic thinking has been proposed to result in a higher order integration of contradictions (Bledow et al., 2009); this integration represents change. A limited potential for dialectic thinking may, therefore, hinder change.

There are other challenges related to adaptability and change that may be present in some organizational contexts but not others. The challenge that every leader and individual in any organization encounter, however, are ethical dilemmas that can be defined as "choices that cannot be backed up scientifically or objectively" (Cilliers, 2000, p. 29). Because of the complexity and nonlinearity of interactions in organizations, individuals cannot know with certainty the outcome of their decisions (Cilliers, 2000; Marion, 1995). Cilliers (2000) reasoned that, since decisions are based on values that individuals choose, individuals are responsible for their own decisions. Because decisions are not grounded in a complete objectivity but, rather, represent what the individuals believe they *should* do, Cilliers (2000) concluded that all decisions contain an ethical dimension.

An example of an ethical dilemma is the misuse of data, which may be distorted, manipulated, or omitted to influence change (Kezar, 2018). Furthermore, withholding information has been proposed to create uncertainty and ambiguity, which can result in unhealthy levels of stress among employees (Kezar, 2018). Kezar (2018) also indicated that individuals who raise objections to change tend to be excluded from the process. The scholar argued, however, that resistance should be embraced because it can indicate that a change may be unethical.

Kezar (2018) suggested several ethical approaches to change, including stakeholder participation and input, broad information sharing, open communication, acknowledgements of

differing values and interests, and co-creation through ongoing dialogue. These approaches align with complexity principles related to change and organizational adaptability, such as sensemaking, collaboration networks, and dialogue (Grobman, 2006; Lawrence, 2015). Regarding higher education specifically, Kezar (2018) proposed that, in order to act ethically, higher education administrators need to consider whether changes in their institutions serve managerial interests or the interests of students. The scholar argued that "students' interests should be the ultimate interest served through any change initiative because they are the primary beneficiaries and main focus of educational institutions" (p. 29).

Organizational Ambidexterity

The ability to adapt is associated with an organization's success in a changing environment (Boylan & Turner, 2017). Uhl-Bien and Arena (2018) proposed that to maintain long-term adaptability and consequently contribute to an organization's success, organizations must manage the tension between contradictory objectives: the need to innovate and the need to produce. The capacity of an organization to address two incompatible objectives equally well has been termed *"organizational ambidexterity"* (Birkinshaw & Gupta, 2013).

Ambidexterity Defined

Bledow et al. (2009) defined ambidexterity as "the ability of a complex and adaptive system to manage and meet conflicting demands by engaging in fundamentally different activities" (p. 320). Such activities enable organizations to manage today's business efficiently while simultaneously being adaptive to environmental changes (Raisch & Birkinshaw, 2008).

The duality of contradictory organizational objectives and functions has been operationalized in various ways; examples include alignment/adaptability (Gibson & Birkinshaw, 2004) or evolutionary/revolutionary change (Tushman & O'Reilly, 1996). Most

scholars, however, express the duality of ambidexterity in organizations as exploration/exploitation (e.g., Gupta et al., 2006; Havermans et al., 2015; Junni et al., 2015; O'Reilly & Tushman, 2004). Organizational researchers tend to agree that the dual functions of exploration of new ideas and exploitation of existing resources are necessary strategies for organizations to survive (Benner & Tushman, 2003; Gupta et al., 2006; March, 1991; O'Reilly & Tushman, 2013).

Exploration is defined as an organization's ability to explore and innovate (Smith & Tushman, 2005). Exploration utilizes divergent thinking (Smith & Tushman, 2005); it increases variance and generates internal variety (Beckman, 2006). Exploration is traditionally associated with search, variation, risk taking, experimentation, play, flexibility, discovery, and innovation (March, 1991). Explorative activities are considered to result in new knowledge or departure from existing knowledge and in new capabilities (Jansen et al., 2006; March, 1991). Within the complexity leadership framework, exploration is a function of the entrepreneurial system that is responsible for the development of novelty to respond to changes in the environment (Uhl-Bien & Arena, 2017).

Exploitation, on the other hand, is defined as activities that broaden existing knowledge and skills, as well as improve and expand what is already established (Beckman, 2006; Jansen et al., 2006; March, 1991). Exploitation utilizes disciplined problem solving and convergent thinking (Smith & Tushman, 2005); it decreases variance and results in increased efficiency (Beckman, 2006). Exploitation is associated with refinement, choice, production, efficiency, selection, implementation, and execution (March, 1991). From the lens of the complexity leadership framework developed by Uhl-Bien and Arena (2017), exploitation is a function of the

operational system that converts emergent ideas into organizational systems and structures that deliver ongoing results.

The theory behind simultaneous exploration and exploitation is that too much exploration and innovation can create chaos without the stability of exploitation activities. On the contrary, too much focus on exploitation can lead to stagnation and even obsolescence if it is not balanced with the change that is brought about by exploration. In other words, highly chaotic systems cannot maintain their behaviors and highly ordered systems are too rigid to coordinate new behaviors (Schneider & Somers, 2006). Organizations that effectively manage the two functions of exploration and exploitation have been proposed to be ambidextrous – they both exploit existing resources and explore new opportunities and competencies (Beckman, 2006). Organizations develop ambidexterity by building "internally inconsistent architectures and cultures" (Smith and Tushman, 2005, p. 524).

Literature on ambidexterity suggests that the often-conflicting activities and demands of exploration and exploitation create tensions, paradoxes, contradictions, and dilemmas when organizations attempt to utilize both functions simultaneously (e.g., Andriopoulos & Lewis, 2009; Bledow et al., 2009; Smith, 2014; Umans et al., 2018). At the core of ambidexterity theory is the tension between the need to innovate and the need to produce (Tushman & O'Reilly, 1996; Uhl-Bien & Arena, 2018). Scholars have proposed that this tension stems from the fundamentally different and often contradictory activities and structures of innovation versus production, as well as exploration versus exploitation (O'Reilly & Tushman, 2013; Uhl-Bien & Arena, 2018). The tension that results from the conflicting needs between exploratory and exploitative activities has been theorized as being characteristic of the adaptive process (Tushman & O'Reilly, 1996; Uhl-Bien & Arena, 2018). Ambidexterity has been proposed to

foster organizational adaptability (Beckman, 2006; March, 1991), which is the topic of the current study.

The current study is situated within the context of public universities. Scholars suggest that ambidexterity is relevant to organizations in both the private sector (Gibson & Birkinshaw, 2004; Güttel et al., 2015; Havermans et al., 2015; Jansen et al., 2009) as well as in the public sector (Choi & Meyers Chandler, 2015; Gieske et al., 2019). In the public sector, which provides the context for this study, ambidextrous strategy has been associated with achieving public goals, preserving present and future quality of public services, and maintaining legitimacy towards stakeholders of public organizations (Gieske et al., 2019). Ambidexterity in public organizations is conceptualized as the ability to innovate while concurrently improving existing processes, products, or services (Gieske et al., 2019). It has been proposed that public institutions are pressed to innovate to enhance public service performance and at the same time are expected to make their operations more efficient (Gieske et al., 2019) and prioritize revenue creation (Pucciarelli & Kaplan, 2016).

More specifically related to higher education, Christensen and Eyring (2011) made an argument for ambidexterity in traditional universities. They proposed that, to survive and thrive, traditional universities need to break with tradition but, at the same time, need to build on what they have always done best: discovering new knowledge and using intellectual memory to guide students in their learning.

Universities are urged to innovate for a number of reasons, including meeting the demands of today's quickly changing economy, finding alternative revenue sources (Weisbrod et al., 2008), and serving a changing student population. Universities are creating new inter-disciplinary research centers (Deem, 2001) or developing professional master's degrees that are

aligned with the marketplace to better reflect today's knowledge economy. They also respond with entrepreneurial activities, such as raising private sector funds through consultancies and applied research (Deem, 2001) or forming relationships between universities, industry, and government, labeled the Triple Helix Model (Etzkowitz & Leydesdorff, 1995). Through various collaborations, including university-corporate partnerships, "traditional forms of higher education are being re-crafted into novel possibilities" (Manning, 2018, p. 5). Seemingly conflicting with the need for innovation is the expectation that public universities optimize their operations and enhance efficiency. Universities accomplish this call for optimization and efficiency, for example, by offering online courses that use technology to automate instruction (Mirrlees & Alvi, 2014).

History of the Ambidexterity Concept

The term ambidexterity was coined by Duncan in 1976 (as cited in O'Reilly & Tushman, 2013) to describe dual organizational structures for managing different activities and managerial capabilities. The development of the organizational ambidexterity concept has benefited from the theoretical ideas presented by March (1991) in his seminal article on exploration and exploitation in organizational learning. These theoretical ideas have been widely incorporated into ambidexterity scholarship. In the article, March (1991) argued that there are incompatibilities between the exploration and exploitation modes of organizational learning. March proposed that both exploration and exploitation are essential aspects of organizational learning and that an appropriate balance between these two functions is a key factor in an organization's success.

Interest in organizational ambidexterity is vast, as is evident from hundreds of empirical studies (e.g., Andriopoulos & Lewis, 2009; Beckman, 2006; He & Wong, 2004; Lubatkin et al., 2006; Nemanich & Vera, 2009; O'Reilly & Tushman, 2011; Patel et al., 2013; Umans et al.,

2018), theoretical papers (e.g., Benner & Tushman, 2003; Carmeli & Halevi, 2009; Gupta et al., 2006; O'Reilly & Tushman, 2008; Raisch et al., 2009; Tushman & O'Reilly, 1996), review articles (e.g., Chakma et al., 2021; Gupta et al., 2006; Junni et al., 2015; Nosella et al., 2012; O'Reilly & Tushman, 2013; Raisch & Birkinshaw, 2008; Simsek et al., 2009), meta-analyses (e.g., Junni et al., 2013; Rosing et al., 2011), special issues of journals dedicated to the topic (e.g., *The Academy of Management Perspectives,* October 2013), and a number of symposia at professional meetings (O'Reilly & Tushman, 2013).

Birkinshaw and Gupta (2013) suggested that ambidexterity scholarship development has undergone three stages. According to the scholars, the definition stage, occurring between 1995 and 2005, is characterized by attempts to define the concept and illustrate its importance (Gibson & Birkinshaw, 2004; He & Wong, 2004; Tushman & O'Reilly, 1996). The growth stage, occurring between 2006 and 2009, is characterized by exploration of the different forms of ambidexterity, its antecedents and consequences, and the role of moderating and mediating variables (Gupta et al., 2006; Lubatkin et al., 2006). The latest stage, named consolidation, slightly overlaps with the previous stage. The consolidation stage is characterized by exploration of additional aspects of ambidexterity and a proliferation of papers, including in-depth reviews attempting to consolidate ambidexterity research (Chakma et al., 2021; Nosella et al., 2012; O'Reilly & Tushman, 2013; Raisch & Birkinshaw, 2008).

While many review papers attempted to integrate the various strands of ambidexterity scholarship, Birkinshaw and Gupta (2013) argued that the papers caused further fragmentation of the field that had already lacked integration. A recent review paper concluded that, considering the increasing complexity of the external environment, future studies on ambidexterity should use a complexity approach to explore new challenges, new dynamics, and new solutions, which

is “continuously evolving due to the unpredictable, varied, and complex interaction of different actors” (Chakma et al., 2021, p. 13). Because ambidexterity has been proposed to foster organizational adaptability (Beckman, 2006; March, 1991), it can be concluded that future research on adaptability would benefit from using complexity approaches as well.

Organizational Ambidexterity Scholarship

Literature on organizational ambidexterity is fragmented. Rather than providing a comprehensive overview, this section focuses on the most influential articles on organizational ambidexterity and on literature that is most relevant to the current study.

A widely researched question in the field of organizational ambidexterity is whether ambidexterity positively impacts performance. Research findings that link ambidexterity to organizational performance are robust. Ambidexterity has been positively associated with sales growth (He & Wong, 2004), subjective ratings of performance (Lubatkin et al., 2006), innovation (Tushman et al., 2010), and firm survival (Hill & Birkinshaw, 2014). Meta-analyses and reviews of prior studies reveal that organizational ambidexterity is overall positively and significantly associated with performance (Junni et al., 2013; Nosella et al., 2012).

The positive association between organizational ambidexterity and performance is not always straight-forward. The results of a meta-analysis of 69 prior studies on the ambidexterity-performance relationship (Junni et al., 2013) revealed the presence of moderators, including industry and performance measures. For example, the meta-analysis by Junni et al. found that ambidexterity had a weaker impact on performance in manufacturing industries, as opposed to high-technology and service industries. Furthermore, ambidexterity was found to have a varying impact on different measures of performance. Ambidexterity was significantly related to growth but not to profit. These findings suggest that ambidexterity may positively impact the

performance of public and private non-profit universities, which are service institutions that strive for growth rather than profit.

The influence of moderators on the effect of ambidexterity was further illustrated by a study by Lin et al. (2007). The authors (Lin et al., 2007) investigated the performance consequences of ambidexterity in strategic alliance formations by analyzing statistical data from 62 firms across five U.S. industries, as well as theoretical insights from computer simulations. The study variables included firm performance, alliance ambidexterity, total alliance partners, environmental uncertainty, and alliance event year. The study found that the effects of ambidexterity on performance were contingent on various factors, such as the stability of the organization's environment. Ambidexterity was especially helpful to alliance formation in uncertain environments and in large firms (Lin et al., 2007).

Jansen et al. (2006) conducted a quantitative longitudinal study at a large European financial services firm to examine implications of coordination mechanisms, such as centralization, formalization, and connectedness on exploration and exploitation. Two surveys, each assessing different variables, were administered 10 months apart to the general managers of organizational units for a final sample of 283 respondents. The study by Jansen et al. found that centralization of decision making negatively affected exploration of innovation, while formalization of rules, procedures, instructions, and communications positively affected exploitation of existing knowledge. Connectedness, which is the degree of informal hall talk and accessibility to knowledge, was found to be an important antecedent for both exploration and exploitation. Additionally, Jansen et al. found that the relative importance of exploration and exploitation can shift, depending on the degree to which an external environment is dynamic (i.e., the rate of change and environmental instability) and competitive (i.e., the extent of intense

competition). Empirical evidence indicates that, even though scholars suggest the importance of simultaneous exploration and exploitation (e.g., Gibson & Birkinshaw, 2004; O'Reilly & Tushman, 2013; Uhl-Bien & Arena, 2018), the two functions may not need to be equally balanced (Bledow et al., 2009; Jansen et al., 2006).

Empirical ambidexterity research includes a range of different measurements, levels of analysis, research designs, and samples from varying industries (Junni et al., 2013; O'Reilly & Tushman, 2013). Even though there is vast research on the outcomes of ambidexterity, such as firm performance, most studies have focused on understanding ambidexterity's antecedents (e.g., Andriopoulos & Lewis, 2009; Chang et al., 2009). For example, a study by Andriopoulos and Lewis (2009) investigated tactics for managing the paradox of simultaneous exploration and exploitation and how these tactics enable ambidexterity. This comparative case study investigated five leading firms in the new product design consultancy industry that excelled in both exploration and exploitation. Qualitative data were collected from 86 semi-structured interviews with employees across levels of each firm; informal observations of daily routines of others not directly participating in the study; and archival data, including industry reports and internal documents. The results of the study (Andriopoulos & Lewis, 2009) revealed three sets of paradoxes: (1) profit versus breakthroughs of strategic intent, (2) tight versus loose coupling of customer orientation, and (3) discipline versus passion related to personal drivers. Study participants viewed these paradoxes as synergistic rather than either/or dilemmas. Each paradox was managed by both integration (i.e., leveraging interdependence) and differentiation (i.e., leveraging distinctness) tactics, which the study authors concluded fostered ambidexterity. Andriopoulos and Lewis further proposed that the role of executives is to manage ambidexterity by setting the context, providing strategic leadership, and allocating resources. However, all

employees within the firm, not just executives, were proposed to be responsible for managing exploration and exploitation paradoxes to foster ambidexterity.

In summary, ambidexterity studies include both qualitative and quantitative analyses, mostly at the firm or the team level; they employ a cross-sectional, rather than longitudinal, approach (as reviewed by Nosella et al., 2012). Researchers have investigated culture, context, and leadership as antecedents of ambidexterity (Jansen et al., 2006; Lubatkin et al., 2006; Nosella et al., 2012), as well as various organizational designs for enabling ambidexterity and handling the tension between exploration and exploitation. Ambidextrous organizational designs and leadership, which are most relevant to the current study, are described in more detail in the following section.

Organizational Designs for Ambidexterity

Ambidextrous organizational designs help to avoid both the success trap and the failure trap (Choi & Meyers Chandler, 2015). The success trap is a result of past successes of organizations that prevent them from adapting to changing environments because the benefits of the current state are "immediate, known, and certain" (Choi & Meyers Chandler, 2015, p. 145). The success trap results from too much focus on exploitation of current competencies; the insufficient exploration of new ideas prevents an organization from adapting to changes in the environment (Junni et al., 2013). This leads to poor performance outcomes in the long run (Smith & Tushman, 2005). On the other hand, the failure trap results from too much focus on exploration and insufficient effort to integrate new ideas into the organization (Junni et al., 2013). This leads to new ideas being replaced by other new ideas before they have contributed to the organization's success (Choi & Meyers Chandler, 2015).

Researchers have explored multiple organizational designs for achieving organizational ambidexterity to balance exploration and exploitation and to deal with the resulting tension between these seemingly contradictory functions. Scholars have identified structural ambidexterity, contextual ambidexterity, and combined ambidexterity as the main designs for achieving organizational ambidexterity. Because organizational adaptability is rooted in ambidexterity (Beckman, 2006; March, 1991) and because leaders are crucial to the development of ambidextrous organizational designs ((Junni et al., 2015), the various designs are reviewed below to inform the current study's topic on leadership for adaptability.

Structural Ambidexterity. One strand of research on ambidextrous organizational designs suggests that organizations can deal with tensions by separating the two activities of exploration and exploitation into distinct units (Jansen et al., 2009; O'Reilly & Tushman, 2011). The organizational separation of exploration and exploitation has been termed in literature *structural ambidexterity* (e.g., Güttel et al., 2015; O'Reilly & Tushman, 2013).

Empirical research supports the positive association between organizational separation of the exploration and exploitation functions and ambidexterity (Benner & Tushman, 2003; Jansen et al., 2009; O'Reilly & Tushman, 2011; Tushman et al., 2010). A frequently cited study that emphasized structural separation between different, often conflicting activities was conducted by Tushman and O'Reilly (1996), who began using the concept of ambidexterity in their research on management of change processes. The researchers examined three companies that they considered as successful in balancing the tensions of simultaneously pursuing incremental and discontinuous innovation: Hewlett-Packard, Johnson & Johnson, and ABB. The scholars found that the companies utilized small, autonomous units to encourage risk taking typical of discontinuous innovation (exploration). However, the researchers (Tushman & O'Reilly, 1996)

also found that the companies leveraged the larger organization for incremental innovation that is typical of exploitation for functions such a marketing and manufacturing. Tushman and O'Reilly suggested that each organization as a whole must be able to host multiple contradictory structures, processes, and cultures to simultaneously pursue both incremental innovation (typical of exploitation) and discontinuous innovation (typical of exploration).

Structural ambidexterity provides advantages. Structurally ambidextrous organizations are efficient because the separate units can specialize (Cannaerts et al., 2016). This leads to the organization's increased ability to maintain competencies in both exploration and exploitation (Raisch et al., 2009). Structural ambidexterity also has its challenges. For example, structurally ambidextrous organizational designs have been found to be demanding for top management teams who need to be able to handle contradictions that stem from the different learning modes of exploration versus exploitation (Smith & Tushman, 2005). Additionally, the separation of exploration and exploitation in structurally ambidextrous organizations may create barriers to information-sharing and cooperation (Bledow et al., 2009; Raisch & Birkinshaw, 2008).

Research shows that structural ambidexterity, where exploration and exploitation are separate, requires mechanisms to integrate both functions to create value (Jansen et al., 2009; O'Reilly & Tushman, 2011; Raisch et al., 2009). For example, O'Reilly and Tushman (2011) conducted semi-structured interviews with senior managers at 15 firms across several industries that were attempting to manage separate exploratory and exploitative units. Results revealed that the structural ambidexterity in these firms was linked with increased growth or profit (O'Reilly and Tushman, 2011). However, a data analysis also suggested the importance of a common vision. This common identity of highly differentiated units within each firm allowed the firm to

integrate the distinct functions of exploration and exploitation, which contributed to achieving ambidexterity and, consequently, to creating value by increasing growth or profit.

Contextual Ambidexterity. Another strand of research on ambidextrous organizational designs investigates *contextual ambidexterity*, in which exploration and exploitation are organizationally joined (e.g., Gibson & Birkinshaw, 2004; Havermans et al., 2015). This approach to organizational ambidexterity emerged with Gibson and Birkinshaw's (2004) article that focused on the tension between the need to adapt and the need to align an organization's capacities, as well as on the role of organizational context in balancing the two needs. The scholars introduced the term contextual ambidexterity to expand scholarly inquiry from focusing solely on structural separation to investigating the different ways organizations manage the tensions that stem from engaging in different, possibly conflicting, activities at the same time.

This body of literature suggests that ambidexterity can be achieved by creating a context that allows the conflicting activities to exist within the same unit (Gibson & Birkinshaw, 2004; Lubatkin et al., 2006). The premise for a contextual ambidexterity design is that the tensions between exploration and exploitation should be integrated within the same organizational unit because they are mutually dependent. In addition to their dependency on one another, exploration and exploitation may potentially be mutually enabling and a constituent of one another (Farjoun, 2010). According to Farjoun (2010), exploitation and stability enable exploration and change, and vice versa. Furthermore, Birkinshaw and Gupta (2013) argued that, in reality, there is no unit in an organization that does only one thing.

Empirical research supports the contextual ambidexterity design for enabling both exploration and exploitation. Gibson and Birkinshaw (2004) conducted a mixed methods study to investigate contextual ambidexterity and its antecedents, consequences, and mediating role on

organizational performance. The researchers collected interview and survey data from over 4,000 executives and employees across hierarchical levels from 41 business units of 10 multinational firms. Each business unit represented a unique industry context. The study measured firm performance in terms of achieving its full potential and satisfying its employees and customers; ambidexterity that was conceptualized as a combination of alignment and adaptability; and organization context that included a performance management context and a social context. *Performance management context* included the elements of setting challenging goals, issuing creative challenges instead of narrowly defining tasks, focusing on getting a job done well rather than being promoted, stretching people, rewarding based on performance against goals, holding people accountable, and using evaluations to improve performance. *Social context* included the elements of developing subordinates, giving everyone sufficient authority to perform their job well, pushing decisions to lower levels, providing access to information, developing the capabilities to execute an overall strategy, basing decisions on facts rather than politics, treating failure as a learning opportunity, being willing to take prudent risks, and setting realistic goals.

Gibson and Birkinshaw (2004) found that the higher the level of ambidexterity a business unit had (i.e., interaction between alignment and adaptability), the better it performed in terms of achieving its full potential and satisfying its employees and customers. The interaction of performance management context and social context was also positively correlated with performance. Results showed that ambidexterity mediated the relationship between context and performance, suggesting a positive role of contextual ambidexterity on performance. The researchers also highlighted the importance of senior executives in making an organization context effective and developing contextual ambidexterity. They concluded that “beyond helping

to establish a supportive context, senior executives likely play a role in fostering ambidexterity, primarily by encouraging and nurturing adaptability" (Gibson and Birkinshaw, 2004, p. 223).

Similarly, Havermans et al. (2015) explored the role of leaders and found that leaders create contextual ambidexterity through their interactions with their team and through their interpretations and responses to the changes in the environment (details on the study are presented in the Leader Role in Ambidexterity section below). Havermans et al. study (2015) supported the notion that organizations often require mechanisms to integrate exploration and exploitation to create value (Jansen et al., 2009; O'Reilly & Tushman, 2011; Raisch et al., 2009), even in organizations with contextual ambidexterity designs.

Like structural ambidexterity, contextual ambidexterity has also been argued to present both advantages and limitations. On the one hand, contextual ambidexterity may promote synergies between exploration and exploitation that can enable each other (Farjoun, 2010). On the other hand, it may be challenging to create such synergies. In contextually ambidextrous organizations, employees can decide themselves how to allocate their time for different activities. However, to make decisions on how to spend their time, it has been shown that employees need background knowledge on their organization's strategy and business model (Güttel et al., 2015). To possess background knowledge, employees need to be willing to obtain it (Güttel et al., 2015). Furthermore, contextual ambidexterity and pursuing both activities within the same unit may pose conflicting demands on individuals and the organization at large (Smith & Tushman, 2005), which presents another possible disadvantage to this organizational design. Lastly, the two activities of exploration and exploitation may compete for scarce resources (March, 1991) when organized within the same unit.

Combined Ambidexterity. A third set of studies on ambidextrous organizational designs demonstrates the advantages of combining elements of both structural and contextual ambidexterity (Cannaerts et al., 2019). Combining elements of both structural and contextual ambidexterity may help organizations manage the trade-offs of these two organizational designs for achieving ambidexterity.

The combined ambidexterity design is consistent with the perspective that exploration and exploitation are both contradictory and complementary (Farjoun, 2010). Research has demonstrated that organizations can successfully combine elements of both structural and contextual ambidexterity to manage simultaneous exploration and exploitation. For example, a study by Cannaerts et al. (2019) explored necessary and sufficient conditions for achieving organizational ambidexterity using qualitative comparative analysis. The researchers collected survey data from 72 respondents employed across hierarchy levels in three cultural and community centers, all of which were classified as public organizations. The analysis revealed that the absence of centralization (i.e., absence of high hierarchy of authority and presence of high participation in decision making) is a necessary condition for ambidexterity. According to the researchers, this indicates that organizations need integration at all organizational levels to achieve ambidexterity. The analysis further revealed several different paths sufficient for achieving ambidexterity, which included a combination of design and leadership conditions of both structural and contextual ambidexterity. The study illustrated that there is not "one solution" to ambidexterity and that ambidexterity may be successfully achieved by combining different organizational designs rather than selecting only one.

Güttel et al. (2015) also found that the balance between exploration and exploitation depends on the interplay between both the structure and context of an organization. The

researchers conducted a single case study of a family owned medium-sized jewelry firm that was innovative and had received several prizes for creativity. At the same time, the firm ensured uniformity and efficiency, indicating that it balanced both exploration and exploitation and was, therefore, ambidextrous. Data sources included semi-structured interviews with employees, reports and internal documents, and observations of workshops and employee everyday behaviors. A qualitative content analysis revealed that structurally separate arenas played a major role in enabling ambidexterity; they enabled employees in this study to engage in exploring new market opportunities that, in turn, enabled exploitative activities related to efficiency. However, the study revealed the necessity of context for achieving ambidexterity, which was enabled by common language, background knowledge about the business model and organizational strategy, and by setting up structures for interactions. The study demonstrated that organizational context plays a crucial role in the integration of structurally separated exploratory and exploitative units, providing further empirical support for employing the combination of structural and contextual designs for successfully achieving ambidexterity.

Leader Role in Ambidexterity

Ambidextrous organizational designs have been found to be composed of interrelated competencies, cultures, incentives, and leadership roles (Tushman et al., 2010). While ambidexterity is comprised of various elements, research suggests that leaders are crucial to the development of ambidextrous organizations (Junni et al., 2015). Much of ambidexterity literature related to leadership focuses on the role of top management teams or leaders with formal authority (e.g., Andriopoulos & Lewis, 2009; Beckman, 2006; Carmeli & Halevi, 2009; Havermans et al., 2015; Junni et al., 2015; Lubatkin et al., 2006; Nemanich & Vera, 2009; O'Reilly & Tushman, 2008; O'Reilly & Tushman, 2011; Smith, 2014; Smith & Tushman, 2005;

Umans et al., 2018). Following is an illustration of research on formal leaders as related to organizational ambidexterity.

Formal Leaders. Researchers have investigated leaders' backgrounds and their effects on organizational ambidexterity. For example, Beckman (2006) explored how the composition of founding members of a management team (i.e., whether they had worked for the same company prior to founding a new one) influences new company's behaviors. Beckman collected longitudinal interview, survey, and archival data from over 170 young high-technology firms in Silicon Valley. Beckman conducted a statistical analysis of the dependent variable of exploration and exploitation behavior; the independent variables of diverse prior company affiliation and common prior company affiliation; and the control variables of industry, venture capital, firm controls, and team controls. Based on the results, Beckman proposed that companies whose founding members had previously worked together engaged in exploitation because they had shared understanding and could act quickly. On the other hand, companies with founding members who had worked at different companies engaged in exploration because of the founding members' unique ideas and contacts. Additionally, companies with a founding team that consisted of members with both common and diverse prior company affiliations engaged in ambidextrous behaviors and were more likely to grow over time. The results suggested that management team composition and background are an antecedent of organizational ambidexterity.

Literature on ambidexterity and formal leaders further suggests that leaders' cognitive abilities could shape organizational ambidexterity. Scholars have pointed out that effective leaders possess cognitive and behavioral complexity for responding to contrary behavior (Carmeli & Halevi, 2009). O'Reilly and Tushman (2011) conducted semi-structured interviews

with senior managers at 15 firms attempting to manage exploratory and exploitative units. A qualitative data analysis revealed that organizations that successfully employed both exploration and exploitation had a leader who was able to resolve the inevitable conflicts that resulted from ambidextrous activities. Further related to cognitive abilities of leaders, ambidexterity has been associated with senior managers' ability to evaluate risk in strategic choices, as well as with risk tolerance and adaptability of top managers (Junni et al., 2015).

In addition to cognitive abilities, leadership style has also been found to influence organizational ambidexterity. Transformational leadership, for example, promoted ambidexterity at the team level within a turbulent environment of an acquisition in a study by Nemanich and Vera (2009). The researchers conducted a field study at a large multinational firm with an American-based division that acquired a competitive firm. A survey data was obtained from 919 employees of the newly acquired firm from various functional areas and across the organizational hierarchy. Variables measured by a statistical analysis included transformational leadership, culture, and ambidexterity. The study found that transformational leadership of team leaders was positively related to culture of psychological safety, openness to diverse opinions, and participation in decision making. This learning culture, in turn, was found to be positively related to ambidexterity.

In addition to transformational leadership, managers' paradoxical leadership, which is the ability to manage exploration and exploitation simultaneously, was also found to contribute to ambidexterity at the unit and firm levels (Andriopoulos & Lewis, 2009, described earlier). In addition to the paradox of needing to both explore new ideas and exploit existing resources, other examples of contemporary strategic paradoxes include the need to integrate globally while also adapting locally, to maximize profits while also improving social welfare and sustainability, to

be both efficient and flexible, centralized and decentralized, or general and specialist (Benner & Tushman, 2015; Grobman, 2006; March, 1991; Smith, 2014; Tushman et al., 2010).

Research has demonstrated that long-term organizational performance may depend on how well leaders can engage paradoxes, as opposed to choosing between options (Smith, 2014). Smith and Tushman (2005) proposed that the effective management of paradoxes, such as the contradictory needs to innovate and produce, is associated with two distinct cognitive processes of differentiating and integrating. *Differentiating* leadership practices recognize distinctions between the needs of existing products and innovation and emphasize the unique characteristics of exploration and exploitation. *Integrating* leadership practices identify and emphasize the synergies, connections, and interdependencies between exploration and exploitation. According to Smith and Tushman, effective managers need to utilize both of these processes.

Leadership Practices for Ambidexterity. Few studies have explored *how* leaders enable ambidexterity within their organizations. Enabling ambidexterity is relevant to the current study's topic on a leader's influence on organizational adaptability because adaptability has been proposed to be rooted in ambidexterity (Beckman, 2006; March, 1991).

Smith (2014) investigated how senior leaders sustain strategic paradoxes and, more specifically, how these leaders make decisions that enable them to explore and exploit simultaneously. The researcher collected data from six strategic business units from one Fortune 500 corporation through observations of top management teams over the course of two years. The qualitative data included 96 interviews with 65 distinct employees at various levels in the company; observations of 16 senior leadership meetings; and archival documents, such as business plans, strategic progress reports, meeting agendas, company websites, and industry analyses. Smith's (2014) qualitative data analysis revealed two main leadership practices that are

both needed for sustaining a commitment to both exploration and exploitation: differentiating and integrating. The labels of differentiating and integrating were adopted from Andriopoulos and Lewis (2009) and Smith and Tushman (2005). To sustain strategic paradoxes, which is necessary for enabling ambidexterity, the results of Smith's study further revealed that leaders dynamically shift their approaches to decision making over time. Leader dynamic decision making included three strategies: choosing between alternatives, accommodating alternatives by finding novel synergies, and accepting existing tensions between alternatives.

Havermans et al. (2015) conducted qualitative research that included two studies to identify leadership practices that enable exploration and exploitation in project-based organizations, as well as how and when leaders shift between these practices. In their first study, the researchers conducted 42 interviews with project team members, project managers, and line managers to explore what leadership practices were used to stimulate exploration and exploitation to create contextual ambidexterity. The researchers found that leadership practices that promoted exploration included the stimulation of the development of a higher complexity of beliefs, such as involving others in projects, stimulating discussion, encouraging cross-team interactions, being available, listening to others, suggesting solutions to current issues, and stimulating the adoption of values related to exploration. Leadership practices in the study by Havermans et al. (2015) that promoted exploration also included the development of a higher complexity of actions, in addition to beliefs. These actions associated with exploration included affording autonomy in accomplishing tasks, encouraging collaboration, and accepting mistakes. The study also identified leadership practices for exploitation, which were essentially the opposites of practices for exploration. Exploitation was enabled by stimulating a lower complexity of beliefs and actions, such as stopping a discussion, not involving others in projects,

stimulating the adoption of values related to exploitation, leaders' making decisions themselves, and enforcing rules.

In the second study by Havermans et al. (2015), the researchers conducted and analyzed additional 11 semi-structured interviews with project and program managers to explore "how and when leaders shift between leadership practices to stimulate either exploration or exploitation to respond to perceived changes in the level of environmental complexity and to sustain the appropriate balance of exploration and exploitation" (Havermans et al., 2015, p. S184). The analysis revealed that leaders in the study dynamically shifted the emphasis on stimulating exploration or exploitation in response to the perceived complexity of the environment. They stimulated exploration in response to a higher environmental complexity as they searched for novel solutions. On the other hand, leaders stimulated exploitation in response to a lower environmental complexity when solutions were found. Additionally, the study results indicated that even though leaders shifted the emphasis toward either exploration or exploitation, they maintained a concurrent focus on the other function.

In addition to empirical research, scholars have developed theoretical models for enabling organizational ambidexterity. Carmeli and Halevi (2009) developed a model to illustrate how top management teams enable organizational ambidexterity. The scholars proposed that information sharing, collaboration, and joint decision making lead to higher levels of behavioral integration of top management teams. This behavioral integration then enables behavioral complexity. Examples of behavioral complexity include the ability of top management teams to exploit complementary resources and skills, the ability to understand complex processes, the capability to provide appropriate responses in diverse situations, increased motivation, more open and transparent communication, the capability to be flexible and spontaneous, and the ability of the

team to adapt to its environment (Carmeli & Halevi, 2009). Because behavioral complexity enables strategic decisions for balancing exploration and exploitation, the scholars concluded that the top management team's behavioral complexity is a mechanism for enabling organizational ambidexterity.

Another theoretical model of the ways leaders enable ambidexterity was proposed by Rosing et al. (2011). Their ambidexterity theory of leadership, which was based on a meta-analysis of existing literature, proposed that leaders must be able to integrate opening behaviors that foster exploration and closing behaviors that foster exploitation. Examples of *opening leadership behaviors* include allowing different ways of accomplishing a task, allowing errors, giving possibilities for independent thinking and acting, or motivating to take risks. *Closing leadership behaviors*, on the other hand, include establishing routines, taking corrective actions, sanctioning errors, or adhering to plans. Similar to Carmeli and Halevi's model (2009) described above, Rosing et al.'s theory considers behavioral complexity of a leader to be a mechanism for employing both opening and closing behaviors and switching between them. Additionally, the theory by Rosing et al. includes a leader's understanding that exploration and exploitation are not mutually exclusive as a condition for enabling organizational ambidexterity.

As is evident from existing literature, ambidexterity scholarship suggests that leaders or senior management teams play a crucial role in integrating exploration and exploitation (Carmeli & Halevi, 2009; Uhl-Bien & Arena, 2018; Tushman & O'Reilly, 1996; O'Reilly & Tushman, 2013). Senior leadership is also proposed to sense and seize new opportunities (O'Reilly & Tushman, 2013) and manage conflict and tension that result from the competing activities of exploration and exploitation (He & Wong, 2004; O'Reilly & Tushman, 2011). Based on

scholarship, leaders appear to be central to organizational ambidexterity and, consequently, to organizational adaptability.

Leadership

Leadership has been written about for more than 2000 years (Kezar et al., 2006). Research on the topic of leadership began in the 19th century (Hunt & Fedynich, 2018) and by 1990, more than two hundred definitions of leadership had been proposed (Northouse, 2016). Leadership in this study is conceptualized as "a multi-layered dynamic system of collaboration and coordination" (Uhl-Bien, 2021, p. 158).

As the large number of leadership definitions suggests, perspectives on leadership are fragmented. This lack of cohesion in defining leadership is reflected in the dozens of distinctive theories that have been proposed. Leadership throughout most of its history was conceptualized as hierarchical, with an emphasis on an individual and social control (Kezar et al., 2006). Research in the last 40 years, however, has yielded nonhierarchical and increasingly democratic styles of leadership (Kezar et al., 2006).

Additionally, some scholars believe that complexity theories are motivating a paradigm shift (Kuhn, 1962) in the social sciences, especially in the study of organizations and leadership (Hazy & Uhl-Bien, 2014; Marion & Uhl-Bien, 2001; Regine & Lewin, 2000). Many classic theories of leadership include possibly limiting assumptions that (1) leaders are those with a formal authority and managerial responsibility; (2) leaders influence followers in a uni-directional pattern; (3) leadership is a personal attribute; and (4) the environment is exogenous to the leadership process (DeRue, 2011). These classic leadership models are often rooted in bureaucratic paradigms; they were effective for production economy of the last century when manufacturing demanded efficiency and control (Uhl-Bien et al., 2007). They can still be useful

for explaining some organizational behavior. For example, when faced with complexity, the natural tendency of organizations is to respond with order, which is often accomplished by hierarchical structures and leadership (Lichtenstein et al., 2006). Order, however, is "the enemy of adaptability" (Lichtenstein et al., 2006, p. 10). While manufacturing generally requires speed and efficiency, organizations that produce knowledge should aim for the goal of adaptability, along with knowledge and learning (Uhl-Bien et al., 2007).

Boylan and Turner (2017) proposed that leaders develop organizational adaptability through their actions, organizational systems, and processes that promote prudent risk taking, new ideas, collaboration, and rewarding of individual adaptability. That said, many scholars argue that leaders themselves are not the direct source of change (Lichtenstein et al., 2006). Rather, contemporary scholars view leadership for adaptability as a complex dynamic *process* that emerges through interactions between people and ideas, as opposed to leadership being a formal role (Bradbury & Lichtenstein, 2000; Lichtenstein, et al., 2006; Uhl-Bien et al., 2007).

Today's knowledge economy demands models of leadership that focus on enabling learning, creativity, and adaptive capacity within Complex Adaptive Systems (Uhl-Bien et al., 2007). Leadership models that account for the complex adaptive challenges that modern organizations and their leaders face (Lichtenstein et al., 2006) may positively contribute to leadership effectiveness. Scholars have noted that leadership failure, including low success rates of planned changed efforts, may be the result of treating adaptive challenges as technical problems (Bushe & Marshak, 2016b; Heifetz et al., 2009).

Modern organizations and their leaders typically face both *technical problems* and *adaptive challenges* (Table 2), as well as a combination of the two (Heifetz et al., 2009). Technical problems are easy to operationally define and can be solved by authorities or experts

with existing knowledge and skills by changing rules or processes in one or just a few places within an organization (Bushe & Nagaishi, 2018; Dunn, 2020; Heifer et al., 2009). On the other hand, it is difficult to agree on what the issue is when facing adaptive challenges (Bushe & Nagaishi, 2018). The definition of an adaptive problem requires learning (Heifer et al., 2009). Adaptive challenges require changes in values, beliefs, relationships, and mindsets, often in numerous places within an organization and across organizational boundaries (Bushe & Nagaishi, 2018). Adaptive challenges cannot be solved by authorities; they require the involvement of stakeholders to engage in experiments and new discoveries, which can lead to wrong turns or dead ends (Bushe & Nagaishi, 2018; Dunn, 2020; Heifer et al., 2009). Unlike technical problems that remain solved until something else changes, solutions to adaptative challenges create new problems that the organization will need to adapt to (Bushe & Nagaishi, 2018).

Table 2
Technical Problems Versus Adaptive Challenges

Comparison	Technical problems	Adaptive Challenges
Definition	Easily defined	Difficult to agree on the issue; requires learning
Impact	One or few places within an organization	Numerous places within and outside of an organization
Solution	Authority or an expert; changes in rules and processes	Stakeholders engaged in experiments & discoveries; changes in values, beliefs, relationships & mindsets
Result	Solved until a new change happens	Creates new problems that require adaptation

The current study focused on how leaders position units and their agents (e.g., people, ideas, information, technology, etc.) to be able to adapt as the unit encounters complex, adaptive challenges, which are problems that require new learning, innovation, and new patterns of behavior. Leadership for adaptability contrasts with leadership for managing change, which tends to focus on how leaders drive change top down through vision and inspiration (Uhl-Bien & Arena, 2018). Complexity leadership for adaptability has been proposed to address current adaptive challenges that are characteristic of Complex Adaptive Systems (Uhl-Bien et al., 2007). Leadership in and of Complex Adaptive Systems is depicted by the Complexity Leadership Theory (Uhl-Bien & Marion, 2009).

Complexity Leadership Theory

Complexity Leadership Theory was proposed by Uhl-Bien et al. (2007) to integrate paradoxes that leaders face, including complexity dynamics and bureaucracy, enabling and coordinating, exploration and exploitation, Complex Adaptive Systems and hierarchy, and informal emergence and top-down control. The theory is well suited to higher education, which is the context of the current study. It has been described as a "framework for leadership that enables the learning, creative, and adaptive capacity of complex adaptive systems in *knowledge-producing* [emphasis added] organizations or organizational units" (Uhl-Bien et al., 2007, p. 304).

Complexity Leadership Theory consists of three leadership functions that are needed for adaptability, which were originally titled adaptive leadership, administrative leadership, and enabling leadership (Uhl-Bien et al., 2007). These leadership functions correspond to more recent titles of entrepreneurial leadership, operational leadership, and enabling leadership, respectively (Uhl-Bien & Arena, 2017); these updated titles are discussed in the sections below.

Entrepreneurial Leadership

Entrepreneurial leadership is a process for generating new ideas or innovative solutions, which leads to creating novelty and helps an organization respond to complex challenges (Uhl-Bien & Arena, 2017). Entrepreneurial leadership is associated with organizational exploration (Uhl-Bien & Arena, 2018). Entrepreneurial leadership engages in cycles of initiating new initiatives, iterating to adapt these initiatives to be able to get accepted into the formal operations, and socializing with networks of individuals and groups to generate and adapt ideas (Uhl-Bien & Arena, 2017). Entrepreneurial leaders tend to have propensity toward action, utilize timing strategically, and are persistent, patient, and flexible (Uhl-Bien & Arena, 2017).

Operational Leadership

Operational leadership is associated with organizational exploitation (Uhl-Bien & Arena, 2018). Like exploitation, operational leadership generates efficiency as it converts entrepreneurial initiatives into systems and structures (Uhl-Bien & Arena, 2017). Operational leadership implements emergent ideas through sponsoring, aligning, and executing (Uhl-Bien & Arena, 2017). Operational leaders sponsor a new idea by generating support from the formal operational system. Operational leaders also facilitate the process of modifying a new idea to better align with organizational needs, as well as aligning the operational system for accepting the new idea. The process of aligning ideas with the system then helps operational leaders with the implementation of the idea so that it becomes integrated into the organization and begins producing ongoing results (Uhl-Bien & Arena, 2017).

Enabling Leadership

Enabling leadership has been proposed specifically as a response to complexity; it represents a crucial part of the Complexity Leadership Theory (Uhl-Bien & Arena, 2017).

Enabling leadership functions in the interface between the operational and entrepreneurial systems (Uhl-Bien & Arena, 2017). It utilizes the principles of Complex Adaptive Systems and helps to initiate and amplify support for new ideas and change (Uhl-Bien & Arena, 2017). Uhl-Bien et al. (2007) proposed that enabling leadership is "a complex dynamic" (p. 306) rather than a person and that it is the origin of organizational change.

Enabling leadership has been proposed to enable conditions, such as mechanisms and contexts, to facilitate the adaptability process (Uhl-Bien & Arena, 2018). According to Uhl-Bien et al. (2007), these conditions are enabled by fostering interaction, creating interdependency, and managing adaptive tension. *Interaction* can be fostered, for example, by developing open-plan workplaces, self-selected work groups, or structuring of rules at a group level, as well as through interactions across groups within a Complex Adaptive System and with the environment (Uhl-Bien et al., 2007). Individuals can contribute to a greater interaction by expanding personal networks, managing information they seek and disseminate, and monitoring the environment for forces that may require adaptation (Uhl-Bien et al., 2007).

Complexity Leadership Theory further posits that, in addition to interaction, agents in a complex system must also be interdependent. *Interdependency* creates pressure to act on the information that is fostered by interaction (Uhl-Bien et al., 2007). Interdependency can be created by affording measured autonomy for informal behavior, by refraining from formal leaders solving problems for employees, or by creating rules that pose pressure to coordinate (Uhl-Bien et al., 2007). Individuals can foster interdependency by engaging in collaboration.

The last strategy of enabling leadership described by Complexity Leadership Theory is fostering *tension*, which has been proposed to be characteristic of organizational adaptability (Tushman & O'Reilly, 1996; Uhl-Bien & Arena, 2018). Tension can be fostered by creating an

atmosphere that embraces dissent and divergent perspectives on issues and where employees are responsible for resolving conflict and finding solutions to their problems (Uhl-Bien et al., 2007). Tension can additionally be fostered by intentional hiring practices to enhance heterogeneity of skills or by structuring workgroups where diverse ideas can interact (Uhl-Bien et al., 2007).

In addition to internal tension, enabling leadership can strategically inject tension that is not already inherent in the system. Strategies for intentionally injecting tension include managerial pressures, distributing resources to support innovation, and demanding results (Uhl-Bien et al., 2007). Furthermore, tension can be introduced by "dropping 'seeds of emergence'," which may stimulate the networked system through new ideas, information, resource allocation, new people, or access to exploration (Uhl-Bien et al., 2007, p. 311).

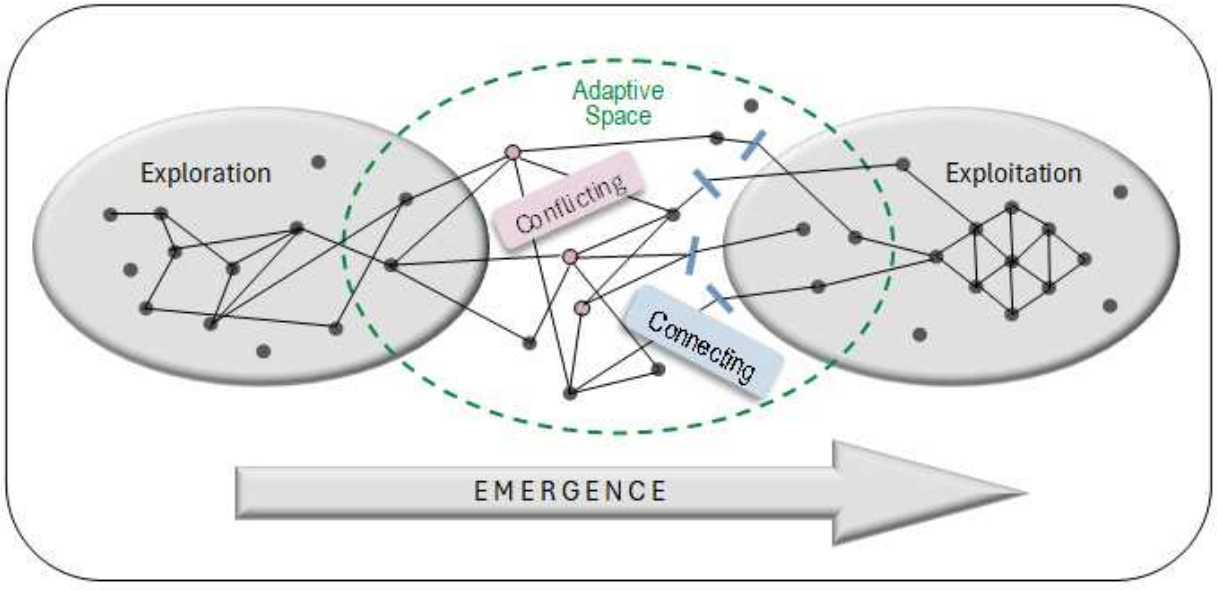
According to Complexity Leadership Theory, individuals can engage in enabling leadership by participating in productive discussions and adaptive problem solving, which means not looking to authority for answers (Uhl-Bien et al., 2007); promoting task conflicts as opposed to interpersonal conflicts (Heifetz, 1994); contributing potentially opposing ideas and opinions and "speaking up"; or exposing groups with unproductive consensus to heterogeneous perspectives (Uhl-Bien et al., 2007).

In summary, enabling leadership engages the tension or conflict that stems from the various paradoxes organizations face, such as the need to innovate (exploration) and the need to produce (exploitation). This *conflicting* is productive and enables organizational adaptability if it is positioned by enabling leadership in the space between chaos and order (Uhl-Bien & Arena, 2017). Conflicting can only be productive if agents in the system (people, ideas, etc.) link up. Enabling leaders facilitate linking up (*connecting*) by enabling information flow and helping agents find points of commonality of needs or perspectives, which contributes to emergence of

new order (Uhl-Bien & Arena, 2017). Conflicting and connecting happens in the interface between entrepreneurial and operational leadership.

Complexity Leadership for Organizational Adaptability Framework

To further build on Complexity Leadership Theory, Uhl-Bien and Arena (2018) developed an integrative framework for leadership that synthetizes the theoretical perspectives on organizational adaptability and complexity. This Complexity Leadership Framework of Leadership for Organizational Adaptability (thereafter the "Complexity Leadership for Adaptability Framework") describes the interface between entrepreneurial and operational leadership functions called *adaptive space*. According to the Complexity Leadership for Adaptability Framework, adaptive space is enabled by conflicting and connecting (Figure 2).



Note. Adapted from Uhl-Bien and Arena (2018) – The Complexity Leadership Framework of Leadership for Organizational Adaptability.

Figure 2
Complexity Leadership for Organizational Adaptability Framework

According to the Complexity Leadership for Adaptability Framework (Uhl-Bien & Arena, 2018), leaders promote adaptation through enabling adaptive space. Within *adaptive space*, new ideas get integrated into the operational system, which leads to new adaptive order. Leaders enable adaptive space by creating structures and processes, such as temporary decentralization, collaboration, brokering, or networks, which engage conflicting and connecting. *Conflicting* is dependent on tension. Tension can be the result of the often-competing functions of exploration and exploitation, as discussed earlier. To engage tension, conflicting also requires interactions of interdependent agents. Agents are defined within the Complexity Leadership for Adaptability Framework as people, ideas, information, technology, etc. Agent interactions are further required for the process of connecting. *Connecting* involves linking up agents to work through the tensions and to promote information flow and interconnectivity. Connecting allows new ideas to get accepted by sponsors who are able to align the operational system to accommodate these new ideas and approaches. Connecting is crucial for the adaptive process because "conflicting without connecting is not productive and can be destructive" (Uhl-Bien & Arena, 2018, p. 100).

Both conflicting and connecting promote the emergence of new ideas (Uhl-Bien & Arena, 2018). Together, conflicting and connecting generate the emergence of new order, which is analogous to the process of adaptation. The Complexity Leadership for Adaptability Framework views the process of conflicting and connecting, and consequently the emergence of new order, as ongoing. The framework, therefore, aligns well with the assumptions of complexity theories that a system is always in a state of change and that organizational change is an inherent part of the system (Black, 2000).

Schulze and Pinkow (2020) answered the call of the Complexity Leadership for Adaptability Framework authors to "study the … ways leaders enable (or stifle) the adaptive process" (Uhl-Bien & Arena, 2018, p. 100). In their empirical qualitative study employing a template analysis technique proposed by King (2012), the researchers interviewed participants across hierarchy levels from different organizations and countries within the management consulting industry to study how enabling leaders create adaptive space to position their organization for adaptability (Schulze & Pinkow, 2020). The leaders who were the focus of the study seemed proficient in creating ambidextrous organizations, including embracing tensions between exploration and exploitation. The leaders created adaptive space mainly by providing employees with space to pursue innovative ideas, by composing diverse teams, and by recruiting individuals with divergent backgrounds. The scholars (Schulze & Pinkow, 2020) further found that leaders created adaptive space by developing cohesion and networks through regular team-building events and providing opportunities for employees to connect with others.

The leaders in the study by Schulze and Pinkow (2020), however, did not sufficiently translate external forces into internal pressure. They also insufficiently leveraged network structures to scale innovation; the researchers found little evidence of virtual or physical forms of adaptive space. Additionally, while the leaders empowered employees to make their own decisions, they failed to develop the employees.

Schulze and Pinkow (2020) encouraged future research to explore how organizations that hold a dominant market position, which may limit the need for change and adaptability, incorporate the notion of leadership that enables adaptability. This suggestion for future research applies to large residential universities, which provide context for this study, because these

universities have in the past derived their strength from tradition and experienced minimal need for change and adaptability.

Conclusion

The literature review chapter conceptualized organizational adaptability as a mechanism for organizations, including institutions of higher education, to anticipate, respond to, and effectively cope with change. Central to the literature on organizational adaptability are the tenets of Complex Adaptive Systems, which were explained to provide insights specifically into the study's topic of leadership for adaptability. Additionally, this chapter reviewed theoretical connections between organizational adaptability and emergent (as opposed to planned) change, which is ongoing and aligns with the principles of Complex Adaptive Systems. The literature review chapter also elaborated on ways to enable organizational ambidexterity, which makes it possible for organizations to adapt to changes in the environment. Lastly, the chapter presented the Complexity Leadership Theory that has been built on complexity principles and informed the current study's topic. The chapter also depicted the Complexity Leadership for Adaptability Framework that guided the study's design for exploring *how senior leaders influence organizational adaptability of their online learning units situated within residential public universities*.

CHAPTER THREE: METHODOLOGY

This study explored the various ways senior leaders of online learning units situated within residential public universities create conditions that influence their unit's ability to adapt to the many forces acting upon it. The methods design was based on the assumption that senior leaders may not consider organizational adaptability intentionally; rather, senior leaders may influence adaptability of the unit they lead intuitively or incidentally through their leadership practices. This chapter describes the research design and rationale for its selection, the researcher positionality, and the methods for studying the key research question of *how senior leaders influence organizational adaptability of their online learning units situated within residential public universities*.

Research Design and Rationale

The design of the current study assumed that there is no single reality that can be objectively measured. Rather, knowledge obtained through research was understood as context specific. While the current study assumed that both the researcher and participants interpret the world (King & Brooks, 2017), knowledge was not viewed as simply subjective. The study design aligned with the principles of *constructivism* that brings objectivity and subjectivity together (Crotty, 1998). Constructivism assumes that humans do not create meaning; they construct meaning based on the world that is already there (Crotty, 1998). The current study aligned with the constructivist epistemological premise that "humans must interact with and reflect on social life in order to know and understand it" (Saldaña & Omasta, 2018, p. 143).

To gain an in-depth understanding of the phenomenon of leadership for organizational adaptability, the current study utilized a *qualitative interpretive research design*. Qualitative

studies, in contrast to quantitative studies, offer methods for exploring phenomena in significant depth (Bhattacharya, 2017; Jones et al., 2014; Klenke, 2008). Qualitative research relies on interpretations (Denzin & Lincoln, 2011; Klenke, 2008). Interpretivism posits that knowledge is constructed through interpretations of experiences of and in the world (Hiller, 2016). As such, interpretive qualitative research is useful for making sense of actions and narratives (Denzin & Lincoln, 2011; Glesne, 2016). An interpretive design was well suited to the current study because the participants themselves may not influence organizational adaptability with conscious intention. Rather, the descriptions of participant practices were interpreted by the researcher as having an influence on creating conditions for connecting and conflicting, which are theorized to enable organizational adaptability. The interpretation was based on the Complexity Leadership for Adaptability Framework (Uhl-Bien & Arena, 2018) and other relevant scholarship.

To gain a better understanding of the phenomenon of leadership for organizational adaptability, the study was guided by a *phenomenological approach*, which is designed to bring together the objective and subjective dimensions of experiences (Peoples, 2021). The field of phenomenological inquiry was established in the early twentieth century by Husserl, who is considered its intellectual founder, as well Heidegger, Scheler, and Stein (van Manen, 2014). Moustakas (1994) described phenomenological research as involving "a return to experience in order to obtain comprehensive descriptions that provide the basis for a reflective structural analysis that portrays the essences of the experience" (p. 13). Phenomenology aims to describe and interpret experiences, not to explain them (van Manen, 2014). The phenomenological approach to research was, therefore, well suited for the current study, which collected descriptions of participants' lived experiences and interpreted these experiences as they relate to the phenomenon of leadership for organizational adaptability.

Researcher Perspective

In qualitative research, acknowledging the researcher's position within the context of the study helps the audience understand the potential influence of social identities on the research process (Jones et al., 2014). Following is, therefore, my (the researcher's) perspective as it relates to the current study, as well as an elaboration on the role of researcher reflexivity in qualitative research.

For over 20 years, I have worked in a continuing education division that has historically centralized most online learning activities at a large, mostly residential university. I have a considerable background in online learning, including developing, implementing, managing, and evaluating online academic programs. I also have substantial industry experience to inform selection criteria for the leaders and the online learning units that were included in the current study.

As part of my professional responsibilities, I have navigated the tension between the need to adapt to the changing environment and the desire to maintain existing structures, processes, and policies. As such, I have a deep interest in the topic of organizational adaptability of online learning units situated within large residential universities.

It is important for researchers to make explicit their preunderstandings by acknowledging their assumptions; this holds biases at bay (Jones et al., 2014). Because of my experience with the study topic, I carry preunderstandings and personal biases. For example, my own experience supports the widely held belief that residential public universities are slow to change. Furthermore, I have experienced university leaders who do not seem, from my vantage point, to consciously work toward developing conditions for adaptability to a changing environment. Lastly, my experience suggests that staff members often work at or above their capacity and,

therefore, focus mainly on incrementally improving existing programs, structures, and processes, while spending insufficient or no time exploring new ideas. I believe that this structure is not conducive to fostering organizational ambidexterity, which demands a balance between exploration of new ideas and exploitation of existing resources, and has been proposed to play an important role in adaptability (Beckman, 2006; March, 1991).

Additionally, I understand the role of researchers as the human instrument in qualitative research. As such, researchers critically reflect on how the researcher, study participants, setting, and research procedures interact and influence each other (Glesne, 2016). Researcher reflexivity is defined as a constant examination of one's positionality, perspectives, backgrounds, and insights and how they influence all aspects of a study, including research design, data, selection of theories, study context and participants, and presentation of study results (Vagle, 2018). Reflexivity helps researchers maintain an awareness of the self in the research situation and of the role of the self in constructing that situation (Glesne, 2016).

Methods

The methods section begins with an explanation of the selected delimitations and resulting limitations of the study. It then describes participant selection, recruitment, and demographics; the methods for data collection and analysis; the approach for maintaining participant privacy and confidentiality; and the strategies for ensuring the study's trustworthiness and quality.

Delimitations and Limitations

A few *delimitations* were imposed by the researcher to narrow the scope of the study and to ensure a fairly homogenous sample, which resulted in depth, as opposed to breath, of understanding (Glesne, 2016; Smith et al., 2022). The fairly homogenous sample also enabled

the researcher to analyze the patterns of convergence and divergence within the data (Smith et al., 2022). To ensure a fairly homogenous sample, all participants included in the current study were selected from a higher education institution that met selected criteria as classified by the Carnegie Classification of Institutions of Higher Education (n.d.). The selected Carnegie classification criteria below yielded a total of 108 qualified institutions:

- Selected institutions were classified as large, public, primarily or highly residential doctoral universities with very high research activity.
- Only U. S. institutions were included.

Not included were two-year and private institutions, as well as institutions with special focus, such as medical or technical schools. This institutional delimitation was imposed because of the assumption that the efforts and challenges related to influencing institutional adaptability may be unique within the more traditional, public, residential institutions that were the focus of this study, as these are often described as resistant to change (Folkers, 2005).

To further help ensure a fairly homogenous sample and to ensure participants had gained enough experience related to the phenomenon to inform the current study (Jones et al., 2014; Moustakas, 1994; Patton, 2002), each participant met the following purposive selection criteria at the time of the interview:

- Participant was a unit head of an organization that supports the administration of online academic programs. The current study refers to such organization as the "online learning unit."
- Participant had served in their current role for a minimum of two years.

Additionally, to ensure the unit's substantial organizational experience with providing online education, each participant in the current study was selected from an online learning unit that met the following criteria:

- Online learning unit was centralized within a larger university and was responsible for supporting the administration of online academic programs (degrees and certificates).
- Online learning unit supported the administration of at least five fully online academic programs (degrees and credit certificates) and had been supporting online academic programs for at least five years.

The selected delimitations resulted in *limitations* to the scope of the study and, consequently, the application of results. Due to the qualitative design of this study, which was based on the views of participants, it is not possible to derive implications that are universally valid (Schulze & Pinkow, 2020). The findings, therefore, have a suggestive value but are not empirically generalizable beyond the participants. However, the value of the study is situated in theoretical transferability, as the reader can make connections between the analysis, their own experience, and the existing literature (Smith et al., 2022).

Another limitation of this study is a key assumption that participants' responses were honest. However, the participants' current situation may have inevitably influenced their report of evidence from the past (Livne-Tarandach & Bartunek, 2009). The study, therefore, is limited by the participants' own perceptions and memories that may have evolved over time.

Participant Selection, Recruitment, and Demographics

Sampling in qualitative research is intentional, as opposed to random. Intentional sampling is done with the purpose of ensuring that the selected participants meet the specific criteria chosen for the study (Klenke, 2008; Terrell, 2016) due to their "position, experience,

and/or identity markers" (Saldaña & Omasta, 2018, p. 96). In accordance with the intentional nature of selecting participants, the current study employed purposive (also called purposeful) sampling (Saldaña & Omasta, 2018; Patton, 2002; Smith et al., 2022). Participants selected through purposive sampling represent a perspective that contributes to in-depth understanding of a particular phenomenon in a particular context, as opposed to representing a population (Jones et al., 2014; Klenke, 2008; Smith et al., 2022).

Patton (2002) identified 15 different purposive sampling strategies. This study employed a combination of the homogenous and criterion sampling techniques (Patton, 2002). Selection of participants followed Moustakas' (1994) selection criteria of the participant having had experienced the phenomenon, being willing to participate in recorded interviews, and granting a permission to publish the data. Selection of participants considered the feasibility of access (Jones et al., 2014). Only senior leaders of online learning units who were able to be identified via web search or referrals from the researcher's professional colleagues were contacted and included in the study.

A recruitment email (Appendix A) requested participation of those who met Moustakas' (1994) selection criteria and the current study's participant criteria defined earlier in the delimitations section. All potential participants that had been contacted enthusiastically agreed to participate in the interviews. A total of six participants was ultimately included in the study. Each participant signed an Informed Consent Form (Appendix B) before their individual interview. Participants' responses to demographic questions, which were included in the Informed Consent Form, their self-selection to participate in the study, as well as a confirmation of the institution's delimitated Carnegie classification ensured that the selection criteria had been fulfilled.

Demographic information was collected via a combination of a web search, the Informed Consent Form (Appendix B), and during interviews. Most demographic information is presented in the aggregate to preserve confidentiality. The universities that housed the online learning units included in the study represented most geographic regions of the U.S., spanning the West, Midwest, Northeast, and Southeast regions. All universities included in the study, except one, were members of the Association of American Universities, which is composed of America's leading research universities. The organizations included in the study (referred to in the current study as "online learning units") were involved in additional programming beyond online degrees and credit certificates. The additional programming included non-credit programming, in-person courses or programs, or individual online courses that were not part of a degree or a certificate. Each organization included in the current study had supported the administration of distance and/or online academic programs from less than 10 years to over 50 years. At the time of the interviews, each organization was supporting the administration of 12 to 150 online degrees or credit certificates.

The titles of the participants' positions included Associate Dean, Dean, Vice President, and Vice Provost. The length of each participant's tenure in their current position spanned from less than six years to 20 years. The size of the staff in the entire organization for which the participants were responsible ranged from 33 to 240 staff members. Each participant supervised six to 11 direct reports. Select participant demographics are presented in Table 3. Only selected demographics are included in the table to preserve confidentiality.

Table 3
Participant Demographics

Participant Pseudonym	Length of Tenure in Current Position (Years)	Length of Unit's Support for Online/Distance Programs (Years)	Number of Online Academic (Credit) Programs Offered
Bailey	<7	<10	<15
Cameron	12-20	>30	15-40
Drew	<7	>30	>100
Logan	7-11	10-30	>100
Parker	7-11	10-30	15-40
Taylor	12-20	>30	<15

Note. Data ranges, rather than actual data, are provided to maintain confidentiality.

Data Collection

Qualitative data was gathered through in-depth semi-structured interviews conducted by the researcher synchronously via Zoom. Interviews were videorecorded and transcribed to assure maximum accuracy in data analysis. Prior to the study, a pilot study was conducted to evaluate the efficacy of interview questions and to determine the time that each interview would likely require to complete (more details about the pilot study are provided further down).

Semi-structured Interviews

Interviews are the most common way to collect qualitative data (Terrell, 2016) and were an effective method for the current study. The study used a semi-structured interview format. Semi-structured interviews ensured that the same areas of information were collected from each participant in a somewhat systematic process (Turner, 2010). Specifically, the semi-structured interview format ensured that a priori themes were covered. Semi-structured interviews afforded a balance between the focus on the topic under investigation and the flexibility to ask probing questions to explore responses for greater depth and understanding (Roberts, 2020; Turner,

2010). Semi-structured interviews also allowed the researcher to further clarify the initial interview via a follow-up interview with two of the six participants.

Before an interview, participants signed the Informed Consent Form (Appendix B) to ensure they were aware of their rights and consented to the interview procedures. The Informed Consent Form included demographic questions to ensure that the participants met the study criteria. To guide the interviewing process, an interview protocol was used during each interview (Appendix C).

The interview protocol was based on the assumption that senior leaders may not consider organizational adaptability intentionally; rather, senior leaders may influence adaptability of the unit they lead intuitively or incidentally through their leadership practices. Consequently, rather than including direct questions about leadership practices for organizational adaptability, the interview guide focused on leadership practices that influence connecting and conflicting. Connecting and conflicting enable an adaptive space where organizational adaptability occurs, as proposed by the Complexity Leadership for Adaptability Framework (Uhl-Bien & Arena, 2018) that guided the current study (refer to Figure 2 in Chapter Two, page 69). The development of interview questions was also guided by other relevant scholarship (Appendix D), as well as an initial interview conducted as a pilot study. Figure 3 illustrates the rationale for focusing interview questions and subsequent findings on elements that scholars argue influence conditions for connecting and conflicting to answer the research question, *"How do senior leaders influence adaptability of their online learning units situated within residential public universities?"*

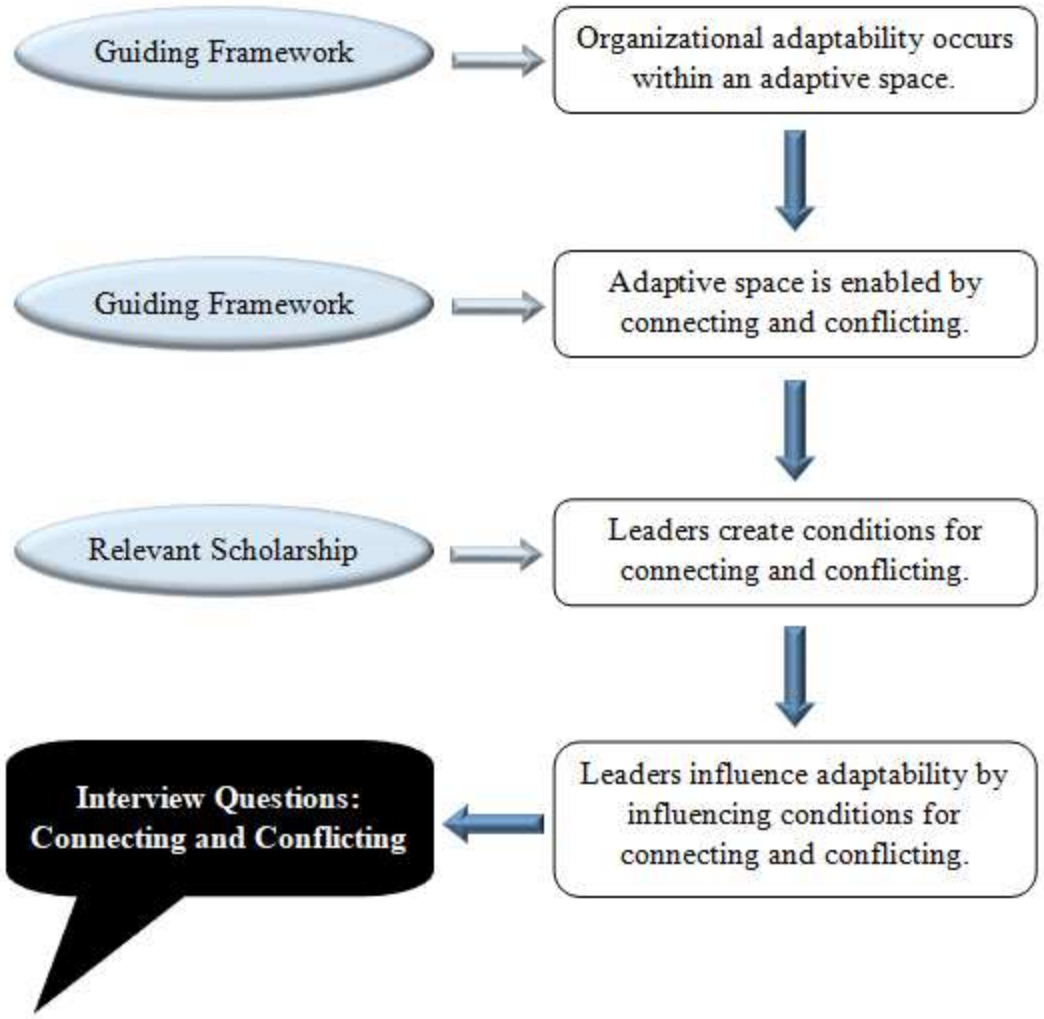


Figure 3
Rationale for Focusing Interview Questions on Connecting and Conflicting

Each one-on-one interview was conducted via Zoom and videorecorded. The recording of the interviews was crucial for capturing all details, as well as assisting the researcher in actively listening to participants and establishing rapport. Each of the six participants engaged in an interview that lasted from 90 to 150 minutes. Two participants, one of which was a pilot study participant, engaged in a follow-up interview that lasted 30 or 60 minutes. A total of 8 interviews was conducted. After the completion of each interview, a thank you email was sent to the participant. Each interview was transcribed using Zoom transcription services. Soon thereafter,

the transcripts were labeled with pseudonyms and edited to remove any identifying information to protect confidentiality of participants.

Pilot Study

A preliminary interview guide was tested with a study participant who met selection criteria prior to conducting the study; it followed the interview design, including recording of the interview and reviewing the recording to identify what worked or did not work (Roberts, 2020).

Such a pilot study can surface potential flaws, limitations, and other weaknesses of the interview design (Turner, 2010). Specific to the current study, the pilot study helped to identify gaps in the coverage and relevance of the interview guide (Kallio et al., 2016). The pilot study revealed that the interview questions did not address *interaction*, which is theorized as a component of the adaptive space. Questions about interaction were added to the interview guide before conducting further interviews. The pilot study also provided an opportunity to assess the effectiveness and intelligibility of each interview question and to identify a need to modify some questions (Kallio et al., 2016; Roberts, 2020; Turner, 2010). An important advantage of conducting the pilot study was the opportunity for the researcher to identify and manage potential biases (Roberts, 2020). An example of a researcher's bias that stemmed from a scholarly and cultural background was failing to initially recognize how the term "conflict" might impact participant responses due to the negative connotation contained in the popular meaning of the word in the American culture. Questions were modified to manage the potential negative connotation of the term "conflict."

Because the pilot study was conducted with a participant who had a similar background as the participants who were subsequently interviewed for the implemented study (Turner, 2010),

the pilot study participant provided valuable feedback (Roberts, 2020). Table 4 provides an example of modifications to the interview guide, which were informed by the pilot study.

Table 4
Example of Modifications to an Interview Guide

Initial (Pilot Study) Interview Questions	Modified Interview Questions
Thinking of the change, how were you, as the leader of the online learning unit, directly or indirectly involved in: A. Anticipating the change. B. Making decisions related to the unit's response. C. Managing the response/implementation. - Coordinating the various formal and informal interactions/efforts of individuals and groups within your online unit, as well as with others outside the unit. - Assigning responsibilities. - Managing information.	Thinking of the change example you provided, what role did you play in the collaboration of the departments and individuals within the unit and with the university? A. How did problems get solved? Who was involved? B. How were responsibilities assigned or understood? What role did you play? C. How was information shared or managed? What role did you play? D. How did departments connect with each other? Who brokered the connections? E. How do you foster interconnectivity? *Prompt: You may think of explicit or implicit rules for collaboration, cross-functional training, joint planning or decision making, etc.*

Conducting the pilot study in the same manner as the actual interview assisted with determining how much time was needed for the interview (Kallio et al., 2016). In addition, the pilot study participant was willing to engage in a follow-up interview to answer additional questions that were not included in the initial draft of the interview protocol and to clarify some prior responses. This allowed the pilot study data to be included in the actual study, as they were found relevant and valuable.

Privacy and Confidentiality

All participants signed the Informed Consent Form (Appendix B) to participate in the study. To protect participants' privacy, pseudonyms were used to label and analyze data and present findings in the present report. Individual names, institutions, and other personally identifiable information have not and will not be used in any reports, publications or presentations.

Interview records and consent documents were stored separately from each other. All electronic documentations were password protected. Researcher notes were labeled with pseudonyms only and stored in the researcher's private office in a locked cabinet. Video recordings were transcribed immediately after each interview and identifiable information, such as references to university or colleague names and titles, was removed from the transcripts. All video files were destroyed after transcription and an accuracy check. Access to any original data, such as transcripts, codebooks, or notes, was and will continue to be limited to the researcher and potentially committee members of the Institutional Review Board.

Data Analysis

The data analysis included data from six participants. Phenomenological studies, which aim for an in-depth understanding of the essence of a particular phenomenon in a particular context, are generally conducted on homogenous samples that are small in size (Smith et al., 2022). The current study determined the number of participants by considering data saturation, as the success or failure of achieving data saturation impacts the quality of qualitative studies (Fusch & Ness, 2015). Guest et al. (2006) offered that data saturation occurs within the first twelve interviews, which are the most common method for collecting qualitative data, and that elements of meta-themes are present at around six interviews. Even though the exact number for

data saturation varies across research designs, in general, data saturation is achieved when there is enough information to replicate the study and when participant responses become redundant and no new information is being attained (Fusch & Ness, 2015; Klenke, 2008). The current study reached data saturation as conceptualized above after a total of eight interviews, which included six initial interviews and two follow-up interviews with six unique participants.

The current study combined both deductive and inductive approaches to data analysis. Data analysis began with a deductive approach, which allowed leaders' influences on organizational adaptability to be interpreted through the participants' accounts of their practices *that have been suggested by the scholarship to affect conditions for connecting and conflicting*. The deductive approach to data analysis was guided by the Complexity Leadership for Adaptability Framework proposed by Uhl-Bien and Arena (2018) and other relevant scholarship (Appendix D), which theorize that organizational adaptability occurs within an adaptive space that is enabled by connecting and conflicting. The theoretical framework and relevant scholarship informed the development of a priori themes (Appendix E), which were defined in advance to aid in the interpretation of data. In addition to the deductive approach, an inductive approach was also used for data analysis to allow for the emergence of new insights. To achieve a balance between the inductive and deductive analysis, data was analyzed using Template Analysis, which is positioned in the mid-range of the induction-deduction continuum (King & Brooks, 2017).

Rationale for Template Analysis

Template Analysis is a form of thematic analysis. Thematic analysis is widely used in qualitative research. It helps the researcher organize and interpret large amounts of complex

qualitative data; its goal is to identify distinctive themes within a data set to gain insight related to the research question (Dawadi, 2020; King & Brooks, 2017).

There are several reasons why the Template Analysis technique was well suited for analyzing data in the current study. Template Analysis typically uses data from interview transcripts (Brooks et al., 2015; King & Brooks, 2017), which was appropriate to the current study that utilized interviews for data collection. Furthermore, among various contexts, Template Analysis has been used most often in organizational research (Brooks et al., 2015; King, 2012), which is also relevant to this study. Most importantly, Template Analysis permits the use of a priori themes (Brooks et al., 2015; King, 2012; King & Brooks, 2017), which was essential to this study that began with a deductive approach. However, a priori themes were used tentatively. An inductive approach to data analysis was also used to allow for new insights to emerge. The balance between induction and deduction afforded a balance between flexibility and structure in handling textual data (King & Brooks, 2017). Such balance is aligned with the balance of opposing elements, such as exploration/exploitation or order/chaos, which are reoccurring themes in the current study.

Template Analysis Process

Template Analysis consists of seven components. King and Brooks (2017) labeled the components as familiarization with the data, preliminary coding, clustering, producing an initial template, developing the template, applying the final template, and presenting the final template. This process is iterative, aligning well with evolving emergent change that is associated with organizational adaptability (Cummings & Cummings, 2014).

Coding of the Pilot Study Data. To evaluate the relevance and coverage of the interview guide (Kallio et al., 2016), the pilot study transcript was coded before conducting subsequent interviews. Many codes used in this pilot stage coding were closely related to the a priori themes (Appendix E). The pilot transcript was also coded using an inductive approach, which generated insights related to a potential context that may influence leadership practices. The process of coding the pilot study transcript suggested a need for using more detailed and descriptive codes in the subsequent stages of the analysis.

Familiarization with the Data. Once all interviews had been completed and transcripts generated by Zoom automated transcription services, the researcher edited each interview transcript for accuracy, grammar, and coherence. This editing process further enhanced *familiarity with the data*, after personally conducting interviews with each participant. The researcher retained copies of all original unedited interview transcripts for a future reference, with the exception of the removal of identifiable information, which was performed as soon as each transcript was automatically generated.

Preliminary Coding. According to King and Brooks (2017), coding in Template Analysis "is essentially the same process as that used in most thematic approaches to coding qualitative data" (p. 27). Saldaña and Omasta (2018) recommended the analysis of only relevant text that can help answer the research question. During this stage, the researcher engaged in detailed *preliminary coding* using descriptive codes, noting information that supported a priori themes, which had been defined in advance (Appendix E), as well as additional information that seemed relevant to the research question. A combination of deductive and inductive approaches was used. Figure 4 provides an example of the codes that were generated at this stage.

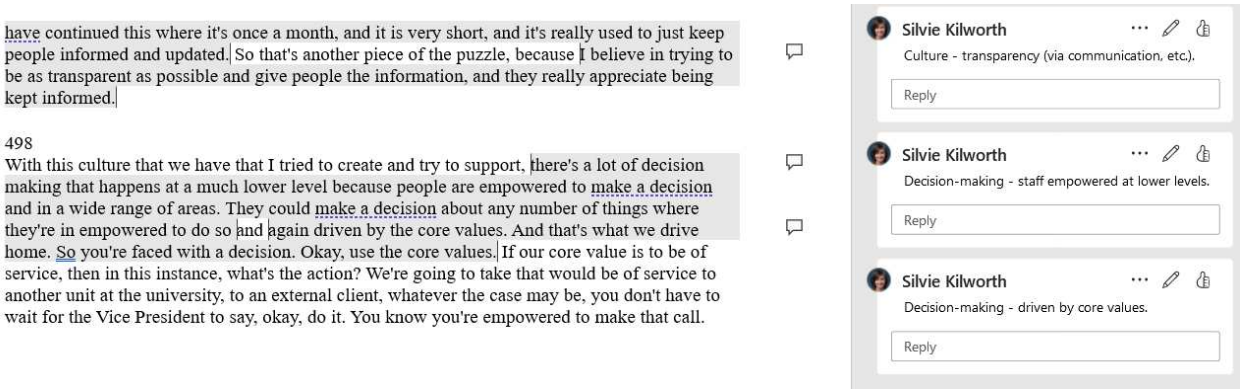


Figure 4
Example of Preliminary Coding

Since Template Analysis does not require the researcher to initially engage with the entire data set (King & Brooks, 2017), only three select transcripts were reviewed initially. These initial transcripts included two transcripts that appeared to be representative of most participants and one transcript that contained unique information. The representativeness or uniqueness of the transcripts became apparent during the interviews and was further established during the subsequent editing process of the transcripts.

To better keep track of the large number of codes being generated, the researcher first coded the two representative transcripts simultaneously across questions. For example, question one was coded for participant “Parker” and for participant “Taylor” before proceeding to code question two for each Parker and Taylor, and so on. This description of the coding process is approximate, as questions for each participant did not follow the order of the interview protocol exactly; some questions were explored in more depth or led to unscripted questions that differed for each participant.

The preliminary coding of the first two transcripts generated 142 preliminary codes. These codes were then applied to the third transcript that contained information that appeared to be unique from the other transcripts, again using a combination of a deductive and inductive

approach. This process generated an additional 46 codes, for a total of 188 preliminary codes. Appendix F provides a subset of the preliminary descriptive codes for illustration.

Clustering. The 188 preliminary codes were then *clustered* into themes. King (2012) defined themes in qualitative analysis as "the recurrent and distinctive features of participants' accounts … that characterize perceptions and/or experiences, seen by the researcher as relevant to the research question of a particular study" (p. 4).

Figure 5 provides an example of clustered codes related to an initial theme of "conflicting," which was later discarded. As analysis progressed, the codes represented in Figure 5 were reorganized into other themes and sub-themes, including *Empowering Staff* and *Building a Culture of Trust/Transparency/Respect*. The themes were ordered hierarchically into overarching themes, themes, and sub-themes as best as possible to aid data analysis. A precise hierarchy could not be achieved due to the interconnected and overlapping nature of the data that represented the characteristics of a complex, nonlinear human behavior.

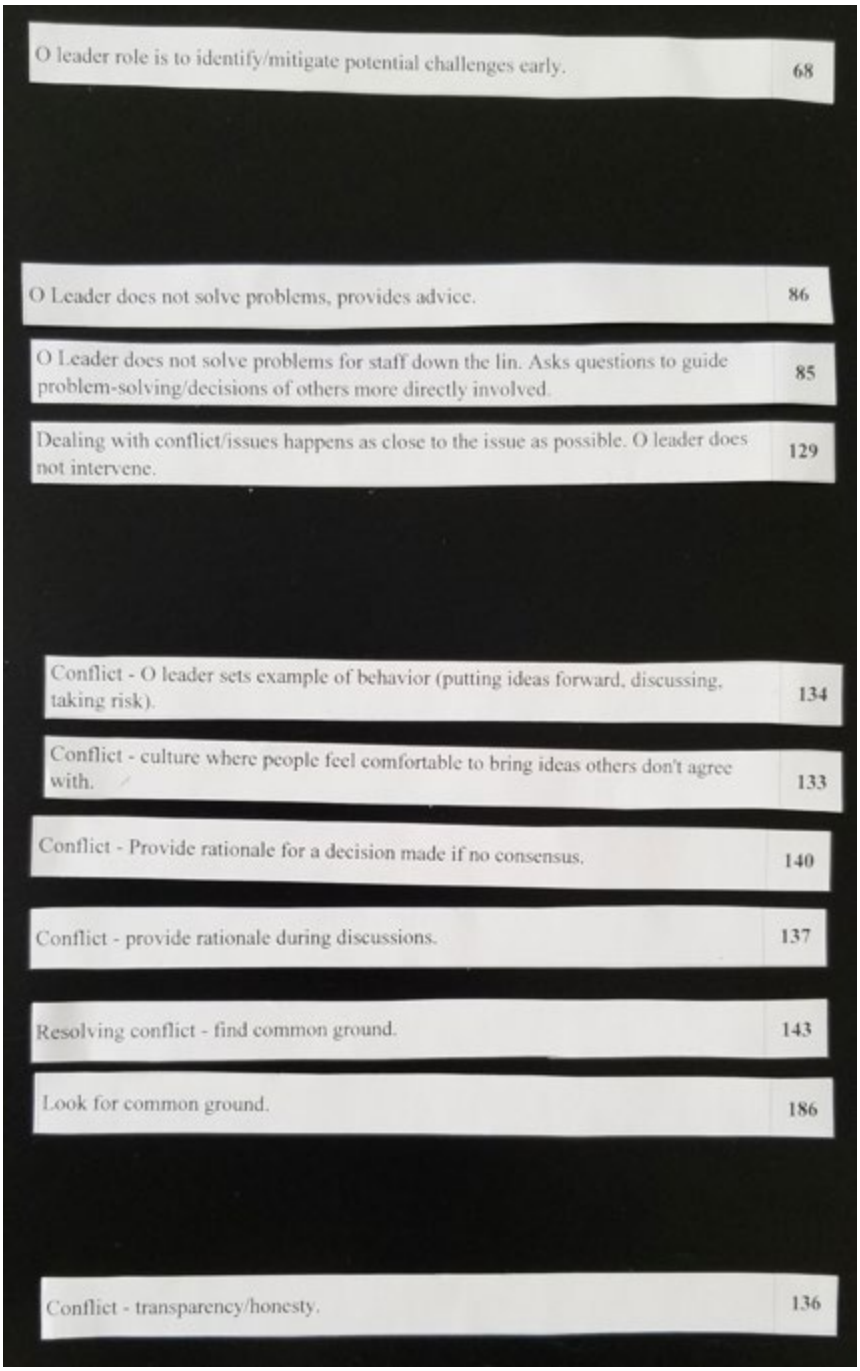


Figure 5
Example of Code Clustering

Producing an Initial Template and Developing the Template. The preliminary analysis, during which preliminary codes were developed and clustered into themes, served as an *initial template*. The initial template was then applied to the remaining three transcripts one by one, rather than across questions as during the coding of the first two transcripts. Interpretation of data continued to occur throughout the analysis. To facilitate data analysis at this stage, sections of text that related to a theme were coded with a label that had been designated for the specific theme (see example in Figure 6).

106 **What made this process successful or not as successful?** 108 It's very rare when you get a unanimous approval from [university] deans for anything. We ended up (it took 2 years, actually) but we ended up last summer getting a unanimous approval to change our financial model and move forward. So, part of that is, at a place like our university, you take the time it takes. You give people plenty of time to process the changes that you're proposing. You take feedback. We made modifications based on the feedback we received. We were very clear and communicating the changes that we were delivering back to the stakeholders, which in this case were the deans. And we actually took a vote a year ago, or before that, that didn't go through. It's like no, we've got problems. So, we made more revisions. We stayed flexible and willing to revise and change and listen to our quote unquote client base, which in this case would be the deans, and we iterated changes until we got close enough to what they needed to see, but also that worked for us, had to work for our financials, and it had to work for what the deans were expecting. So, it's an iterative process of conversation, some rework, putting new things forward, but doing so in a way where people know their feedback is going to be heard and accepted, and then showing people how we incorporated their feedback into the next change. Getting to a unanimous vote of yes was a huge success, and that's how we did it.	Depending on University Approvals/Collaboration/ Buy-in (Obstacles to Exploration) Incorporating Varied Viewpoints (Increasing Diversity/Heterogeneity) Promoting Internal/External Information-sharing Promoting Discussion (Increasing Diversity/Heterogeneity) Building a Culture of Transparency

Figure 6
Example of Applying an Initial Template

As analysis progressed from initial coding to reviewing additional data and modifying the template that had been developed from the preliminary codes in an iterative process, both a priori

and new themes were redefined or discarded. The process of *developing the template*, therefore, continued to use a combination of a deductive and an inductive approach.

Applying the "Final" Template. Once the template captured relevant and potentially important data, the *final template was applied* to code the full data set. As data continued to be reviewed and interpreted, the "final" template was further refined. This iterative process of continuing engagement with the data resulted in successive modified versions of the template. The process included editing the theme labels, deleting or adding themes, and reorganizing the hierarchy of themes. This stage of applying the final template consisted of organizing excerpts of text by theme to further aid in the interpretation of the data. The organization by theme assisted in identifying how prevalent a theme was across participants or within individual participants. To aid with this process, participant responses were coded with a color that was assigned to each participant (see example in Appendix G).

Presenting the Final Template. According to King and Brooks (2017), the final stage of the template analysis is *presenting the final template.* Of note is that this study continued to engage with the data beyond the application of the final template as depicted above. An engagement with the data during the process of describing the study's detailed findings further refined the analysis and, consequently, the template. According to King and Brooks (2017), continued engagement with data has the potential for further refinements to coding and the template of themes. The final template as presented in Table 5 is, therefore, based on the researcher's judgement that the template meets the needs of the current study, which means that the template is subjective to the researcher. Similarly, individual themes are not objective facts and are, therefore, subjective to the researcher as well (King, 2012).

Table 5
Final Template

Overarching Themes	Themes	Sub-themes
Shaping Networks	Fostering Connections	Cultivating Interactions/Relationships
		Encouraging Communication
	Creating Interdependency	Encouraging Collaboration
		Empowering Staff
		Establishing Clear Roles
Regulating Tension	Increasing Heterogeneity	Incorporating Varied Perspectives
		Building Heterogeneous Teams
		Supporting Autonomy
	Stimulating Innovation	
	Injecting Pressure	
Navigating Organizational Context	Influencing a Culture of Psychological Safety	Cultivating a Culture of Learning
		Cultivating a Culture of Trust/Transparency/Respect
		Cultivating a Culture of Belonging/Engagement
	Navigating a Context of Limited Control	Possessing Limited Control over Academics/University Policies
		Depending on Faculty/University Collaboration

Because themes are subjective to the researcher, it was important for the researcher to maintain an awareness of the role of self in the analytical process (Glesne, 2016). Being fully conscious of one's own perspectives and their potential bias and impact on the study was important to maintain throughout the research process. Equally important was to maintain awareness of the risk that "when researchers focus on their own experiences, as in the case of

reflexive ‘introspection,’ the researcher’s voice may eventually overshadow the participant’s” (Finlay, 2002, p. 225). Throughout the research process, the researcher balanced reflecting on the researcher’s own background with keeping the participants’ voices at the center of the data and analyses. This was accomplished by keeping a research journal throughout the research process (Glesne, 2016; Terrell, 2016), including during data collection, data analysis, as well as data reporting.

Trustworthiness and Quality

Trustworthiness in qualitative research is the means for ensuring that a study is of high quality (Jones et al., 2014). Academic rigor and trustworthiness in qualitative research may be achieved through a number of strategies. One strategy that this study utilized was credibility and the alignment between the constructivist interpretive epistemology, the Complexity Leadership for Adaptability theoretical framework (Uhl-Bien & Arena, 2018), the data collection through semi-structured interviews, the data analysis using Template Analysis, and a thick description with rich contextual details for presenting findings (Bhattacharya, 2017; Glesne, 2016; Terrell, 2016). To demonstrate to what extent the findings can be transferable to other participants or contexts, the report of findings includes a thick description and utilizes participant quotes (King & Brooks, 2017; Terrell, 2016). This study, which used Template Analysis, aimed to describe main themes clearly and thoroughly to assure quality (King & Brooks, 2017).

Academic rigor was further assured by basing the justification of the research design on literature review (Bhattacharya, 2017). The semi-structured interview method for collecting data aided in developing an in-depth understanding, further contributing to academic rigor (Bhattacharya, 2017). Additionally, academic rigor and trustworthiness were demonstrated by acknowledging and documenting the iterative process of the data collection and all stages of the

Template Analysis used in this study. Such an audit trail intended to assure confirmability (Bhattacharya, 2017; Glesne, 2016; Terrell, 2016); it can serve as a quality check (King & Brooks, 2017). Lastly, trustworthiness was assured through debriefing with a supervisor, along with monitoring of subjectivity and reflexivity through journaling throughout the research process (Glesne, 2016; Terrell, 2016).

CHAPTER FOUR: FINDINGS

This chapter examines the empirical findings of the current study that was designed to explore the key research question, *"How do senior leaders influence organizational adaptability of their online learning units situated within residential public universities?"* The study was guided by the Complexity Leadership for Adaptability Framework (Uhl-Bien & Arena, 2018) that theorizes that organizational adaptability occurs within an adaptive space, which is enabled by connecting and conflicting (refer to Figure 2 in Chapter Two, page 69). The research question was answered by understanding how online leaders influence conditions for connecting and conflicting.

Through a Template Analysis of data obtained via interviews with six senior leaders of online learning units (subsequently referred to as "online leaders"), three overarching themes were constructed: (1) Shaping Networks, (2) Regulating Tensions, and (3) Navigating Organizational Context. The interconnected nature of these overarching themes, which represent leadership practices for creating conditions for connecting and conflicting, is illustrated in Figure 7. In addition to depicting relationships between the overarching themes, which the data analysis revealed influence each other, the figure also illustrates connections with corresponding themes and sub-themes that provide more detailed understanding of how leaders in the current study influence conditions for connecting and conflicting and, ultimately, organizational adaptability.

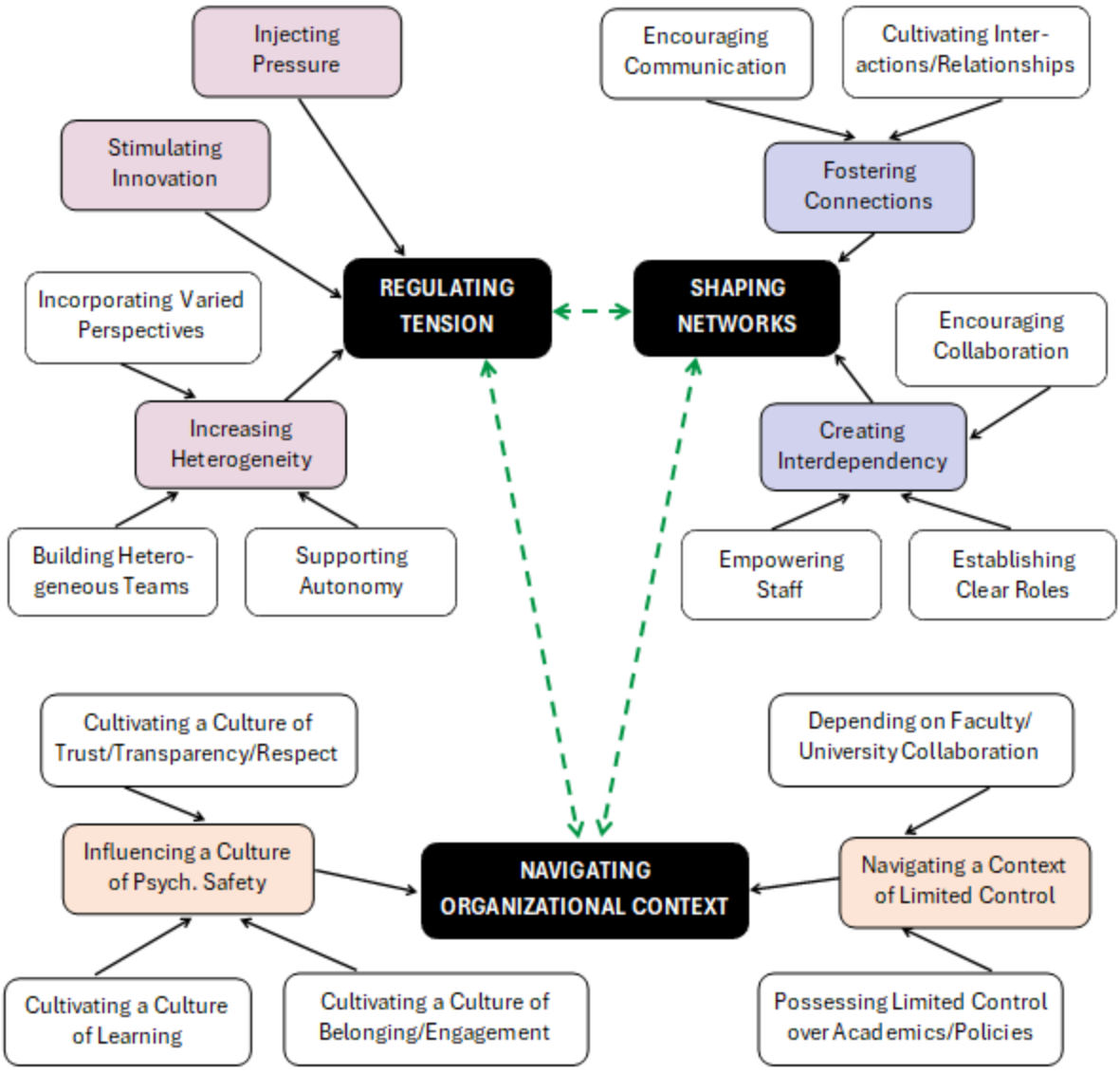


Figure 7
Leadership Practices for Influencing Organizational Adaptability

Following is a discussion of each overarching theme and the corresponding themes and sub-themes. The interconnectedness of these overarching themes, themes, and sub-themes, which represent leadership practices, is highlighted throughout the discussion. Examples of the interconnectedness of leadership practices are also provided in Table 6 (page 151) at the end of this chapter.

Overarching Theme 1. Shaping Networks

The data for the current study revealed that both connecting and conflicting, which together constitute the adaptive space where adaptability is enabled, depend on the presence of networks where agents, including people and ideas, can interact. Leaders of online learning units develop networks by fostering connections and creating interdependencies. The data also provided evidence that organizational context plays a role in enabling or stifling a successful development of networks. Figure 8 illustrates the relationships between the overarching theme of *Shaping Networks*, the corresponding themes, and their sub-themes, which are discussed in more detail in the following sections.

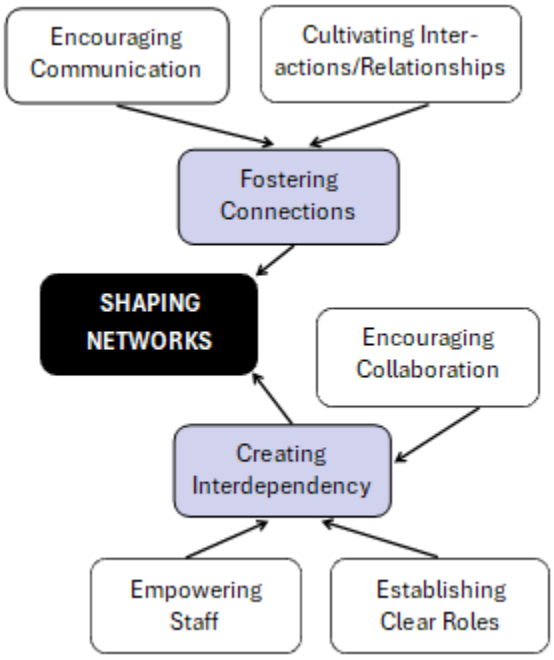


Figure 8
Overarching Theme 1. Shaping Networks

Theme 1.1. Fostering Connections

The data analysis indicated that online leaders foster connections, which play a role in developing networks, through cultivating interactions and encouraging communication.

Sub-theme 1.1.1. Cultivating Interactions/Relationships

The data analysis revealed that online leaders cultivate interactions and relationships externally with the university, as well as internally within their online unit. The data also suggested that online leaders employ intentional strategies to cultivate interactions and enable relationships both formally and casually. These strategies include leaders' support for formal meetings and events, social events, impromptu casual chats, or creating physical spaces for in-person interactions. Following is a more detailed discussion of leadership strategies for cultivating interactions and, consequently, relationships.

The data analysis revealed that all six leaders play a role in connecting their online unit with the larger university within which the unit resides. The leaders personally connect with their university's senior leadership and college deans, as summarized by Logan:

> Part of [my] role is to be that external connector to the other deans and other schools and colleges across [the university] and make sure we're remaining in alignment with the vision of the president, my boss – the provost, and the senior leadership, and where we need to move. So, I have this really important linkage alignment back to the broader university and then bring that sort of alignment back into our organization.

The data indicated that the connections are made through the leaders' participation in university team meetings or individual meetings. Through these formal and other more casual interactions, online leaders promote online learning on campus and advocate for resources, as well as build personal relationships. Bailey offered their general approach to fostering positive relationships with the university by "trying to be incredibly approachable" and "try to show them that we are attempting to provide solutions, not introduce problems." Bailey believes that such approachability is an important factor in the unit's success of its current university-wide initiative.

Besides cultivating relationships with the university's senior leadership and academic leaders, some online leaders also directly connect with the faculty who play a crucial role in developing new programs. Taylor called this role in faculty relationships a "convener," in which online leaders, including Taylor and Bailey, initiate relationships with faculty that the online team has not worked with yet. Other leaders tend to delegate the responsibility of connecting with faculty to others within the online unit. Logan's unit, for example, has a partnership lead position whose team is responsible for talking to university departments on a regular basis. This team serves as "faculty champions." In Parker's unit, faculty relations have been delegated to a member of Parker's leadership team.

It was clear that the fostering of positive relationships with university stakeholders plays a significant role in the work of online units. The data suggested that the importance of cultivating these relationships is at least partly due to the context in which online units operate, as they depend on their university's collaboration, approvals, and buy-in (collaboration, approvals, and buy-in are discussed in more detail in section 3.2.2. *Depending on Faculty/University Collaboration*). Drew's strategy to secure collaboration is to include key university stakeholders on taskforces:

> I went to one college dean and said, "Who is the most prickly faculty member that's going to raise the most difficult questions? Because I want them as part of this team and because I want to know who's the biggest voice on the faculty senate." I wanted that person as part of this […] team because if I didn't have that, that would have been hard. So I needed to win over some key people in key positions that were well respected by the faculty to be able to [accomplish my goal].

Also related to the context of the larger university and challenges to collaboration, Bailey shared that "the fact that university leadership stepped up aggressively to tackle the organizational culture issue at the campus level was critical" for the unit's current university-wide initiative to successfully move forward. The university's support allows Bailey to prioritize focusing

internally on the online unit, which is unique from the rest of the participants who see their role largely as a connection to the external university. Bailey elaborated why their current focus is more internal, given that they have been in their current position for a relatively short time:

> If this were 10 years into my tenure, there's really no doubt that the focus for me, then, could be more political and organizational; focusing externally, trying to worry more about how the online unit is positioned and what we're communicating about our role in the online space. It would happen more externally and focus to the academic units and university leadership, where most of [my current] effort is actually internally and dealing with the needs [of the online unit].

While most online leaders tend to focus externally on building relationships with university constituents and may empower their team members to foster similar relationships within the online unit, such as through regular team meetings, the online leaders are themselves involved in fostering interactions within the online unit as well. The data showed that leaders organize or encourage various forms of interaction among the staff, such as serving on committees, attending forums with the online leader, participating in all-staff meetings or internal conferences, attending professional development workshops together, or participating in staff retreats. Bailey shared the following strategies for encouraging interaction. Of note is that Bailey's online unit is currently experiencing some competition and disrespectful conflict between subunits:

> The reason we have committees, there's many, but one of them really is to try to get subunit interaction. It's successful to different levels. That's why we have staff meetings. It's both interaction time and communication sharing, etc. Forums with the dean is, again, just trying to bring people together and have conversations around things they're thinking about, I mean, in the broadest sense. All that is trying to facilitate a little more openness and team mentality. […] Those kinds of things are definitely important. I think the committees are a really important part, as much as people hate them. We'll work through why people hate them to some extent; we'll keep working on that. But I think it's really important because, otherwise, I don't know how people would interact. We've gotten large enough and the subunits are specialized enough, it's really hard to have broader conversations unless we facilitate them somehow. I do think they serve a role on that front.

Somewhat contrasting to Bailey's and some other interviewed leaders' facilitation of committees is Cameron's approach. Rather than convening committees centrally at the leadership level, Cameron encourages the unit's employees to take the initiative and autonomously form committees they themselves deem necessary or useful (*Supporting Autonomy* is discussed in more detail in section 2.1.3.):

> We have a committee that [the staff] just sort of formed. And they call themselves the fun committee. They just create these little things where we just get together. For example, in the fall we had a [themed potluck] at lunchtime and every unit was responsible for part of a meal, and then people had to move around the building to go to the units. And you know, it sounds very silly in some respects, but it's amazing how many people find themselves just talking to others.

Some leaders, including Logan, use an approach that combines the leader's authority with affording autonomy by convening a committee with an initial charge and encouraging it to work autonomously going forward:

> I stood up a committee; I had no role in what happened after that. In fact, the committee had an initial separation from leadership entirely because of the [political tensions in the country] and they felt like they wanted a safe space to have conversations, probably about leadership. […] And we gave them that space. We weren't fearful. […] What I said, though, is, "You've got to come and tell us at some point what we need to do as an organization. And that way we can start to prioritize."

Affording autonomy, such as allowing committees to work independently, contributes to building trust, which is further discussed under the theme of *Cultivating a Culture of Trust/Transparency/Respect* in section 3.1.2.

In addition to formal interaction via meetings, committees, etc., the data showed that leaders also encourage social interactions among the staff through various organized social events, such as holiday parties, summer barbeques, or team lunches. Additionally, Drew shared a specific strategy for one-on-one connections among colleagues:

> Every month each staff member meets with three or four individuals [from our online unit]. It's different every month; it's almost like we're randomly selected. And we come

> together, and we talk about our dogs or our gardening or our whatever; the new gym equipment that somebody bought or the car that somebody's thinking about. It's just any topic to sort of create that sense of community, a sense of engagement, especially being a [fully virtual] organization.

It became evident from the study data that social interaction contributes to creating an environment where people feel comfortable to perform their job effectively because of the bond such interactions create, which in turn encourages collaboration (further discussed in section 1.2.1. *Encouraging Collaboration*) and helps build a culture of belonging (further discussed in section 3.1.3. *Cultivating a Culture of Belonging/Engagement*). Except for Drew who oversees a fully virtual online unit, leaders themselves interact with staff across the unit informally through impromptu, in-person causal chats and also encourage such interaction among the staff, as Bailey articulated:

> I'm a huge believer in hallway chatter. I walk around. Everyone knows that I walk around and have chats with people, and it's often work related. It's often not work related. They blend. And it's that informal approach to managing. If you want to call that organizational dynamics, or whatever … really important. I don't want to squelch most of these conversations. Anybody knows how much work and how much bonding happens during that kind of impromptu casual time. Far more important than the formal committees. Those are helpful but it is work focused still, and it's still formal. And the informal environment definitely allows a very different dynamic both for work and personal bonding.

While Bailey expressed support for "hallway chatter," they also shared a concern that "in this remote world, people are already giving themselves a lot of space sometimes," which creates a challenge for Bailey as to the balance between encouraging social interactions to promote a positive culture and limiting social time in order to get the job done. Bailey speculated that their struggle with this balance stems from their own tendency to be task oriented. The data also suggested that the culture in Bailey's online unit that they have led for a relatively short time may lack elements of psychological safety, which may be contributing to Bailey's struggle (the context of culture is discussed in more detail in section 3 *Navigating Organizational Context*).

The data revealed that, to cultivate interactions and relationships, online leaders make themselves available and approachable partly by their physical presence in the organization. They also encourage or even mandate a physical presence of their staff in their units that, with one fully remote exception, support hybrid schedules. The data showed that leaders encourage in-person interactions by creating physical collaborative meeting spaces and other social spaces, such as break rooms, where people can gather. In addition to making physical spaces available, leaders ensure that people utilize them for connecting. Leaders support various social activities to happen in these physical spaces, such as contests hosted by teams, as well as work-related activities, such as program reviews. When describing an in-person event that one team organized for the rest of the online unit, Logan reflected:

> What was interesting is, as people came down, everybody was very tentative because we don't see each other that much, and it's one of the first events like this, and it was like, "I think I know you from Zoom." I heard so many people saying, "I think I've only seen you on Zoom." And by the end of that time, people were laughing and talking, and we're starting to see groups do [more of these kinds of events].

The data analysis suggested that a physical presence is important because staff members with a limited physical presence may become detached. Cameron's quote below summarizes the sentiment expressed by the participants who oversee online units that continue operating in person, at least part-time:

> In an online environment, which is a funny thing for me to say, since our work is about online activity, but nevertheless, I think working together physically, and seeing people, and sharing lunch with them, being in the break room together, those things truly matter.

Lastly, the data suggested that relationships in Bailey's online unit have been disrupted by the unit's new role and have not been sufficiently reestablished, which leads to insufficient delegation:

> The online unit is in a new role [within the university] with a new leader, a lot of newer people, and new positions. It's requiring just a lot more effort, attention [from me], where

> things would have otherwise been delegated because all those relationships would be established. Also, we're changing subunits and changing the dynamics between them. And that's taking some effort to make sure it goes as smoothly as possible.

The data suggested that interactions and relationships play a key role in creating conditions for empowerment and delegation (further discussed in section 1.2.2. *Empowering Staff*).

Sub-theme 1.1.2. Encouraging Communication

The previous section analyzed leadership strategies for cultivating interactions and relationships, which build professional and personal connections. Such connections help encourage the sharing of information and overall communication within an online unit and externally with a university. Similar to the strategy for cultivating interactions, the data indicated that leaders encourage communication to materialize both formally and informally. Furthermore, leaders develop specific communication strategies for new initiatives and also encourage ongoing communication indirectly by setting expectations for their online units. Following is a more detailed discussion of leaders' strategies for encouraging communication to foster connections to build networks, as well as considerations related to inhibiting communication.

The data suggested that leaders personally participate in communication with staff at all levels of their online unit. Bailey sees the benefits of being personally engaged in casual, ongoing communication with staff members as an opportunity to receive input on potential anticipated changes. Taylor echoed the sentiment that conversations elicit ideas: "Just having the authentic conversation that I care and then I'd like their opinion because they'll probably come up with much better ideas than I would have. Because coming from them, it's a team-based effort." This quote also illustrates the leader's acknowledgement of the value of working together, discussed in more detail under the *Encouraging Collaboration* sub-theme (section 1.2.1.).

When Bailey was discussing strategies for enabling communication, the importance of a physical presence came up again:

> I do think [the staff who have a limited presence] become less aware of all the communication that's happening around work-related stuff and become more isolated. They feel more isolated because they're not part of the informal communication channel. In a way, that's pretty destructive for an organization if there are people or units that are not part of the culture and feel that they're somewhat isolated and stuff. So yeah, I do worry about stuff like that. I do think the informal is so important that I might have to become unpopular at some point and say, "Look, y'all, you got to show up some number of times in a year."

Drew, who oversees a fully virtual online unit, holds unscripted monthly virtual forums that encourage staff to come with questions and raise issues. Drew's invitation for employees to voice concerns during the forums suggests that communication is a way to foster productive tension, as it can embrace diverse voices and foster *Incorporating Varied Perspectives* (discussed in more detail in section 2.1.1.).

An element of communication is the sharing of information. Parker posited that "information sharing goes both directions and that has a formal and informal aspect to it, too." Every two weeks, Parker's unit engages in responding to question prompts, which change each time and include topics such as morale or individual and team successes. Supervisors are required to review all responses and respond to each person. Parker, as the unit leader, reviews all responses from each staff member to remain informed about the organization. It is a way to foster regular two-way communication between supervisors and their employees, as well as for the unit leader to identify potential issues, opportunities for collaboration, etc.

The data revealed that formal information sharing and communication are often established when an online unit engages in new initiatives. When Drew coordinated efforts across the university in developing and implementing a new initiative, they convened a core leadership team and several working groups from across the university. These teams created

communication strategies both internally within the university and externally with students and employers. They utilized a website, held update meetings with a large advisory group, and sent emails to a dean's council. The teams also planned a cadence of articles in the university's daily email blast "so that [they] could bring everyone at the university along with the work [they] were doing and reporting those key milestones as [they] met them." Furthermore, the teams that Drew led organized briefings across the university. Drew shared more details below that suggest the importance of customizing information to clearly communicate relevancy to various stakeholders who may play different roles. Drew's quote below also demonstrates a strategy to secure a better university collaboration by including representatives from the university in an online unit's initiatives. Strategizing on securing collaboration is a response to the unit's *Dependance on Faculty/University Collaboration*, further discussed in section 3.2.2.:

> We did a briefing for the library. We did a briefing for different campuses. We did a briefing in colleges. We did a briefing for the graduate council. We did briefings all over the university so that we could talk about what we were doing, why we were doing it, who's doing what. That's when we'd either have a slide with [all members of the large advisory group] on it or just two slides, because we wanted to be able to say, "Oh, within the library, you have a representative that's part of this process. Oh, within [this particular college], you have a representative or representatives who are part of this process." We wanted to be able to sort of say, "If you got questions, talk with the person you know. Talk with us." […] We'd oftentimes go to our representative and say, "You know, we're going to do a briefing for the library. What are the key points that you feel the library personnel need to hear about this initiative at this point?" And then we would adjust the slides that we would include [in each briefing].

Parker also established a variety of strategies to communicate about a new initiative, which included email, social media, conferences, meetings, and advisory boards. In addition to that, Parker reports directly to the chief academic officer of the university and, as part of this executive leader's cabinet, regularly speaks at the cabinet meetings to communicate information. The data suggested that utilizing communication strategies is not only a vehicle for sharing of

information necessary to do a job, it also increases transparency and contributes to building trust (the theme *Cultivating a Culture of Trust/Transparency/Respect* is discussed in section 3.1.2.).

In addition to specific and formal communication strategies, online leaders encourage ongoing communication indirectly by setting up expectations for communication. Cameron described the following strategy for encouraging information sharing and communication:

> I have set up team leader meetings. And so every team leader is responsible for providing an update once a month to the whole group of all the directors or all the team leaders. It took a while for people to get good at that. But they did. And now it's really just second nature. I mean, none of us benefits if we aren't talking to each other. So I think it's now kind of embedded in our communication patterns, but we did have to develop it. And I think what happened, honestly, is when we were small, there was a lot of turnover. It was really hard to maintain a level of continuity. But once we grew, then it became an imperative. Now it's just an expectation. […] And I still have the directors' meetings [in addition to the team leader meetings] and the expectation is that people share information. […] So I think people have understood that while some people are sort of inclined to be information hoarders, I think I have them convinced that it never works and it always makes us look like the right hand left hand don't know what we're doing. And I don't think anyone feels very good about being in that position.

Data analysis revealed that communication and information sharing require intentional efforts of leaders to directly encourage it. One example, as described above, is Cameron's setting up team leader meetings. Another example is Taylor's unit where the leader requires teams within the online unit to set up a sharing and collaboration software for each project. The software provides access to the same information, process controls, and updates for all stakeholders across the university, including faculty in academic departments. Taylor explained: "We're as transparent as we can possibly be through that [sharing and collaboration software]." The data suggested again that information sharing contributes to a culture of trust and transparency, further discussed in section 3.1.2. *Cultivating a Culture of Trust/Transparency/ Respect*.

Logan disclosed a current gap in communication in their online unit and shared plans to address the gap, underscoring the need for intentionality in fostering communication:

> So, we have a gap. We know we have a gap right now. We're going to hire an internal communications person for our organization. We're great at marketing. We're great at external comms. We make great connections with our students, and sometimes we forget we need that exact same care and feeding for our staff. And given the size of a unit of [two hundred staff members], it can be easy to forget to communicate well to everybody and reach all the audiences in the ways that they need to be reached.

Bailey further reflected on the importance of communication in change management and the shortcomings of their unit related to a new initiative:

> Yeah, so if there's one thing we have not done well, this is both university and the online unit, it's probably around communication. And that's interesting because that's such a critical part of change management. And I mean, like core to it, actually. And if there's one area where we have probably failed abysmally, that is it.

The data analysis suggested that effective communication requires the right context. The data revealed that Bailey is heavily involved in various activities within the online unit and there was insufficient evidence of delegation. Lack of delegation may present challenges in successfully overseeing the various elements of a new initiative that Bailey talked about.

To address suboptimal communication, Logan is hiring a communications person for their online unit. The objective is to improve communications by entrusting this responsibility to a staff member. Logan further talked about the unit's vision, which is also essential in providing a context for and indirectly encouraging communication, along with collaboration. Logan shared:

> I'm saying we might want to build programs that span the lifespan. But we've never built connected set of programs that interconnect our work together. […] And that's requiring staff to start to have communications that they've never had before. Had we done that without the context of what we're trying to accomplish together, I think I would have had just a complete total resistance.

Theme 1.2. Creating Interdependency

Besides fostering connections discussed in the previous sections, the data analysis revealed that online leaders build networks, which enable conflicting and connecting, by creating interdependencies between people and ideas. Leaders create interdependencies by encouraging collaboration, empowering staff, and establishing clear roles, which are sub-themes discussed below.

Sub-theme 1.2.1. Encouraging Collaboration

The data analysis revealed that when online leaders foster connections through the strategies reviewed in the preceding sections, such as convening teams, setting up meetings, encouraging personal and professional connections, and providing physical and virtual spaces, they create conditions that enable collaboration. Following is a discussion of additional strategies online leaders use for encouraging collaboration, including reminding staff to collaborate, incorporating collaboration in performance reviews, and involving others in problem solving.

A direct strategy that online leaders use for encouraging collaboration is reminding the staff that they should work as a team, as articulated by Taylor:

> My role is to make sure always to remind us of the team-based activity, that you have to think about upstream and downstream workloads, not just your own; that whatever you do or don't do impacts a fellow colleague. So please keep coming together.

Another strategy that online leaders use to encourage collaboration is including it as an element of performance appraisals. The data suggested that the collaboration expectation needs to be explicit within the performance appraisals. Even though Bailey's online unit includes an expectation for collaboration in performance appraisals similar to other units, Bailey speculated that it may not be obvious to all employees. The data further suggested that leaders encourage collaboration by modeling it through their own behavior when they include others to work on

projects, problem-solve, undergo shared decision making, or provide feedback. The following response from Taylor to how they broker connections provides an example of how involving others in solving problems encourages collaboration:

> Talking through [issues] so that the team can see where our challenges are, and then finding collective solutions. Because it could be, and this often happens, is one of the team members will say, "Well, I could slide this person over here for a couple of weeks because that process isn't really needed right now. And if I do that, that's going to free up your person over here." It becomes a team-based solution process; a strategy for solving how do we use our existing resources most effectively at [a given] time.

Some leaders, including Taylor, mentioned their role in encouraging collaboration as "bringing the right people to the table at the right time so that they can share knowledge about the process, about what we're trying to accomplish." Bailey also mentioned playing a role in bringing the right stakeholders together. However, when subunits hold different viewpoints, Bailey uses a somewhat contrasting approach of isolating conversations:

> I'm realizing in retrospect what I think I tend to do is to isolate those conversations, help those subunits work through some of the considerations [on their own]. I bring in the vantage point of other subunits into the conversations with that subunit and that subunit leader to get them to realize why other subunits might not be on board.

The rationale for isolating conversations to deal with different viewpoints is Bailey's attempt to "take away the politics and the personality and just make it like, 'Hey, step back. Let me explain why [the other unit] feels that way.'" While this approach may "usually be pretty productive," it may also suppress collaboration between subunits and consequently stifle interdependencies needed for building networks. On the other hand, it may be a necessary strategy for keeping disrespectful conflict, which the data suggested is present in Bailey's unit, under control so that Bailey can work toward building networks once the context of the online unit becomes less disordered.

Sub-theme 1.2.2. Empowering Staff

The study's data suggested that an important condition for enabling collaboration and, consequently, for creating interdependency between individual staff members and subunits is to empower staff. Online leaders empower staff by delegating, coaching, encouraging professional development, clarifying organizational values, and sometimes playing the heavy, as discussed below.

One strategy that online leaders use for empowering staff is delegating to their direct reports. Sometimes the delegating requires coaching, as Taylor shared:

> Another part of my strategy [to encourage collaboration] is to groom [my direct reports] so that we can keep scaling. I can't be in all these conversations, so they have to start being in some of it. So, I like to empower my teams.

The data revealed that, in addition to coaching their direct reports to be able to empower them, online leaders also provide tools for empowerment to the remaining employees by supporting their professional development (further discussed in section 3.1.1. *Cultivating a Culture of Learning*). Additionally, online leaders establish organizational values to guide autonomous decisions, as Parker explained:

> With this culture that I tried to create and try to support, there's a lot of decision making that happens at a much lower level because people are empowered to make a decision in a wide range of areas. They could make a decision about any number of things where they're empowered to do so and, again, driven by the core values. And that's what we drive home. So you're faced with a decision. Okay, use the core values. If our core value is to be of service, then in this instance, what's the action? […] You don't have to wait for the [online leader] to say, "Okay, do it." You know you're empowered to make that call.

The study's data revealed that to empower and delegate, online leaders avoid micromanaging, which requires confidence in the abilities of the unit's staff. Most online leaders mentioned a very high regard for their staff. Following are a few quotes that illustrate the value leaders assign to their unit's staff and how staff expertise and abilities enable leaders to empower

them. Drew shared: “I think, fundamentally, I work to hire the best person I can hire. I mean, that's just my philosophy, and I give them the running room to work and to do their best.” Cameron echoed the sentiment by saying, “I have great people working on this staff and I can give them a lot of responsibility […] I just know how to put people in place who are good at it and then let them go do it.”

Logan further elaborated on their strategy related to hiring staff:

> I'm not a smart person, so I have to surround myself with super smart people who can make me look much smarter than I am, and that's a key philosophy of my leadership. I've tried to hire people better at their jobs than I would be, and eventually they would be better at my job than I will be, and some of them probably already would be. Once you do that, suddenly you've got a real ability to delegate with confidence and you know you have great folks who are going to be aligned. It does not mean we get along. I hire for diversity of thought on my team and diversity more broadly than thought, because I like us to challenge each other.

Taylor shared a similar philosophy: “I don’t have the knowledge [the staff members] have. They’ve learned all kinds of things. So that’s why I like to empower them and get out of the way. They have the expertise I’m counting on.” Taylor also explained why empowerment is important for collaboration (further discussed in section 1.2.1. *Encouraging Collaboration*) and professional development (further discussed in section 3.1.1. *Cultivating a Culture of Learning*):

> I empower [my direct reports] and on down the line to bubble up and find resources themselves, find ways to collaborate themselves. I don't want to micromanage. That's not a good style in my perspective, because then the teams never become self-sufficient. They never learn how to grow into new positions for their own career growth. So I like to try to get decisions made at the level closest to where the action is and not at my desk, unless it needs to be at my desk.

It was clear from the data that while leaders have confidence in their staff and empower them to work independently, they keep updated on the work of the people who report to them and provide support when needed. The support includes coaching, providing advice, or “playing

the heavy." Drew's quote below explains why leaders may assume an unfavorable role on behalf of their staff:

> I'll be the heavy if something needs to be said outside of [the online unit] and [an employee] has a really good relationship with the registrar, but something's not going well. I can be the person to sort of say, "Help me to understand this." Sometimes it's good to protect your relationship with someone and for me to be the one asking the questions or wondering about what's what and how this is working, and all of that. And I think [this is appropriate] externally because I want to be careful not to do that internally.

The quote above suggests that Drew does not interfere in solving issues among the staff from the online unit, which also relates to the *Supporting Autonomy* sub-theme discussed in section 2.1.3.

Even though online leaders typically empower staff, there are times when they themselves need to make a decision, as articulated by Taylor:

> If people don't come to the same conclusion, then, at the end of the day, somebody has to make the decision. So I'll make the decision but I'll give an explanation in person to both parties as to why the decision: "Here's what I saw" and give them an opportunity to refute.

Drew further elaborated on the reasons for being more closely involved in some decisions:

> I think it really depends on the decision. If the buck needs to stop at my desk, then I'm going to be more active in that decision, in that plan, in that work. Potentially, if I need to sit in front of the President or the Provost and advocate for additional investments, I need to understand all facets of any initiative so I can clearly, objectively and critically provide an analysis. As a leader, you need to zoom in, and as a leader, you need to be able to zoom out.

Lastly, Logan stated, "my role is ultimately to be the decider when there is tension and conflict."

Sub-theme 1.2.3. Establishing Clear Roles

The preceding section discussed ways that online leaders empower staff to create interdependency, as well as specific strategies for how leaders support their staff members to create conditions for empowerment. The present section discusses another strategy that leaders use to provide support; the strategy of establishing clear roles. This section discusses establishing

organizational values, vision, and common goals as a way to create interdependency, as well as challenges to establishing clear roles.

The data suggested that collaboration and staff empowerment discussed in preceding sections are enabled when leaders clarify organizational values and the unit's vision, goals, and priorities, as well as roles and expectations for staff members and the unit as a whole. The leaders who talked about organizational values and vision indicated that values or vision had been established by involving staff members across the online unit; they had not been written by a few individuals in formal leadership roles. The process that Parker's unit utilized illustrates how online leaders establish values that can be utilized for decision making. The quote from Parker below also suggests practical strategies for reinforcing the values that the unit collectively adopted and for applying the values in daily work:

> One of the things that I am a big advocate for and have pushed for for a long time are core values. We had a process where we had a small group generate what we thought were our core values. But then we engaged the whole community to get feedback from the whole community. And now we've identified these core values. They're published on our website; we talk about them. Last year, every month I took a different core value and I wrote a piece about it, and we had other people highlight how they saw the core value being put in practice in their area. And we really do use the core values for decision making.

The value system of an organization seemed to be related to organizational culture (discussed in more detail in section 3 *Navigating Organizational Context*), which was intentionally clarified by the staff in Taylor's unit. Taylor assembled a group of staff members who were representative of the unit to "get as many different voices as possible" in clarifying the desired culture. Taylor told the group: "You're there because of your diverse viewpoints […] You need to help me figure out what is this culture that we want? Not that I want. We want." Taylor specified that "people on the culture group are from all levels of the organization other than senior management. They were barred from it."

Logan utilized external consultants to lead the process of creating a vision for the online unit because, according to Logan, "part of building interconnectivity is building a shared vision of where we want to go together." The process included working with the leadership team and collecting input from across the unit through individual interviews, small group conversations, and an engagement in larger groups. Once the consultants gathered information on what was important and what mattered to the unit's staff, the leader hired a person to analyze the qualitative data to extract the collective vision.

The data suggested that establishing clarity on vision and goals is important, as it helps leaders to articulate the commonality of the unit's goals. Providing clear common goals creates interdependency within an online unit. It also helps resolve differences, as Cameron suggested: "You have to make your message clear and you have to keep people from being upset with each other by reminding us that we have a common goal here." Logan also reflected on a disagreement that impacted the whole unit and the role clarity played in an unpopular decision that Logan made: "It was interesting because my leaders thought, 'It's going to blow up.' And people said, 'You know, we're not happy but we're so glad to have a clear decision. Let's just have clarity. Let's start moving forward.'"

The data also provided evidence of insufficient clarity in Bailey's online unit. Bailey indicated that being in the current position for a short time "added another element of change confusion," combined with a new role for the online unit within the larger university. As various subunits were being more empowered than previously, staff did not fully understand what role individual subunits would play in the unit's new role serving the university. Additionally, Bailey mentioned "a little uncertainty with my expectations and how to interact with me" due to Bailey's relatively short tenure in the current position. Bailey shared:

> As we go through this big stage now, folks are also having to kind of try to figure out, "How do I operate? What am I doing?" […] It's just a double change management overlay. We've got this top online priority but, for better or for worse, I'm also part of the change. So people having to kind of wrestle through both.

Communication and expectations within Bailey's unit appeared to lack clarity at times, as evidenced by quotes, such as "sometimes we weren't super explicit with expectations" or "I know in some cases there were conversations where things weren't explicit." The overall strategy for the change that Bailey's online unit is undergoing was likely also unclear, based on Bailey's statement:

> Frankly, maybe the [priorities] could have been stated more explicitly in terms of the online initiative and what all the parameters were. But I'd say there were so many considerations to be had. It's not like I could sit there and say, "Oh, on that particular thing, this is how we go. And on this next thing …" You can't be there for every little decision that has to happen.

There was no evidence in the interview with Bailey of their unit having common organizational values, which in other online units play a role in clarifying goals and providing a framework for decisions. The insufficient clear direction might have contributed to some of the confusion that Bailey described, especially since the leader "can't be there for every little decision that has to happen." Even though the quote above suggests that it was not feasible for the leader to closely lead all aspects of the new initiative, there was evidence in the data that suggested a low level of delegation. Complicating the situation was Bailey's belief that some staff members were reluctant to make decisions, which may have contributed to the limited delegation. On the other hand, the reluctance to make decisions might have resulted from the limited delegation. The reluctance to make decisions might have also resulted from the lack of clarity surrounding the new initiative, further underscoring the role of establishing clear roles in shaping networks.

The preceding sections discussed details on how online leaders shape networks, which play a key role in creating conditions for both connecting and conflicting. The data revealed that

leaders cultivate various forms of interactions, which create conditions for leaders to encourage communication. Through the combination of cultivating interactions and encouraging communication, leaders foster connections between people and ideas. The data further suggested that, to shape networks, online leaders combine fostering connections with creating interdependency. They create interdependency by encouraging collaboration, which is enabled by empowering staff. Additionally, online leaders establish clear roles to enable collaboration and staff empowerment. The data also suggested that context, especially the online unit's culture, influences leadership practices for shaping networks. For example, the presence of disrespectful conflict, which is an element of organizational culture, relates to leadership practices that result in limited collaboration. Furthermore, the context of limited control over academics and university policies motivates online leaders to focus on developing networks externally with the university to ensure collaboration.

While the data showed that networks play a key role in creating conditions for connecting and conflicting, conflicting also requires the presence of tension. The following sections discuss how online leaders regulate tension.

Overarching Theme 2. Regulating Tension

The data analysis revealed that the presence of networks, in which people and ideas are connected and interdependent, creates conditions for leaders of online units to foster productive tension. The data further indicated that leaders foster tension by increasing heterogeneity within their online units, as well as by supporting staff autonomy, stimulating creativity, and injecting pressure into the system. Similar to the overarching theme *Shaping Networks* discussed in the preceding sections, the data also provided evidence that organizational context plays a role in fostering or limiting tension. Figure 9 illustrates the relationships between the overarching theme

of *Regulating Tension*, the themes, and the sub-themes, which are discussed in the following sections.

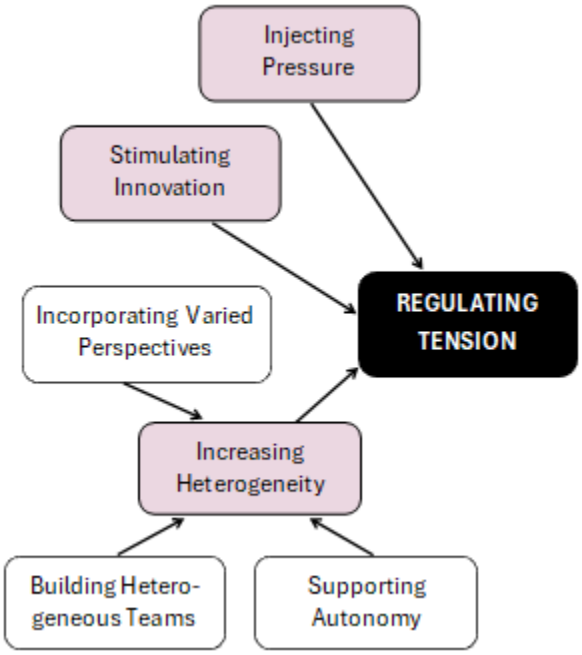


Figure 9
Overarching Theme 2. Regulating Tension

Theme 2.1. Increasing Heterogeneity

The data analysis revealed that online leaders increase heterogeneity in their online units to foster productive tension, which is a key element of conflicting, by incorporating varied perspectives, building heterogeneous teams, and supporting autonomy. Leadership strategies for increasing heterogeneity are discussed in more detail below.

Sub-theme 2.1.1. Incorporating Varied Perspectives

A strong theme that surfaced from the data analysis in leadership practices for increasing heterogeneity in online units was the incorporation of varied perspectives. Leadership strategies for incorporating varied perspectives include the incorporation of university perspectives, seeking input from staff, encouraging discussion, and supporting professional development. The

following detailed discussion of these leadership practices also includes the consideration of context in incorporating varied perspectives.

Because of their external focus on the larger university, online leaders mentioned their practice of incorporating the perspectives, including priorities and needs, of academic departments and other university stakeholders. When talking about a collaboration with another administrative unit in the university, Bailey elaborated on the need to consider the external unit's perspectives: "The conversations have always been collaborative and trying to appreciate that they have concerns that are very real in their minds, very important to them, and that we need to address as we progress [on the new initiative]." The data analysis revealed that it may sometimes be necessary to incorporate the perspectives of the large university because online units depend on their university's collaboration and academic approvals, which is related to the theme of *Navigating a Context of Limited Control* discussed in more detail in section 3.2. Furthermore, Logan mentioned that the online leader position is appointed by the university's president and is, therefore, expected to "carry out what the president wants the university to look like." An example of conforming to a university's directive is an online unit's retention of in-person operations because it is centralized within a residential campus.

Another way online leaders incorporate diverse perspectives to foster productive tension is to encourage staff to speak in meetings. For example, in hybrid meetings that include both in-person and virtual options, leaders intentionally interact with staff who are joining the meeting virtually. Additionally, Taylor described a strategy of providing encouragement to speak up, which helps to elicit the perspectives from the more quiet staff members:

> There's always somebody that wants to speak more than somebody else, but I'll find ways to try to get the person who's quiet to say something. […] Sometimes, on the way out of the meeting, I'll just say, "You were kind of quiet. Is everything okay?" And that opens them up. And it's like, "Well, okay, I appreciate that. But next time, just try to offer some

> opinions. Your voice is needed. Nobody said what you just told me and the group would have benefited from that." You have to give them the encouragement and the courage to have those kinds of conversations.

In addition to formal meetings, Drew incorporates varied perspectives by soliciting input through an anonymous survey that staff can complete at any time. Drew shared: "If anyone sees something that we need, or it's an opportunity, it's an issue, it's a challenge, or if you're concerned about something, you can bring it forward." Furthermore, as discussed in earlier sections on *Fostering Connections* (section 1.1.) and *Creating Interdependency* (section 1.2.), leaders engage with staff informally and, through this informal engagement, hear perspectives from staff across the online unit.

The data further revealed that another leadership strategy to incorporate new insights is the encouragement of staff to connect with colleagues from other institutions, which relates to supporting professional development (discussed in section 3.1.1. *Cultivating a Culture of Learning)*. Additionally, leaders incorporate varied perspectives to increase heterogeneity through community or industry advisory boards or through utilizing the expertise of external consultants. However, Bailey's experience also suggested that online leaders may need to be strategic when incorporating varied perspectives:

> With so many people in the conversation, there were so many different vantage points on what a solution would be that it really made it difficult to kind of facilitate those conversations and to do it in a productive way.

Several leaders described their role in incorporating varied perspectives in terms of providing themselves, or guiding others to consider, a fresh view on a context when disagreements arise. A new perspective on the context of a situation can promote autonomous problem solving, as Taylor explained:

> No matter what it is, I'm trying to find ways to get more context into decision making, so that people are being respectful of their colleagues, no matter what the situation is. […] If

> it's workload within the office environment, what's the impact of my decision on others' work? Is it fair to them? I ask the questions, so others get the context to see the potential solutions themselves rather than me having to tell them.

The data also revealed another reason for encouraging discussion while incorporating a variety of perspectives. Leaders utilize discussion as a strategy to stimulate solutions. Cameron described an approach when two sub-units were having a disagreement about a proposal to utilize staff across subunits, which ultimately resulted in a positive outcome for both subunits: "I wanted [the two directors] to have that discussion and not have me mediating it. And so, I would say that sort of encouraged low level conflict, amiable conference, if you will, that allowed them to work toward a solution."

Somewhat contrasting is Bailey's approach to handling disagreements between subunits, which Bailey indicated are due to a new role that the online unit has assumed in leading online efforts and resulting disruptions to the online unit. Bailey reflected:

> I think the primary role [for me], again, given the newness, the new dynamics, etc., has really been about subunit interactions. So, in the front getting the charge out, getting the collaboration where needed. But I'm realizing the subunit interactions are such where, once the subunit comes back and says, hey, this is how we should do it, this is what we've done, I feel like there's been a need [for me] to facilitate communication of that and any brokering of differences [between subunits], trying to broker those differences and come up with an online unit answer to how we are going to do that.

As discussed in section 1.2.1. on *Encouraging Collaboration*, the presence of disrespectful conflict that became evident from the data may also play a role in influencing the strategies that Bailey uses in facilitating collaboration, as well as incorporating varied perspectives in decision making and problem solving.

Sub-theme 2.1.2. Building Heterogeneous Teams

Related to the preceding strategy of incorporating varied perspectives to increase heterogeneity, which fosters tension, is leaders' strategy of building heterogeneous teams. Online

leaders build heterogeneous teams by including others in decision making, constructing diverse teams, and through intentional hiring practices to increase diversity, as discussed in more detail below.

The data indicated that, within their online units, leaders incorporate varied perspectives, and consequently increase heterogeneity, by setting up intentional structures, such as building heterogeneous teams. Leaders mentioned forming various committees that consist of diverse staff members and also represent sub-units across the online unit. Committees and other groups that leaders form often participate in decision making. Logan described their unit's equitable decision guide that is used to include staff who might be impacted by various decisions, rather than including only the staff with formal authority. While the inclusion of varied perspectives brings equity into the online unit, the process has the potential to lead to expectations of consensus, which may not always be feasible or desirable, as Logan explained:

> If it's a change within our organization, we try to use what we call an equitable decision-making process. So, we really try to broaden this into the organization. If it's a major change, this sometimes means it takes more time. We can suffer potentially from that becoming consensus-driven decision making. There's a difference between equitable decision making and consensus-driven decision making. In equitable decision making, we try to make sure the stakeholders who might be impacted by a decision have the ability to communicate that impact back to senior leadership before the change rolls out. This avoids us from making stupid decisions because we are not in the day to day. But it also means we can hear where the change is going to create pain points within the organization, which helps us then understand how my leadership team needs to be prepared to coach and deal with those changes downstream within the organization.

Even though Logan does not always seek consensus, the unit's leadership team uses the equitable decision-making process, which requires collaboration, to solicit feedback so that potential challenges could be dealt with. The quote above suggests that effective collaboration depends on communication (discussed in section 1.1.2. *Encouraging Communication*).

Parker also provided an example of building heterogeneous teams. After utilizing a small executive team within Parker's online unit for monitoring and shared decision making, Parker expanded the team to increase its diversity:

> And then I realized our group was not diverse enough, it was not representative enough, and it was really limited. And so, I rethought the whole structure and I changed the structure. And now we call it a strategic leadership group, and it's probably three times bigger than it used to be, but it is completely diverse, and it allows many more voices at the table and many more opportunities for cross collaboration because we bring them together once a month. And part of the challenge is to see how can we work together across multiple units.

In addition to including varied perspectives, the strategic leadership group in Parker's unit also serves to encourage collaboration. The data indicated that building heterogeneous teams serves as a strategy for *Encouraging Collaboration*, which is a sub-theme discussed earlier in section 1.2.1.

The study's data provided evidence that some online leaders intentionally hire diverse people to increase heterogeneity in their online unit. Parker utilizes diverse hiring committees to screen applicants, as well as hiring practices to intentionally "diversify our workforce so the workforce represents the people we serve." These hiring practices include marketing job openings to historically black colleges and universities or national black or Hispanic associations. Logan further shared: "I hire for diversity of thought on my team and diversity more broadly than thought because I like us to challenge each other."

Sub-theme 2.1.3. Supporting Autonomy

In addition to incorporating varied perspectives and building heterogeneous teams discussed in the preceding sections, online leaders increase heterogeneity by supporting autonomy in decision making and problem solving and by providing advice when needed. These

strategies are discussed in more detail below, along with a consideration of context in supporting autonomy.

The data provided evidence that online leaders support staff autonomy in decision making to increase heterogeneity. Such decisions are expected to happen at the appropriate level of responsibilities, as articulated by Bailey below. The quote indicates that in situations when a leader is involved in a decision, the decision may be team-based or the leader seeks input:

> In general, I'd like to believe that in day-to-day operations, people are constantly making decisions on how to move forward. And I think it's only kind of the high resource utilization, whether it's money, or people, or new initiatives, etc., where I'm much more obviously involved, saying, "Hey, you know, I've got to be a part of the decision. So, let's come together and figure this out."

In addition to autonomous decision making, the data provided evidence that leaders support autonomous problem solving. More specifically, leaders not only afford autonomy in problem solving, they expect it, as is evident from Drew's quote:

> People know that my expectation is that they will talk before they come to me and say, "My project isn't getting prioritized and I'm upset about that." It's kind of like, "Go and understand the priorities and where your project is in the queue, and what's being prioritized before your project. Understand that situation." So, I'm really careful about not stepping in to sort of manage that, understand that, discuss that.

Unlike Drew, Bailey shared two examples of personally providing suggestions to employees for resolving issues, which suggests a hands-on approach. For example, when describing a disagreement between subunits about course offerings, Bailey described talking to a representative from each subunit:

> Now, Gary, could you work on creating a list of the really critical classes that you think need to be offered? And Peter, would you please try to find faculty who could teach those? And you two go off and let me know how it's going.

This hands-on approach to problem-solving may stifle interdependency between subunits. It contrasts practices of other online leaders who encourage employees to work through problems

independently. When online leaders refrain from solving problems for others, they encourage their staff to "understand the situation." The process of understanding a situation may require employees to incorporate the perspectives of their colleagues, which relates to the sub-theme of *Incorporating Varied Perspectives* discussed in section 2.1.1. When leaders encourage their staff to solve their own problems, they further create conditions for the staff to interact and collaborate, which contribute to fostering connections and creating interdependency. *Fostering Connections* and *Creating Interdependency* are both strategies for developing networks as discussed previously in sections 1.1. and 1.2., respectively. Lastly, Bailey noticed a "reluctance by some people to proactively make decisions and move forward themselves, like deal with these tough things, make decisions," which may be the reason for Bailey's offering solutions. However, the practice of offering solutions may also contribute to employee reluctance to make decisions proactively.

Even though leaders expect their staff to solve their own problems, they make themselves available to provide advice. However, similar to Drew's expectation for staff to first "understand the situation," Taylor expects staff members to demonstrate that they have considered solutions before asking for advice, which again encourages staff to incorporate varied perspectives and to potentially collaborate with others:

> The last thing I want is somebody comes and throws their problems on my desk. They need to be solving their own problems or coming to me, saying, "I need your advice. Here's what's going on. I'm thinking of option A or option B. Here's what I think the options or the advantages of option A are. Here's where I think the options or advantages of option B are. Am I missing something?"

Unlike other leaders, the data provided evidence that Bailey is "definitely heavily involved" in a new initiative, including the implementation, and limits the delegation of responsibilities. Bailey's explanation suggests that supporting autonomy may be contingent upon

the context, including the length of the leader's tenure in the current position and the extent of an initiative:

> Yeah, I think [I am involved in this new initiative] pretty darn heavily; actually, maybe even more than I would want in a perfect world. But I think there's a couple of things going on as a context. Again, this is a very new role for the online unit from the university perspective; seeing us in a leadership role for most of the offices at the university is a bit unique. And I'm also new in my leadership role and that impacts us both externally and internally. If this were 10 years into my tenure, I would probably be handling this very differently. But given kind of new in the position, and the online unit new in the role of providing leadership on something for the university, etc., I've interjected myself heavily into a lot of the decision making around this topic as we move forward.

In addition to fostering the inclusion of varied perspectives, interaction, and collaboration, which the study's data show contribute to developing networks and fostering tension, affording staff autonomy in decision making at their level of responsibilities and in problem solving also contributes to the development of a *Culture of Belonging and Engagement*, as discussed in a later section 3.1.3. Cameron explained that "[people] could [get paid more elsewhere]. And if I can't [pay them as much here], then at least I can give [them] a lot of autonomy, because that's really important to people."

Theme 2.2. Stimulating Innovation

The study's data provided evidence that online leaders create conditions that stimulate exploration of new ideas and encourage innovation, which is a leadership strategy that can increase tension and enable conflicting. Online leaders stimulate innovation by monitoring the environment, building a flexible infrastructure, allocating resources to new initiatives, retaining flexibility in their unit's services, providing spaces for innovation, supporting learning, and embracing failure. These strategies are discussed in more detail below, along with considerations of context that can influence innovation.

The data revealed that leaders stimulate innovation by monitoring the environment for potential forces of change. The strategies leaders use to monitor the environment include maintaining external professional connections, reading relevant articles, or engaging with the online unit staff to elicit feedback. Parker also mentioned the unit's business continuity plan that had been developed before the COVID-19 pandemic and allowed the unit to be prepared for the crisis, which required some creativity to handle a novel situation. Parker further elaborated on the unit's scalable, flexible infrastructure that the leader had developed to respond to fluctuating demand:

> One of the things that I had developed is not just full-time people, but also an expanded team – part time people, consultants – that we could grow as the need developed. So, if we had a particular semester where there was just so many courses that had to be developed and we didn't have enough staff to do it, we had this expandable staff model that we could use, and we used that during Covid as well.

A flexible infrastructure can accommodate fluctuating demand, as well as create conditions for innovation, which typically demands increased resources, at least initially. Logan also talked about flexibility. Specifically, Logan changed the unit's financial model to give the unit more flexibility in responding to changing needs of academic departments for varied levels of support that grew out of the COVID-19 pandemic.

Online leaders further support innovation by allocating resources to new initiatives, such as providing a marketing budget to promote new academic programs or supporting faculty who are interested in teaching online, as Parker explained:

> We did have some early adopters. We did have some cooperation. And so we doubled down on working with those that wanted to do this work, that wanted to build up their online course portfolio, that wanted to launch an online degree. And we threw all the resources to supporting them. So, we worked with the willing, but we continued to preach the message to everybody.

The study's data further revealed that leaders create conditions for innovation through physical spaces. An example is Cameron's unit's physical building where each team decided to create their own "innovation space." The physical space of Logan's unit similarly encourages creativity: "We have stackable glass on the cubes but you could easily stand up and have a conversation across the cubes that alone starts to encourage more creativity." Clearly, creativity and innovation are related to the theme of *Fostering Connections* discussed in section 1.1.

Another way for leaders to create conditions for creativity and innovation is by encouraging staff to attend conferences and find other ways to connect with colleagues from other institutions, as those connections stimulate learning and new ideas. This practice is also related to the sub-theme of *Cultivating a Culture of Learning*, which is discussed later in section 3.1.1. Related to the *Cultivating a Culture of Learning* sub-theme is leaders' attitude towards new ideas and the recognition that some ideas may not move forward, which is another practice for creating conditions for creativity and innovation, as Parker explained:

> I set the example by saying, "Well, I have this idea; it may not be a good idea." We [the leaders] are just like anybody else. We're going to put the idea on the table and we're going to talk about pros and cons, we're going to discuss it. And we're going to see, is there a consensus? We've been working hard at this to develop a culture where people feel free to put forward wild ideas, right? We want them to think crazy thoughts because something good may happen.

Logan summarized the relationship between innovation and failure by saying, "We try to push the envelope, so we fail at things at times."

It was clear that creativity and innovation require a context where people feel comfortable to fail. The data further suggested that creativity and innovation may also depend on a context where the unit's operations have been established. Bailey specified that the priority for their online unit, which was fairly recently charged with a new responsibility, is to establish operations, policies, and processes to support the administration of online programs before the

unit can make space for innovation. Bailey likened this order of priorities to the Maslow's hierarchy of needs:

> The focus right now is on operations because we're trying to normalize operations and trying to really understand what operations we need, and policies, processes, everything to support online [efforts] for the university. But after we get past that stage [of figuring it out], the hope would then really become […] around innovation. Everything from creative, interesting ways to market a program to maybe using AI or avatars in the classroom, right? Full range of what might be innovation for a program. New track, whatever, make it up. I'd like to think that kind of thing would start coming in. It's kind of like Maslow's hierarchy of needs. So, step one, we got to deal with hunger and safety, which for the programs is really kind of that operational emphasis: we have to know how to function, so let's get that taken care of. And then we can start aspiring to grander and grander things.

Further related to organizational context, the data analysis also suggested that innovation in online units may be stifled by the need to *Navigate a Context of Limited Control*, which is a theme described in more detail in section 3.2. Cameron's quote below illustrates a challenge for online units to operate within residential universities when they depend on the university collaboration:

> We're a little bit more reactive than proactive as a unit, because the fact is, at the university, there's a lot of administrative … what's the word? I guess I would say administrative pressure to make sure that we remain primarily a residential campus. And so I spent most of the past 20 years of my career convincing faculty and administrators that we aren't stealing campus enrollments. Actually, it's an additive process; we are increasing the number of enrollments.

Theme 2.3. Injecting Pressure

The preceding sections discussed leadership strategies for regulating tension, which included increasing heterogeneity and stimulating innovation. The present section discusses a third strategy that the data analysis identified for regulating tension, which is injecting pressure. Online leaders inject pressure to increase tension mostly by holding staff accountable. An online units' external context also injects pressure, specifically a sense of urgency, which may be beyond online leaders' control, as discussed in more detail below.

The data provided evidence that online leaders hold people accountable, which injects pressure into the system and contributes to fostering tension. Leaders expect their direct reports to promote teamwork and to ensure sufficient communication and sharing of information. Taylor also holds the team of direct reports accountable for making sure they are creating safe spaces, are willing to listen, and encourage all voices to speak. Leaders hold staff accountable by including such expectations in annual performance reviews.

Cameron reflected on the need to challenge the staff by saying, "You have to push people. And it's especially important in a unit like mine where there's so much longevity, we can get very comfortable. And I think it's really important that we not get very comfortable." Similarly, Logan reflected on accountability and a challenge of using committees to accomplish work, which is typical in the context of higher education:

> One of the things I say is, "Let's just be clear about the accountability." I will say we have to improve on that a lot because we do a lot of things by committee. If there's an error in something that happens and everybody starts saying, "Well, I don't know who's responsible," [that's a problem]. It's not about prosecuting or persecuting somebody for an error that occurs; it's about being able to know who is responsible. Do we know with clarity where the responsibility for a fix for that problem occurs?

The study's data also suggested that online units are pressured by a sense of urgency, which may come from the unit itself, from the university, or from the governance board. Taylor, for example, talked about a team of instructional designers who are under a lot of pressure to ensure that they are on track with their course design process each semester, despite facing challenges, such as faculty unavailability. Drew talked about a university-wide initiative and being given one year to show a governance board that the initiative should continue moving forward. In addition to the time pressure, there was a limited room for error, as Drew described: "We knew we had one shot. We had one shot to do this, one window to do it right." When talking about a new charge that the online unit received from its university and various

stakeholders figuring out how to best support online programs for the university, Bailey also mentioned "a sense of urgency to try to move the conversations along."

Sometimes leaders inject these pressures intentionally, but other times they do not possess much control, especially in the case of time pressures that come from the university or the governance boards. The pressures of employees being held accountable or working under time constraints contribute to fostering tension, which is theorized to be a key element in organizational adaptability. The data, however, provided evidence that time pressure may also inhibit heterogeneity (discussed in section 2.1. *Increasing Heterogeneity*) and, consequently, productive tension when time constraints limit discussion. Bailey mentioned throughout the interview the element of time urgency and the need to make decisions and resolve disagreements fairly quickly. Bailey shared that, when assembling a large heterogenous group to work on a new university-wide initiative, "conversations ran off target, ran off task, and went off on tangents. It slowed down progress." Bailey's approach was to "isolate those conversations" to each subunit and personally "bring in the vantage point of other subunits into the conversations with that unit" to mediate disagreements. The next step was to "try to expand the conversation in a relatively limited way from there, keep the players who are directly impacted as part of the conversation and maybe lose more of the tangential ones, so we don't muddy the task at hand." The data suggested that this strategy helped Bailey's unit to progress forward.

The preceding sections discussed details on how online leaders regulate tension. The data revealed that leaders foster tension by stimulating innovation and injecting pressure into the system. In addition, leaders foster tension by incorporating varied perspectives and supporting autonomy that enable them to build heterogeneous teams, which collectively lead to an overall increase in heterogeneity within online units. Similar to leadership practices for shaping

networks, organizational context was found to play a role in how leaders regulate tension. For example, the data indicated that the presence of a disrespectful conflict and subunit jealousy, which can be viewed as elements of an organizational culture, negatively influence the extent to which online leaders incorporate varied perspectives into decision making and problem solving. Furthermore, a sense of urgency that comes from the university's environment, which online leaders may not be able to control, was found to inhibit discussion and, consequently, stifle heterogeneity.

Leadership practices for regulating tension, along with shaping networks, create conditions for conflicting. These practices are influenced by an online unit's culture and the context of the larger university. The following sections discuss how online leaders navigate the organizational context of their online units and the larger university.

Overarching Theme 3. Navigating Organizational Context

The time pressures that come from the university discussed in the previous section relate to the organizational context that online leaders must navigate. The data analysis revealed that leaders' strategies influence the culture of their online units in both deliberate and consequential ways. Leaders must also navigate the context of the larger university with a limited ability for control. The data suggested that context affects how leaders shape networks and regulate tension and, consequently, how they create conditions for connecting and conflicting. Figure 10 illustrates the relationships between the overarching theme of *Navigating Organizational Context*, the themes, and the sub-themes, which are discussed in the following sections.

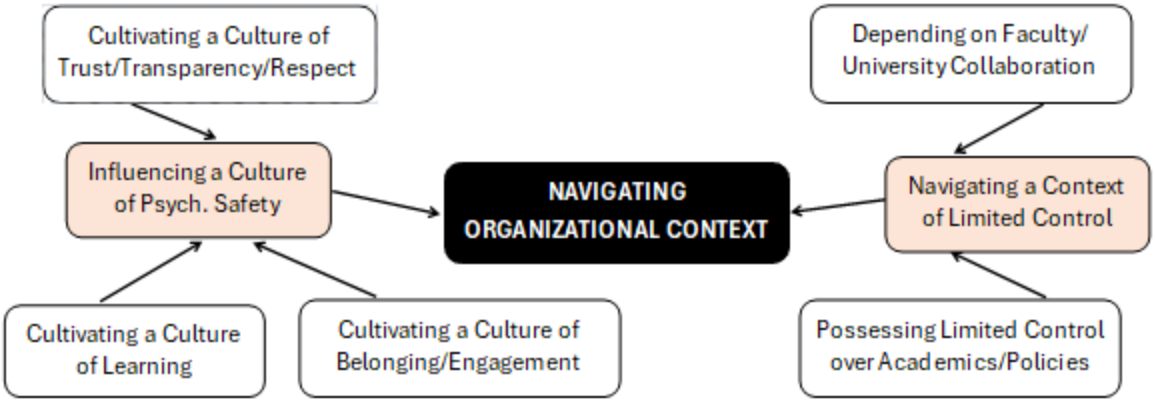


Figure 10
Overarching Theme 3. Navigating Organizational Context

Theme 3.1. Influencing a Culture of Psychological Safety

The data analysis clearly indicated that to develop effective networks and foster productive tension, online units need to cultivate a culture of psychological safety. Taylor provides an optional training to staff on psychological safety. Other participants influence a culture of psychological safety more indirectly by cultivating a culture of learning; a culture of trust, transparency, and respect; and a culture of belonging and engagement, as discussed below.

Sub-theme 3.1.1. Cultivating a Culture of Learning

The data analysis suggested that online leaders strongly support staff professional development and embrace errors and failure as learning opportunities. Through these practices, leaders build a culture of learning in their online units. The data revealed that the culture of learning creates conditions for *Empowering Staff* and *Supporting Autonomy*, which are sub-themes discussed in sections 1.2.2. and 2.1.3., respectively. When leaders support professional development, they also encourage *Incorporating Varied Perspectives* (discussed in section 2.1.1.). Following is a more detailed discussion on leadership practices that support professional development.

It was evident from the data that online leaders strongly support and encourage professional development within their online units. Nearly all study participants mentioned professional development and training repeatedly throughout the interview. Online leaders shared a number of examples of how professional development is supported in their units. Leaders provide funds for staff to attend conferences as participants and to also participate at conferences as presenters. Additionally, Drew encourages staff to serve in leadership roles in professional organizations, which Drew sees as a benefit to the university as well as the employee. Some leaders support their units in organizing their own internal conferences or dedicated days of professional development, which fosters connections that are especially helpful in a virtual environment and contribute to efforts for *Shaping Networks*, as described in section 1. Parker encourages employees to utilize a tool called Blue Ocean Brain, which provides learning related to business topics and is designed specifically to build a culture of learning. Parker's unit has also built its own internal mentoring program and an internally funded grant program for employee continuing education.

Online leaders also support various forms of training. Logan's online unit organizes workshops with consultants on difficult conversations. Taylor described an opportunity for all interested staff within the online unit to participate in a lean process training "so that [the staff members] become empowered to look at what they do and say, 'Is there a better way of doing this?'" As is evident from the quote above, professional development creates conditions for *Empowering Staff*, which is a sub-theme described earlier in section 1.2.2. Drew also arranges training specific to new responsibilities so that employees can perform their jobs successfully. Parker described a cross-training that proved to be essential in retaining employees when the university shut down in-person operations during the COVID-19 pandemic. Employees whose

jobs were not well suited for a virtual work were able to help other sub-units within the online unit during the shutdown period because they had been cross-trained.

Of note is that online leaders mentioned the embracing of their own learning, either through participating in learning institutes, engaging with their online unit staff's diverse perspectives, reflecting on their leadership effectiveness and learning from experience, or acquiring wisdom from the mentorship of other leaders. Similar to their own journey of continuous learning, the data also revealed that online leaders support the development of leadership of others through somewhat organic or indirect efforts. For example, online leaders refrain from micromanaging. They mentioned that when they drive responsibility toward their employees, the employees grow in their jobs and into new positions. Supporting employees to grow into new positions creates conditions for the online unit to scale up, as Taylor explained:

> Another part of my strategy [in creating collaboration] is to groom [my direct reports] so that we can keep scaling. I can't be in all these conversations [with university stakeholders], so they have to start being in some of it. So I like to empower my teams.

The ability of online units to scale up creates conditions for *Stimulating Innovation*, as discussed in section 2.2.

Similar to online leaders' practice of delegating to their direct reports, the leaders coach the members of their leadership team to appropriately delegate to their supervisees. Logan shared:

> Where I will coach people sometimes is when somebody's not getting their work done, and [a leadership team member] starts stepping in and doing the work for that slack number. And I'm like, "I see what you're doing. You're becoming an individual contributor. You've got to have a hard conversation [with that person] and say that you need them doing this work."

Logan continued to explain that rather than doing someone else's work because the person says they are really busy, Logan expects the leadership team members to ask questions, such as "Why

[is this person] really busy? Are they appropriately delegating?" The information that Logan shared suggests that coaching as a form of professional development is related to the *Empowering Staff* sub-theme discussed in section 1.2.2. Empowering can be accomplished by delegating to others but may require skill development through coaching. This data indicated that online leaders provide coaching to their leadership team in how to lead their own employees.

Of note is the absence of data on professional development in Bailey's unit, which does not mean that Bailey is not supportive of staff development. However, it could potentially indicate that professional development is not used intentionally to empower staff or foster connections, as it is in other online units. For example, Parker shared that "part of the agenda [of the unit's mandatory professional development] is to cross-fertilize with [the unit's] different offices," which relates to the theme *Fostering Connections* discussed in section 1.1.

In addition to professional development, the data analysis suggested that another way to cultivate a culture of learning is for leaders to embrace errors and failure. All participants embrace errors and failure as a learning opportunity. Drew connected the learning opportunities that stem from errors, mistakes, and failures to the core business of online learning units that operate in the education industry. Cameron further reflected on their philosophy regarding errors that stem from faulty decisions:

> If [my leadership team members] can't make good decisions, then I don't mind them making a mistake. We'll deal with the mistake as long as it doesn't have a really bad effect on their team members; I don't want their mistakes to be problematic for people below them. I guess if [the decisions] are problematic for the [people who made the decision], that's just a learning thing, and you have to learn those things and deal with your mistakes.

The data indicated that some leaders model the acceptance of failure by acknowledging their own mistakes and apologizing to the team, as illustrated by Taylor, who shared: "If I'm willing to say, 'I'm sorry, I made a mistake,' that should say it's fine for [the staff] to do too."

Taylor also specified that it is important to be authentic in these kinds of situations. Bailey acknowledged that while they are open to risk taking and failure, the leader does not know "to what extent that's communicated out, if people are aware of that." Bailey further reflected that the uncertainty about the repercussions of failure might be the reason why some staff members seem reluctant to make quick decisions and to move forward. The data suggested that online units need to provide a culture of psychological safety for employees to embrace errors and failures. The data analysis also found that university policies that are beyond the control of online units may influence employee behavior. In the particular case of embracing errors, even when leaders communicate their tolerance clearly, the university's probation period during which new employees can get fired within the first several months may discourage employees from taking prudent risks.

The data clearly indicated that while online leaders embrace errors and failure, they expect a follow-up with a reflection on what might have gone wrong and how to fix or prevent the error in the future. These kinds of reflections and post-mortems, which are often performed in a team setting, contribute to *Encouraging Collaboration*, a sub-theme discussed in section 1.2.1. Logan further elaborated on the role of accountability (discussed in more detail in section 2.3. *Injecting Pressure*) in fixing errors:

> We're very careful to say, "Okay, let's find out what happened. First, let's get to the root of the problem. Let's investigate the error." So again, if we have an error, we fix it. I'm like, that's a success that happens every day. When we have an error and we're not fixing it, and especially if we're not fixing it because we don't want to hold somebody accountable for it, that's where I'm going to step in and say [to my leadership team], "As a leader, you've got to hold folks accountable to get that fixed."

The data analysis also revealed that failure does not necessarily originate from making mistakes or erroneous decisions. Logan understands failure as a positive indication of the unit's attempts to innovate, as the following reflection demonstrates:

> Did we fail because we were pushing the envelope and we were trying to do something big and new, and we discovered, "Crap, this is just not working."? I love those kinds of failures.

The data indicated that embracing failure can be seen as a leadership strategy for *Stimulating Innovation*, which is a theme discussed in section 2.2.

Sub-theme 3.1.2. Cultivating a Culture of Trust/Transparency/Respect

The data analysis suggested a connection between leadership practices for *Fostering Connections*, which was a theme discussed in section 1.1., and leadership practices for building a culture of trust, transparency, and respect. Online leaders foster transparency by "having honest conversations" and owning up to their errors or decisions that may not be popular. In general, leaders foster transparency by encouraging communication and sharing information. The data revealed that part of effective communication and fostering transparency is providing a rationale for decisions, as well as demonstrating to unit staff that they are heard, as illustrated by Logan:

> What I've previously heard is, we've formed committees, they give ideas, and then they're ignored by management. And what I said was, "I don't care what you say about me, as long as you do not tell people you were ignored, because being heard and getting things to go your way are two different things. I want to make sure you know you were heard. And I want you to see how that impacted the way I thought about how we made this decision."

Drew and Cameron talked about their "no surprises" expectation for staff, which also relates to communication. Drew explained why it is important to be transparent and how the expectation is disseminated:

> I talk with my leadership team about [the need to be transparent]. If we know about it, we can manage it. We can lead through it. We can pivot. We can inform. We can educate others. We can deal with it. It's when we're not transparent, we're not candid, we're not open because we think it's going to reflect poorly on us, that's when we get in trouble. And so, the no surprises for me is sort of how I lead. I talk about it with the people that report to me because I think that just helps us to do it across [the unit].

Cameron added that it is important for a leader to hear about problems, as well as about positive accomplishments, from the employees directly, rather than hearing from someone else.

Online leaders also talked about strategies to cultivate respect and civility among their online unit staff. The strategies include incorporating an appraisal of workplace civility in annual performance reviews or providing more context for decision making that enhances transparency and consequently promotes respect among staff for each other. Leaders integrate respect into their daily interactions by respecting differences, which they accomplish through their support for heterogeneity (the *Increasing Heterogeneity* theme was discussed in more detail in section 2.1.).

The study data revealed that the cultivation of transparency and respect supports the cultivation of trust. In addition to promoting transparency and respect, leaders also cultivate trust by encouraging informal interactions, which provide staff with opportunities to engage impromptu on a more personal level. Logan expressed a belief that such interactions materialize most likely in a physical rather than a virtual setting:

> People don't really know each other except on Zoom. That's where we see the real challenge in the breakdown of trust and the interstitial communications that build that trust. Trust and communication are not the ones you get from a formal meeting. It's what happens in the hallway after the meeting, and we've never replicated that yet [in a fully virtual format].

Cameron also underscored the important connection between building trust and working together physically where people can “see each other be vulnerable.”

It was further evident from the data that online leaders intentionally build or recognize that they have teams of competent employees on whom they can rely and whom they trust. Leaders build trust in their online units by modeling trust themselves. They demonstrate their own trust through empowering their staff to work autonomously and through delegating rather

than micromanaging (discussed in sections 1.2.2. *Empowering Staff* and 2.1.3. *Supporting Autonomy*). The data included limited evidence of delegating in Bailey's unit or holding a high regard for staff, which may be related to the presence of "subunit competition," "subunit jealousy," and "disagreement where disrespect starts becoming an element in the conversation." Additionally, insufficient communication and unclear roles in Bailey's online unit (discussed in sections 1.1.2. *Encouraging Communication* and 1.2.3. *Establishing Clear Roles*, respectively) may obstruct transparency, which in turn inhibits the fostering of trust and, consequently, cultivating an overall culture of psychological safety.

Sub-theme 3.1.3. Cultivating a Culture of Belonging/Engagement

Overall, the data indicated that online leaders intentionally create a welcoming environment for staff to feel that they belong and can safely engage. For example, Taylor supports the unit's staff having trusted colleagues to confide in:

> Some of our team members are trained in safe spaces; they have the little tag outside their cube or office, and this is a safe space and people can come to them. You don't have to come to me. They can come to somebody else and have those kinds of [sensitive] conversations. But providing avenues in which they can, I'll just say, vent or have a conversation, is critical as we go forward.

Many of the strategies discussed under the various themes in the preceding sections contribute to creating a culture of belonging and engagement. In addition to building a culture of trust, transparency and respect, examples of strategies for creating a welcoming environment include engaging employees in meetings, actively soliciting their input, and including them in shared decision making. Leaders also afford flexibility within the potential constraints of a residential university that expects units to provide in-person presence and allow staff to utilize a hybrid schedule. Other ways to create a welcoming environment that leaders mentioned are various celebrations or acknowledgements of difficult events in employees' lives.

Several participants talked about their unit's organizational values that specifically promote respect. Leaders create a welcoming environment especially by engaging staff across all levels of the organization in the process of developing these values rather than determining the values at the leadership level. Leaders also support their employees taking the initiative to create ways to engage with each other outside of formal work or to determine creative ways to demonstrate respect and celebration of differences, such as getting pins with preferred pronouns to wear in virtual meetings.

Leaders strongly support personal connections, as described in section 1.1.1. on *Cultivating Interactions*, which further contributes to the culture of belonging and engagement. Logan described a program that recognizes diversity where two employees, ideally with dissimilar cultural backgrounds, periodically engage on various topics for half an hour. The topics relate to cultural differences, such as the importance of food in one's life, one's family culture, or current news events. Part of the goal of these conversations, according to Logan, is to "get people to un-focus on specifically the organization and have a human conversation that connects you with somebody."

Another way leaders engage their staff and create a welcoming environment is through formal and informal recognitions of accomplishments that may include small monetary amounts or even a permanent pay raise. Lastly, Logan talked about their role in inspiring staff: "Part of my role is to be the inspiration and tell people why we're doing things, where we're going, why we're going this way." This quote underscores the importance of *Establishing Clear Roles* (discussed in section 1.2.3) in creating a culture of psychological safety.

Theme 3.2. Navigating a Context of Limited Control

In addition to building a culture of psychological safety in their online units to build a context conducive to connecting and conflicting, online leaders must navigate the context of the university within which they operate. Unlike with the cultural context that leaders directly influence, the data revealed that leaders have less control over the university context, which includes possessing limited control over academics and university policies, as well as depending on faculty and university collaboration, approvals, and buy-in. Following are details on the university context and its connection to leadership practices related to enabling conditions for connecting and conflicting.

Sub-theme 3.2.1. Possessing Limited Control over Academics/University Policies

The data clearly showed that academics at the public residential universities included in the study are the purview of faculty and their associated departments and colleges. The role of online units is to provide a service to support the administration of online programs. Generally, the faculty and academic units decide what programs or courses to offer online and who will teach them. Online units also typically do not have the ability to directly refuse supporting an online program when approached by an academic unit. In such situations, online units use data to demonstrate a potential low feasibility of a proposed program. The data suggested that the dependence of online units on the faculty and academic departments in proposing and approving online programs limits the ability of online units to innovate freely in the area of programming.

Furthermore, because the online units included in the study are centralized within a larger university, they must adhere to many university policies that they may not have the ability to control or influence, but that affect the online unit nevertheless. Examples from the data include HR policies related to salary ranges, which constrain hiring, or dealing with low performing

employees. One university included in the study also has a six-month probationary period during which new employees may be fired, which may stifle these employees' willingness to take prudent risks and, consequently, reduce innovation (further discussed in section 2.2. *Stimulating Innovation*).

Parker talked about a university-wide online learning council that had been convened by the university president. Even though the council's efforts impact the online unit, a member of Parker's team only "sits on the council as ex officio member, not a voting member." Lastly, Logan talked about the position of the online leader within their university in the context of the university wishing to remain mostly residential and expecting all units, including the online unit, to operate in person. Logan said: "I'm appointed; I have to carry out what the president wants the university to look like." This kind of relationship, where an online leader carries out directives from a university executive, likely applies to at least some, if not all, other universities included in the study. The university environment that online leaders do not have the ability to control can negatively influence the conditions within online units for connecting and conflicting that enable organizational adaptability.

Sub-theme 3.2.2. Depending on Faculty/University Collaboration

Related to online units' limited control over academics and university policies is their dependence on faculty and university collaboration. The data established that online units depend on their university's collaboration, approvals, and buy-in because they are not fully autonomous units. Because academics are the purview of faculty, online units tend to use data to persuade faculty to develop online courses or programs. Taylor described the process when the online unit identifies a market opportunity to serve students who cannot come to campus and reaches out to faculty or an academic unit: "[We ask], 'Are you willing to learn more? Are you willing to want

to do this?' We don't ever force somebody to do this either as a program or as an individual faculty member. It's always a collaborative effort." Parker described the role of the online unit as: "We're the service provider. We provide guidance, which [the academic unit] can accept or reject." Online leaders mentioned a lack of cooperation from college deans who either "discount" the work online units do or "are facing pretty severe financial stress and don't really want to do anything that doesn't benefit their own [university] students."

Online learning units are also not completely in control of a course design process, which is the service that the units provide, because a faculty member may not be available to collaborate when needed. Additionally, online units may need to get financial models approved by the university. When talking about the online unit's relationship with the university, leaders used expressions such as "maintain that buy-in," "I wanted him to be onboard with me," "persuade the dean," "we had to make a great case," or "I don't really have the power to make it happen." The following quote from Drew is illustrative of some of the challenges online units face even when they may be able to assume control:

> The interesting thing is that [a person at the university] said to me one day a year or two after we submitted [a proposal for a new program]: "You have the budget in [your online unit] to do this." And I was like, "Yeah, I know I do. I could stand this up tomorrow but that's not the point. If we stand this up tomorrow in [our unit], then some college or some other campus is going to decide they don't like the structure that we've created; that they don't want to play ball. And they're going to go off and create their own thing and that's not in the best interest of the university to just perpetuate these nuanced […] frameworks and systems and processes [for this particular program]. And that's not in our best interest." And she was like, "You're right." And so I think that it couldn't be my idea. It couldn't be my unit's idea. It had to be the university's idea. And it took us three years to get there.

The preceding sections discussed details on how online leaders navigate the organizational context of the online unit and the larger university. The data revealed that organizational context influences how leaders shape networks and regulate tension, which both

play a key role in creating conditions for connecting and conflicting. The data suggested that leaders navigate the organizational context by influencing a culture of psychological safety and by navigating the context of the larger university over which they have a limited control. Online leaders shape the unit's culture of psychological safety through their practices related to a culture of learning; a culture of trust, transparency, and respect; and a culture of belonging and engagement. The data further revealed that online leaders must navigate the overall organizational context of the larger university where they possess a limited control over academics and university policies. This limited control results in the online units' dependence on faculty and university collaboration, which online leaders must also navigate to shape networks and regulate tension and, consequently, to create conditions for connecting and conflicting to enable adaptability.

Summary of Findings

This chapter examined the empirical findings of the current study to answer the key research question, *"How do senior leaders influence organizational adaptability of their online learning units situated within residential public universities?"* Employing the Complexity Leadership for Adaptability Framework (Uhl-Bien & Arena, 2018), which theorizes that organizational adaptability occurs within an adaptive space that is enabled by connecting and conflicting, the research question was answered by understanding how online leaders influence conditions for connecting and conflicting.

The data analysis indicated that, to create conditions for both connecting and conflicting, leaders develop networks, which foster connections and enable interdependencies between agents of the system, including people, ideas, information, and technology. In addition to

enabling connecting, the presence of effective networks enables leaders to foster productive tension. Networks and tension together enable conflicting in the adaptive space.

The analysis further revealed that to develop networks and foster tension, online leaders must navigate the organizational context of their online unit, which includes the unit's culture, and the context of the university within which the online unit operates. The data suggested that organizational context plays a key role in how leaders shape networks and regulate tension and, consequently, enable connecting and conflicting. Figure 11 illustrates how online leaders develop conditions for connecting and conflicting. The figure also demonstrates the interconnected nature of the three overarching themes.

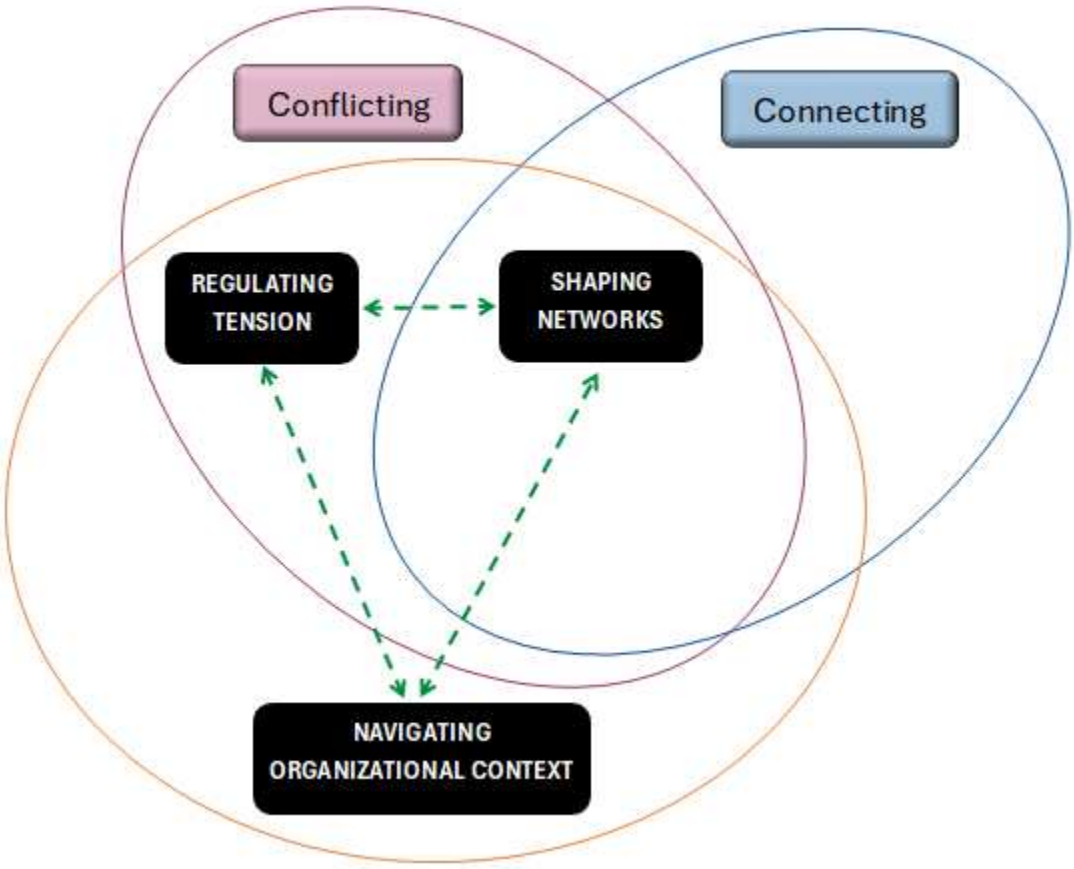


Figure 11
Relationships Between Overarching Themes, Conflicting, and Connecting

In addition, the interconnectedness of leadership practices that the data analysis revealed is depicted in more detail in Table 6. The numerous connections within the data provide richness to the findings. The connections demonstrate the complexity of relationships among leadership practices that the current study found influence conditions for connecting and conflicting and, consequently, organizational adaptability.

Table 6
Illustration of the Interconnectedness of Leadership Practices

OVERARCHING THEME	Shaping Networks (1)	Regulating Tension (2)	Navigating Organizational Context (3)
Shaping Networks (1)	Social interactions (1.1.1.) create a comfortable environment that encourages collaboration (1.2.1.). Interactions and relationships (1.1.1.) play a role in creating conditions for empowerment and delegation (1.2.2.).	Independent committee work (1.1.1.) supports autonomy (2.1.3.). Open communication (1.1.2.) can embrace diverse voices (2.1.1.). When leaders empower staff (1.2.2.), they support staff autonomy (2.1.3.). Communication (1.1.2.) enables effective collaboration (2.1.2.).	Cultivating relationships (1.1.1.) with the university is important for navigating the unit's dependence on university collaboration (3.2.2.). Communication (1.1.2.) increases transparency and builds trust (3.1.2.). Empowering staff (1.2.2.) can lead to staff professional development (3.1.1.). Interactions (1.1.1.) foster transparency (3.1.2.). Insufficient communication (1.2.3.) may obstruct transparency (3.1.2.). Support for personal connections (1.1.1.) contributes to a sense of belonging and a greater engagement (3.1.3.).

OVERARCHING THEME	Shaping Networks (1)	Regulating Tension (2)	Navigating Organizational Context (3)
Regulating Tension (2)	Building heterogeneous teams (2.1.2.) serves as a strategy for encouraging collaboration (1.2.1.). Refraining from solving employee problems (2.1.3.) fosters connections (1.1.) and interdependency (1.2.).	Refraining from solving problems for employees (2.1.3.) encourages incorporating varied perspectives (2.1.1.). Time pressure (2.3.) may inhibit heterogeneity (2.1.).	Support for diversity (2.1.) fosters a climate of respect (3.1.2.). Affording autonomy (2.1.3.) contributes to a culture of engagement (3.1.3.).
Navigating Organizational Context (3)	Supporting professional development (3.1.1.) enables leaders to empower staff (1.2.2.). Leaders minimize disrespectful conflict (3.1.2.) by limiting collaboration (1.2.1.). Professional development (3.1.1.) creates conditions for empowering staff (1.2.2.). Cross-training (3.1.1.) supports connections between employees (1.1.). Reflections and post-mortems (3.1.1.) contribute to collaboration (1.2.1.).	Leaders navigate their limited control within the university (3.2.1.) by incorporating varied perspectives of university stakeholders (2.1.1.). Leaders minimize disrespectful conflict (3.1.2.) by limiting the input of varied perspectives (2.1.1.). Professional development (3.1.1.) creates conditions for autonomy (2.1.3.). Embracing errors (3.1.1.) encourages innovation (2.2.). Some university policies (3.2.1.) discourage innovation (2.2.).	

Note. Numbers in parentheses indicate the applicable themes and sub-themes presented in the preceding discussion of findings.

CHAPTER FIVE: DISCUSSION

Online learning units and their leaders are becoming central to the future of the larger universities in which they reside. This changing position has resulted from the advancements in information and communication technology that are influencing online instruction, as well as from the increasing student demand for online education. The current study was motivated by the imperative to understand how senior leaders influence the ability of their online learning units situated within residential public universities to adapt to the changing environment. However, prior to the current study, there was no empirical research on how leaders of online learning units influence organizational adaptability that allows their units to effectively respond to changing environmental conditions.

To address the gap in empirical research, the current study provides evidence of the various ways senior leaders create conditions that influence their online unit's ability to adapt to the many forces of change acting upon it. Additionally, the findings provide insight into how the theoretical framework that guided the study is applied by senior leaders in the context of online learning units situated within residential public universities. The framework that guided the current study is the Complexity Leadership for Organizational Adaptability Framework developed by Uhl-Bien and Arena (2018).

This chapter begins with an interpretation of the findings, which are organized by overarching themes and their corresponding themes. It then proceeds with a discussion of the implications of the current study to existing scholarship, as well as suggestions for future inquiry. The chapter concludes with implications for practice.

Interpretation of Findings

The current study investigated *how senior leaders influence organizational adaptability of their online learning units situated within residential public universities*. Findings of the study were interpreted using the Complexity Leadership for Organizational Adaptability Framework (Uhl-Bien & Arena, 2018), which is an integrative meta-framework that synthesizes theoretical perspectives on organizational adaptability. The framework's key proposition is that the adaptive process (i.e., organizational adaptability) occurs within an adaptive space, which is enabled by connecting and conflicting (Uhl-Bien & Arena, 2018).

The researcher identified three sets of strategies that senior leaders in the current study employ to create conditions for connecting and conflicting to influence organizational adaptability. These strategies have been categorized into the overarching themes of (1) *Shaping Networks*, (2) *Regulating Tension*, and (3) *Navigating the Organizational Context* of online units and the larger universities. The three overarching themes, as well as their corresponding themes and subthemes, were constructed by utilizing a Template Analysis of data collected through interviews with six senior leaders of online learning units.

The researcher found that, to create conditions for both connecting and conflicting, online leaders in the current study develop networks that consist of people, ideas, information, and technology. The networks foster connections and enable interdependencies between these agents of the system; the networks enable *connecting*. In addition to enabling connecting, the presence of effective networks enables leaders to foster productive tension. Networks and tension together enable *conflicting* in the adaptive space. The researcher further discovered that to develop networks and foster tension, online leaders in this study must navigate the organizational *context* of their online unit. The unit's context includes the unit's culture, as well as the context of the

university within which the online unit operates. The researcher posits that organizational context and leadership practices for navigating context play a key role in how leaders shape networks and regulate tension and, consequently, enable connecting and conflicting. The following sections interpret the findings in more detail by positioning them within the guiding framework and other relevant scholarship.

Influencing Adaptability by Shaping Networks

The Complexity Leadership for Organizational Adaptability Framework (Uhl-Bien & Arena, 2018) theorizes that leaders promote organizational adaptability by creating conditions for connecting and conflicting. The researcher found that online leaders in the current study enable connecting through the combination of fostering connections and creating interdependency, which are discussed below.

Fostering Connections

Uhl-Bien and Arena (2018) suggested that the purpose of connecting is to promote information flow and interconnectivity between agents of a system, which include people, ideas, information, and technology. Uhl-Bien and Marion (2009) proposed that when leaders encourage a rich flow of information, they foster self-organization and create conditions for emergent change and adaptability. The researcher found that online leaders in the current study enable information flow by fostering connections as they cultivate interactions and relationships and encourage communication.

Unsurprisingly, these online senior leaders encourage connections within their online unit and with the university in a variety of formal and informal ways. Noticeable was the online leaders' support for building personal connections among staff, in addition to professional relationships. Online leaders recognize the role personal connections play in creating a sense of

community and engagement, which they in turn leverage to further strengthen connections and create interdependencies. This highlights the complexity and the interconnected nature of the leadership practices of online leaders and the way these various practices influence each other. It resonates with the principles of complexity theories and Lichtenstein et al.'s (2006) argument that components of a system interact and, through this interaction, change one another.

It was somewhat surprising to find that online leaders in the current study encourage or require staff to be physically present at work to foster informal interactions, which the data suggested cultivates trust and avoids detachment. This finding aligns with Schulze and Pinkow's (2020) research, which concluded that the main factor contributing to trust and support between employees is their physical presence. The current study suggested that trust is a key factor in creating conditions for both connecting and conflicting. Consequently, physical presence may play a key role in creating conditions for adaptability through its mediating role in building trust.

The various connections that online leaders foster enable staff to engage in sensemaking, which is a process for discovering what people are thinking about (Birnbaum, 1988). Weick et al. (2005) posited that sensemaking requires dialogue (Weick et al., 2005). Lawrence (2015) proposed that dialogue and social interaction can be encouraged by leaders. Lawrence's argument resonates with the current study that found that online leaders facilitate dialogue and interactions by listening, being open to others' input, being transparent, giving feedback, and addressing others' concerns. In other words, the researcher found evidence that online leaders create conditions for sensemaking. Sensemaking can play a role in organizational adaptability. As Lawrence (2015) and Weick et al. (2005) proposed, sensemaking leads to actions that do not require a top-down directive, which is a key principle of complexity theories and adaptability (Cilliers, 2000; Marion, 1995; Osifo & Omoregbe, 2011). Specifically, the researcher found that

online leaders empower staff to work without top-down directives as a strategy to create conditions for interdependency between agents of the system. Uhl-Bien et al. (2007) proposed that interdependency is a component of conditions for adaptability.

Creating Interdependency

According to Uhl-Bien et al. (2007), interdependency is a crucial aspect of organizational adaptability; interaction itself is not sufficient for creating conditions for adaptability. The authors of the Complexity Leadership Theory (Uhl-Bien et al., 2007) argued that agents in a complex system must be interdependent to enable the adaptive capacity of complex adaptive systems. The researcher of the current study found that online leaders create interdependency by employing numerous strategies for cultivating interaction as described earlier. Additionally, these online leaders create interdependency by empowering staff to work autonomously, refraining from solving problems for employees, and by creating rules that pose pressure to coordinate. The combination of leadership practices for fostering connections through interaction and leadership practices for creating interdependency found in the current study provides support for the Complexity Leadership Theory (Uhl-Bien et al., 2007).

Schneider and Somers (2006) further contributed that interdependency enables self-organization. Bradbury and Lichtenstein (2000) proposed that self-organization is enabled by pushing authority to lower levels of an organization where staff are empowered to work without top-down directives. Furthermore, to enable self-organization and, consequently, organizational adaptability, Grobman (2006) proposed that leaders should provide directions with minimal detail, which allows for solutions to emerge. The researcher of the current study found evidence of leadership practices that, according to the above scholars, enable self-organization. The practices of online leaders in this study that enable self-organization relate to empowering staff

to autonomously make decisions and solve problems (discussed in more detail in the following section).

The researcher also identified examples of leadership practices that contradict the principles of self-organization, including leaders' providing solutions to staff and limiting delegation. Based on Grobman's (2006) argument, online leaders who solve problems for employees may be hindering self-organization, which in turn stifles interdependency and the ability of online units to adapt. However, the researcher of the current study discovered that organizational context presents nuances to the interpretation of leadership strategies. Scholarship on chaos can aid in this interpretation. According to Schneider and Somers (2006), organizations need the right context for effective adaptation to occur. The right context is at the "edge of chaos" where order and disorder are balanced; this balance provides conditions for optimal self-organization and maximum adaptability (Burnes, 2005; Grobman, 2006). Online units that are experiencing significant disruptions to operations, disrespectful conflict, and/or are operating under unclear vision, values or staff roles can be viewed as largely disordered. Empowering staff to work autonomously could perpetuate such disorder, as staff autonomy contributes to heterogeneity and tension (Uhl-Bien et al., 2007). Therefore, providing solutions to staff and limiting delegation may be interpreted as an online leaders' practice for reducing disorder and bringing online units closer to the optimal balance between order and disorder where self-organization and consequent adaptability are at an optimum. This leadership practice may, therefore, be viewed as enabling rather than stifling conditions for adaptability, depending on the organizational context.

The preceding paragraphs illustrated how the combination of leadership practices for fostering connections and creating interdependency shape networks within online units in this

study and with their university, and how these networks create conditions for connecting. Connecting is necessary for linking up agents to work through productive tensions, which are necessary for conflicting. It was evident from the data that, generally, both interdependency and productive tension within online units are enabled when online leaders in this study empower staff to make autonomous decisions and solve problems. Important insights on antecedents for empowerment and affording autonomy are discussed in the following section.

Influencing Adaptability by Empowering Staff and Supporting Autonomy

The current study contributes additional insights into the way online leaders create interdependency and increase heterogeneity, which together enable connecting and conflicting that are crucial for adaptability. The researcher found that both interdependency and heterogeneity depend on staff being empowered to autonomously make decisions and solve problems. Online leaders in the current study empower others by delegating and refraining from solving problems for employees. These findings closely align with Uhl-Bien et al.'s (2007) propositions for the ways enabling leaders facilitate adaptability through creating interdependency and managing tension.

Actively Developing Employees

The current study contributes an insight on the relationship between leadership practices for affording autonomy and practices for cultivating a culture of learning. To actively ensure their staff is successful in autonomous work, online leaders in the current study coach their direct reports and provide other forms of professional development for the unit's staff. These leadership practices contribute to the overall culture of learning. This finding contradicts the findings of a study by Schulze and Pinkow (2020), which found "little evidence for leaders actively devoting effort to the development of their subordinates" (p. 17).

Providing Clarity

Another insight the current study provides into ways to create interdependency and heterogeneity through staff autonomy and empowerment is the need for clarity. The researcher found that the main role of clarity of vision, organizational values, and goals is for online leaders to provide guidelines for autonomous decision making and problem solving. This finding aligns well with Tushman and O'Reilly's (1996) argument that a common culture or vision provide a unifying framework that guides the actions of organizational members. The current study expands this understanding. The researcher proposes that providing clarity is a strategy used by online leaders in the current study to create conditions for affording autonomy and empowering staff, which then contributes to creating conditions for interdependency and heterogeneity. Because interdependency and heterogeneity are associated with adaptability, online leaders who provide clarity to create conditions for interdependency and heterogeneity consequently create conditions for adaptability.

Empowering staff and supporting autonomy are crucial for creating interdependency and increasing heterogeneity, which together contribute to creating conditions for both connecting and conflicting. Consequently, highlighting that strategic staff development and clarity of vision, values, and goals play a crucial role in online leaders' practices for staff empowerment and autonomy provides an original contribution to literature on leadership for organizational adaptability.

This section introduced the concept of heterogeneity, which plays a role in creating conditions for conflicting, and further discussed interdependency, which plays a role in both conflicting and connecting. In addition to promoting information flow and interconnectivity,

connecting is also necessary for linking up agents to work through productive tensions. The study's findings that relate to regulating tension are discussed next.

Influencing Adaptability by Regulating Tension

In addition to connecting, the Complexity Leadership for Organizational Adaptability Framework (Uhl-Bien & Arena, 2018) posits that leaders promote organizational adaptability by creating conditions for conflicting. The researcher of the current study found that senior leaders of online units create conditions for conflicting by regulating tension, which depends on the presence of networks that were discussed earlier. This finding supports Uhl-Bien and Arena's (2017) argument that interdependence is required for sustaining conflicting, since networks enable interdependence and networks have been shown to enable tension that enables conflicting.

Stimulating Innovation and Injecting Pressure

The researcher found that online leaders in the current study regulate tension by stimulating innovation and injecting pressure into the system. More specifically, these online leaders create conditions for stimulating innovation by monitoring the environment for potential forces of change, allocating resources to new initiatives, retaining flexibility in their online units' services, and building flexible infrastructure. Similar to a study by Schulze and Pinkow (2020), the researcher of the current study found evidence of physical and virtual spaces and events that enable employees to engage in creativity and innovation. Contrary to Schulze and Pinkow's study, the current study did not find explicit evidence of a "head space," which is created by providing employees with free time. However, online leaders in the current study encourage various forms of interactions and professional development, which can be likened to a "head space" for innovation.

While the current study provided evidence of online leaders' stimulating innovation through a variety of strategies mentioned above, the researcher also found that online units tend to be more reactive than proactive in exploring new ideas, especially as they relate to academics. This passive approach to innovation stems from the units' dependence on their university for collaboration, approvals, and buy-in, which are required for the development of new academic programs. The researcher discovered that this context of limited control plays an obstructive role in online units' ability to explore, which may have negative consequences on their ability to adapt. According to scholarship on organizational ambidexterity (Tushman & O'Reilly, 1996) and the Complexity Leadership for Organizational Adaptability Framework (Uhl-Bien & Arena, 2018), adaptability happens at the intersection of exploitation of existing resources and exploration of new ideas. Schneider and Somers (2006) posited that when organizations, such as online units, dedicate too much focus on exploitation, they may become stagnant or even obsolete if their efforts are not balanced with the change that is brought about by exploration. The limited ability to explore may, therefore, hinder the ability of online units to create conditions for adaptability.

Furthermore, the researcher found that the degree of innovation in online units may depend on the unit's context. Specifically, online leaders in the current study who cultivate a culture of learning by embracing errors or failure as learning opportunities create conditions for innovation. This interpretation is based on a qualitative study by Havermans et al. (2015) who found that accepting mistakes is associated with exploration of new ideas (i.e., innovation). Further supporting the argument are the findings of the current study, which suggested that when university policies penalize employee errors, the desire of employees to innovate may be reduced.

Additionally, Schulze and Pinkow (2020) concluded that the process of idea generation is characterized by a diversity of viewpoints and, therefore, argued that innovation is a possible source of conflicting. In addition to Schulze and Pinkow's conclusion, the researcher of the current study proposes that innovation not only leads to conflicting but also depends on connecting. Connecting, which the current study suggested encompasses networks that require connections and interdependencies, is required for agents of a system to be able to interact to exchange ideas and subsequently collaborate to innovate. This point illustrates the complexity of human behavior and the interconnected nature of leadership practices, as well as the need for interactions between interdependent agents to enable innovation and adaptability. It resonates with complexity theories. For example, Cilliers (2000), Marion (1995), and Osifo and Omoregbe (2011) proposed that system behavior often results from complex, nonlinear interactions between its components. An example of such system behavior is innovation, which, according to the proposition above, results from interactions.

Lastly, an interesting finding of the current study revealed that innovation (i.e., exploration) may depend on the presence of exploitation, which is characterized by established operations that enable the leveraging of existing resources. The data suggested that online leaders in the study refrain from encouraging innovation when operations are in disorder. It implies that exploitation may take precedence over exploration in certain contexts. This may be due to the requirement for various systems, policies, and processes to be in place to comply with federal and state requirements regarding higher education, as well as policies and expectations of the university. This assumption highlights the influence of organizational context on leadership practices.

In addition to stimulating innovation, the researcher found that online leaders in the current study regulate tension by injecting pressure into the system. This finding corresponds to Uhl-Bien et al.'s (2007) proposition that enabling leadership can strategically inject tension that is not already inherent in the system. The researcher of the current study found that online leaders inject intentional pressure mostly by holding staff accountable. Specific to the context of online units situated within larger universities, the findings further revealed that a sense of urgency coming externally from the university also serves as a pressure to stimulate the networked system.

Tushman and O'Reilly (1996) and Uhl-Bien and Arena (2018) argued that tension is characteristic of the adaptive process. The researcher of the current study, however, found evidence that tension in the form of time pressure, which is typically beyond the control of online leaders, may inhibit the adaptive process. The findings revealed that time pressure may hinder heterogeneity when online leaders avoid involving others in decision making and problem solving due to time constraints. Decreased heterogeneity may lead to narrower viewpoints and potentially to a narrower range of innovative solutions. This finding links leadership practices for regulating tension to the organizational context of limited control. It suggests that context may influence how online leaders regulate tension.

Increasing Heterogeneity

In addition to stimulating innovation and injecting pressure, the researcher found that online leaders in the current study regulate tension by embracing dissent and divergent perspectives, holding employees responsible for finding solutions to their problems, employing intentional hiring practices to increase diversity, and building heterogeneous teams. These findings correspond with the principles of the Complexity Leadership Theory proposed by Uhl-

Bien and Arena (2007). The leadership practices increase heterogeneity, which online leaders in this study utilize to elicit a wider range of perspectives. These online leaders recognize the usefulness of diverse perspectives for decision making and problem solving. This aligns with the findings of Schulze and Pinkow (2020) whose participants also recognized and actively utilized heterogeneity for its creative potential.

In addition to existing scholarship on organizational adaptability that views heterogeneity as a mechanism for eliciting a wider range of viewpoints, the researcher found that online leaders in the current study also understand heterogeneity as a mechanism for ensuring equity. The researcher found that cultivating an equitable climate contributes to a culture of psychological safety in online units. A culture of psychological safety, in turn, creates a climate for effective networks and productive tension to materialize, which, again, underscores the complex and interconnected nature of leadership practices. Furthermore, the researcher discovered an interesting finding that is specific to the context of online units situated within a larger university. Online leaders in this study leverage heterogeneity when they incorporate perspectives from university stakeholders for the purpose of securing the university's collaboration, approvals, or buy-in.

The leadership practices discussed in the preceding paragraphs for stimulating innovation, injecting pressure, and increasing heterogeneity correspond with Uhl-Bien et al.'s (2007) understanding of ways that foster tension. Tushman and O'Reilly (1996) and Uhl-Bien and Arena (2018) proposed that fostering tension is characteristic of organizational adaptability. Therefore, it can be implied that online leaders in the current study enable adaptability of their online units by fostering tension, along with shaping networks. It may appear reasonable to conclude that leaders who employ practices that contradict stimulating innovation, injecting

pressure, and increasing heterogeneity limit tension and, consequently, stifle organizational adaptability. Examples of such practices found in the current study include isolating conversations, limiting delegating, and refraining from stimulating innovation.

However, the researcher also discovered that context provides nuances to the interpretation of leadership practices. Similar to the earlier discussion on creating interdependency, scholarship on chaos can aid in the interpretation of leadership practices for regulating tension. According to Schneider and Somers (2006), Burnes (2005), and Grobman (2006), organizations need the right context for effective adaptation to occur. Such context is at the "edge of chaos" where order and disorder are balanced and adaptability is optimized. Leaders of online units that are largely disordered may employ practices that limit tension. Limiting tension may lead to an improved balance between order and disorder and, consequently, to more optimal conditions for adaptability. Rather than viewing all leadership practices that limit tension as stifling adaptability, such practices may be understood as enabling conditions for adaptability, depending on the organizational context. The context in which online units operate is discussed next.

Influencing Adaptability by Navigating Complex Organizational Context

The theme of organizational context was not explicitly represented in the current study's a priori themes because it was not included in the guiding framework. Rather, the theme of organizational context emerged from the data. As is evident from the preceding discussion, the theme of navigating organizational context permeates the previous themes that represent leadership practices for creating conditions for adaptability. The researcher discovered that organizational context has a mediating role in leadership practices of online leaders in this study for shaping networks and regulating tension. Concurrently, the researcher also found that

leadership practices that these online leaders employ for shaping networks and regulating tension in turn influence organizational context. Following is a discussion on how the online leaders in the current study navigate organizational context by influencing a culture of psychological safety within their online units and by navigating a context of the external university that is largely beyond their control.

Influencing a Culture of Psychological Safety

The researcher found that online leaders in the current study actively cultivate a culture within their online units that creates a climate where employees feel comfortable to interact and collaborate and where they can be successful in performing work responsibilities. Prominent was the online leaders' intentional focus on professional development of their staff and themselves. This finding is not surprising, given that online leaders operate in an industry centered around learning. The concept of learning is fundamental to organizational adaptability. The Complexity Leadership Theory proposed by Uhl-Bien et al. (2007) has been described as a framework of leadership that enables learning, along with adaptability.

The development of employees resonates with concepts in the literature that are central to leadership practices for facilitating adaptability, including affording measured autonomy and making employees responsible for finding solutions to their problems (Uhl-Bien et al., 2007). As discussed in an earlier section titled "Influencing Adaptability by Empowering Staff and Supporting Autonomy," the researcher of the current study found that online leaders in this study intentionally develop employees, which enables them to empower the employees to autonomously make decisions and solve problems. This finding implies that the development of employees plays a key role in adaptability because it enables autonomy, which is central to adaptability. Examples of leadership practices related to professional development that online

leaders in this study employ include funding conferences and training, organizing internal professional development events, utilizing online tools for learning, supporting mentoring programs, coaching direct reports, cross-training, and driving responsibility toward employees to encourage growth. The finding of the current study that online leaders intentionally focus on staff development contradicts the study by Schulze and Pinkow (2020), who found little evidence that leaders actively invest effort in their subordinates' development.

In addition to professional development, online leaders in the current study cultivate a culture of learning by embracing mistakes and errors as opportunities for learning. Havermans et al. (2015) found that leadership practices that accept mistakes contribute to stimulating higher complexity of beliefs and actions, which promotes exploration. According to scholarship on organizational ambidexterity (Tushman & O'Reilly, 1996) and the Complexity Leadership for Organizational Adaptability Framework (Uhl-Bien & Arena, 2018), adaptability occurs at the intersection of exploitation of existing resources and exploration of new ideas. It can, therefore, be implied that leadership practices of online leaders in the current study that cultivate a culture of learning by embracing errors contribute to adaptability because they create conditions for exploration.

The researcher further found that leadership practices for fostering connections, including the encouragement of communication and information sharing, lead to enhanced transparency in the online units and universities in the current study. Enhanced transparency can be viewed as an element of cultural context. Additionally related to cultural context, the researcher found that leaders in this study cultivate respect and civility by incorporating expectations for respect in performance appraisals, by providing more context to help staff understand others' points of view, or by modeling a respect for differences themselves. The researcher found that leadership

practices of these leaders for the cultivation of transparency and respect support the cultivation of trust, as well as a sense of belonging and engagement.

Birkinshaw and Gibson (2004) found that organizations must possess a climate of trust and support for tension to be adaptive rather than destructive, because such a climate enables employees to feel safe engaging in the conflicting process. In the current study, the researcher found that online leaders employ practices for cultivating trust and an overall culture of psychological safety. It can, therefore, be implied that leaders in this study create conditions for adaptability in part through cultivating a supportive culture.

Navigating a Context of Limited Control

In addition to employing leadership practices for influencing a culture of psychological safety, the researcher discovered that online leaders in the current study must also navigate the context of the university, which is largely out of their control. The data indicated that online units provide administrative services for offering academic programs, while academics are the purview of university faculty and their associated academic units. This lack of control over academics and potentially other university policies hinders online leaders' ability to stimulate innovation because they depend on the university's buy-in, approvals, and collaboration, as discussed in a greater detail in an earlier section titled "Stimulating Innovation and Injecting Pressure."

To overcome the lack of control over crucial aspects of their unit's work, such as academics, the researcher found that online leaders in the current study employ some of the same practices they use within the online unit. For example, these online leaders play a significant role in brokering connections between their online unit and the university to cultivate relationships. The online leaders also employ practices for increasing heterogeneity, which they accomplish by

incorporating perspectives of university stakeholders or building heterogeneous teams that include representatives from both the online unit and the university. The researcher also found that online leaders in this study build a culture of trust and transparency between their online unit and the university through ample communication.

However, there are likely elements of the university's context that may be challenging for online leaders to influence. Leaders in the current study may not be able to create sufficient interdependency, which they typically accomplish by empowering employees, since university employees are independent from the online unit. These online leaders may also be unable to establish a clear vision when the university does not provide a clear strategy for online education. These challenges may be explained by viewing the organizational structure of online units and the university within which they operate as a loosely-coupled system. According to the principles of loosely-coupled systems, the various parts of the university, including the online unit, can be understood as responsive to each other while remaining largely independent (Weick, 1976). Weick (1976) argued that "loose coupling lowers the probability that the organization will have to – or be able to – respond to each little change in the environment that occurs" (p. 6). Weick's argument suggests that the structure of loose coupling may hinder online leaders' efforts in creating conditions for adaptability to a changing environment.

Additionally, universities can be viewed to a large extent as serving the function of exploration through their role in developing new academic programs. At the same time, online units can be viewed to a large extent as serving the function of exploitation through their role in providing operational services. According to the Complexity Leadership for Adaptability Framework developed by Uhl-Bien and Arena (2018), conditions for adaptability are created at the intersection between exploration and exploitation through connecting and conflicting. Since

online leaders in the current study have limited ability to create conditions for connecting and conflicting between their online unit and the university, it can be implied that they also have a limited ability to position online units for adaptability, as online units depend on the university for exploration. The conclusion aligns with the earlier proposition that the loosely-coupled system of the university may hinder online leaders' efforts in creating conditions for adaptability.

Implications for Scholarship and Future Research

Birkinshaw and Gibson (2004) posited that a climate of trust and support, which are elements of organizational context, is necessary for the process of productive conflicting. While Uhl-Bien and Arena (2018) also acknowledged the importance of a supportive climate for conflicting, the scholars did not explicitly include context in their Complexity Leadership for Organizational Adaptability Framework. However, based on the findings of the current study, the researcher suggests that organizational context and leadership practices for navigating context are inseparable not only from enabling conflicting, but also from enabling connecting. The researcher discovered that elements of organizational context influence how online leaders in the current study shape networks and regulate tension, which together create conditions for conflicting and connecting and enable adaptability of their online units. Simultaneously, the researcher also found that leadership practices for shaping networks and regulating tension influence the organizational context of online units, along with leadership practices that influence the context.

In addition to organizational context whose role was evident within the online units, the findings of the current study posit that additional elements of a university context play a key role in organizational adaptability. Specific to online units situated within residential public universities, online leaders in this study have limited control over the context of the university,

which may stifle innovation due to the units' dependence on the universities' policies, approvals, buy-in, and collaboration. The current study suggests that the limited control of online units over the university context, which includes a limited control over academic innovation, may limit the ability of online leaders in this study to create conditions for adaptability.

Findings of the current study illuminated two-way relationships between navigating organizational context and enabling connecting and conflicting. These relationships indicate that context and the practices of online leaders in this study for navigating context influence both connecting and conflicting. Concurrently, the two-way relationships also indicate that connecting and conflicting, in turn, each influence context and leadership practices for navigating context.

In conclusion, findings of the current study elevated the role of organizational context in the leadership for organizational adaptability of online learning units. The researcher, therefore, proposes modifications to Uhl-Bien and Arena's (2018) Complexity Leadership for Organizational Adaptability Framework to incorporate the role of organizational context and leadership practices that influence context. The proposed framework, titled 3C (Conflicting-Connecting-Navigating Context) Complexity Leadership for Organizational Adaptability Framework, positions context and leadership practices for navigating context together with connecting and conflicting to play a fundamental role in enabling organizational adaptability. The 3C framework is depicted in Figure 12.

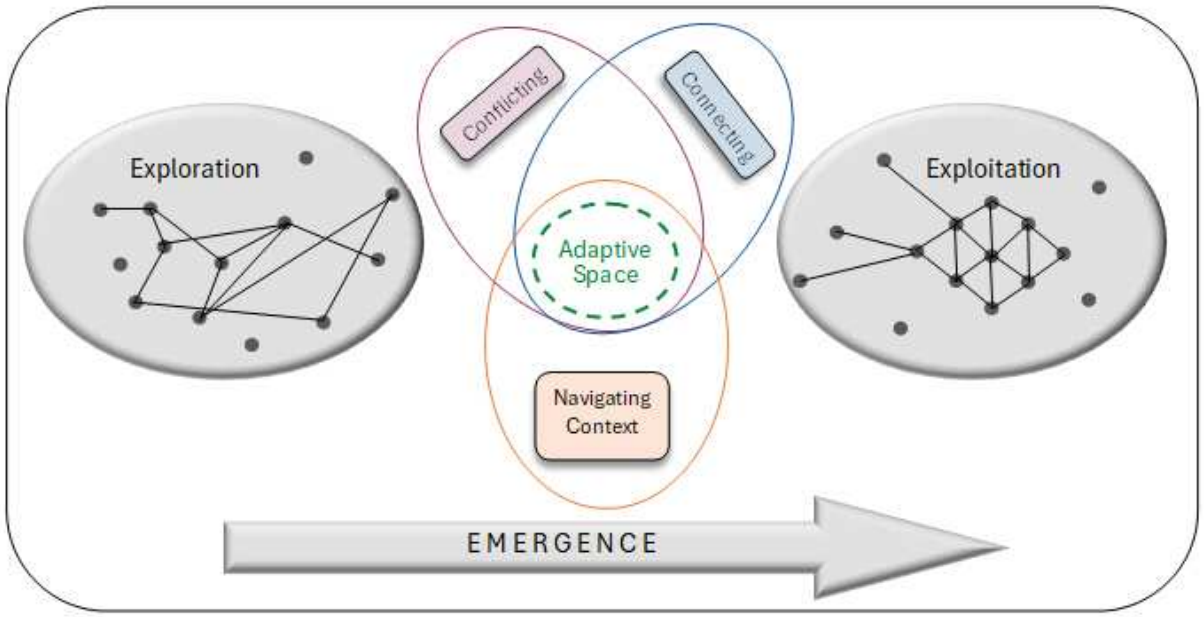


Figure 12
Proposed 3C Complexity Leadership for Organizational Adaptability Framework

The current study suggested modifications to the Complexity Leadership for Organizational Adaptability Framework proposed by Uhl-Bien and Arena (2018) and revealed specific insights on how senior leaders in this study position their online learning units situated within residential public universities for adaptability. The study also surfaced suggestions for further inquiry into the topic, which are presented below.

The current study examined leadership practices of senior leaders of online units from the leaders' own perspectives. However, future research should also incorporate the perspectives of other employees within the online units to gain a more comprehensive understanding of leadership dynamics and the perceived organizational context. Conducting interviews with employees from different organizational levels could provide additional insights into how leadership practices are perceived throughout the online unit. Such diverse viewpoints could

uncover further details on leadership practices for creating conditions for adaptability of online units situated within residential public universities.

The current study mainly focused on how senior leaders develop conditions for adaptability within their online units. During the course of the study, however, it became evident that the leaders' leadership practices respond to and influence the context of the larger university. Therefore, it is critical to investigate in more detail how online leaders influence the adaptability of their online units in relation to the university. The findings of the current study indicated that online leaders employ some of the same strategies for creating conditions for connecting and conflicting when it comes to the university as they do within their online unit. The proposed 3C Complexity Leadership for Organizational Adaptability Framework can, therefore, be used by future researchers as a framework to gain insights into strategies online leaders employ when they interact with the university. For example, future research could investigate how online leaders navigate the complex interplay between their unit's objectives and the strategic goals of the university. This could involve exploring how leaders balance the autonomy of their units with the need to align with university-wide initiatives and priorities. Additionally, valuable insights could be gained from examining how online leaders leverage institutional resources, networks, and relationships within the university to enhance the ability to adapt. Similarly, examining the unique obstacles online leaders face in creating conditions for adaptability and how they overcome these obstacles could provide a further understanding of the topic within the context of residential public universities.

Because universities and many other organizations are structured as loosely-coupled systems where connecting and conflicting may present unique challenges, it is important to also understand how the 3C framework applies in such organizations. Future research could

investigate how the inherent characteristics of loosely-coupled systems influence leadership practices for connecting and conflicting and, consequently, organizational adaptability. This could involve analyzing the extent to which decentralized decision making, diverse stakeholder interests, and potentially fragmented communication channels influence leadership practices of senior leaders, including leaders of online units. Also related to loosely-coupled organizations, researchers could examine the specific strategies senior leaders of online learning units employ in creating conditions for adaptability when the university context, which the leaders cannot control, plays a significant role in innovation.

During the interviews and the subsequent data analysis of the current study, it became evident that the tenure of senior leaders in the current position may influence their leadership practices. Future studies could investigate how online leaders' tenure and other leadership characteristics, such as their professional backgrounds, influence their practices in positioning their organizations for adaptability. Future researchers could conduct a longitudinal study to examine how leadership characteristics evolve over time and how they impact organizational dynamics. Specifically, researchers could investigate how online leaders' tenure in their current position affects their ability or their practices for building networks, managing tension, and navigating the context of the larger university to enable conditions for adaptability. For example, leadership strategies for shaping networks and regulating tension, as well as navigating the context of the university, could be influenced by the length of online leaders' tenure. The depth of institutional knowledge and strength of networks the leaders have gained during their time in the leadership position may affect leadership strategies. Furthermore, this research could explore how leadership transitions influence the conditions for adaptability, including effective connecting and conflicting. Understanding the relationship between leadership characteristics,

including leaders' tenure, and organizational adaptability can provide valuable insights for leadership development programs in higher education and potentially other contexts.

Because human behavior is complex and leadership practices vary by context, future research could also investigate the necessary and sufficient conditions for enabling adaptability, using a qualitative comparative analysis. This research would involve in-depth case studies with a diverse sample of online units and/or universities to explore leadership practices and elements of organizational context that enable or hinder organizational adaptability. Through qualitative comparative analysis, researchers could identify patterns, configurations, and interactions of elements of leadership practices and organizational context that are necessary and/or sufficient for creating conditions for adaptability.

Another method future researchers could employ in investigating organizational adaptability of online units or other organizations is the use of computational models. Computational models could incorporate interactions between various stakeholders, leadership practices, and elements of organizational context. Computational models can conduct virtual experiments to explore the effects of various leadership practices and organizational contexts on conditions of adaptability, such as connecting and conflicting. Researchers could simulate a variety of scenarios, such as leadership transitions or changes in organizational culture.

Implications for Practice

In addition to informing scholarship on leadership for organizational adaptability, the aim of the current study was also to provide insights to improve practice. The discussion of findings in Chapter Four, as well as the interpretation of findings in the current chapter, include numerous examples of leadership practices for creating conditions for adaptability within online learning units. Senior leaders can employ these practices in their own units to develop adaptability to a

changing environment. Additionally, following are recommendations that emphasize the need for strategically utilizing staff professional development and providing clear guidelines. These recommendations synthetize insights from the study's findings related to the overarching themes of Shaping Networks and Regulating Tension.

Recommendations for Leadership Practices Within Online Learning Units

A crucial element of organizational adaptability is the empowerment of staff to autonomously make decisions and solve problems because it enables self-organization and, consequently, adaptability (Bradbury & Lichtenstein, 2000). Empowering staff and supporting autonomy were leadership practices that the researcher identified online leaders in the current study used for creating conditions for shaping networks and regulating tension. The researcher found that networks and tension play a role in creating conditions for organizational adaptability. Empowering staff and affording autonomy are, therefore, fundamental strategies of online leaders for enabling adaptability of their online learning units.

To empower staff to work autonomously, the insights from the present study suggest that online leaders should strategically utilize staff professional development and to provide clear guidelines in the form of vision, values, and goals. Leaders should employ staff professional development with intention by methodically identifying the skills each employee needs to work independently. Furthermore, leaders, in collaboration with each employee, should strategically develop professional development plans that are customized to the individual. Such customized professional development would go beyond attending conferences or incidental workshops. Rather, it would include a comprehensive and dynamic written plan for specific education, skill training, mentoring, cross training, leadership opportunities, and/or other growth opportunities that would strategically support autonomous work of each individual staff member.

Additionally, to provide guidelines for autonomous work, online leaders should also ensure a clarity of vision, organizational values, and goals. Ideally, online leaders would involve the unit's staff in the development of vision, values, and goals. Such involvement would ensure that the vision, values, and goals reflect what is important to employees and the unit, and therefore secure a buy-in of the employees.

The preceding recommendations focus on leadership strategies that online leaders can employ within their online units. However, the researcher discovered that an internal focus on online units is not sufficient for enabling organizational adaptability and that the context of the larger university plays a fundamental role. Included is, therefore, also a discussion on practical implications of the current study as they relate to the overarching theme Navigating the Organizational Context of the larger university. The following recommendations synthetize insights from the findings, the relevant literature (examined in Chapter Two) and the researcher's own positionality (presented in Chapter Three).

Recommendations for Universities: Elevate and Support Online Education

The insights from the current study suggested that the larger university must do its part in positioning the online unit, and consequently the university, for adaptability; online leaders and online units cannot do it alone. That is, university executive leaders must elevate online education to become an equal partner to in-person education and research. It is in the university's interest to recognize the importance of online education, as today's students need and expect the flexibility that online education provides, even when they are enrolled in traditional in-person programs. It is no secret that the college population is becoming increasingly older, living off-campus, and having full-time jobs and families (Afzal, 2020; Hewlett, 2022). The non-traditional is becoming traditional. Because traditional educational formats no longer work for an increasing

percentage of students who now attend school part-time and/or have other responsibilities outside of school, universities that wish to retain enrollments and remain relevant must fulfill the students' need for flexibility with quality online education.

To elevate online education within residential universities, university executive leadership should incorporate online education in strategic plans with a clear vision and actionable goals. It is essential to include online leaders and other professionals from online units in the development of the vision, plans, and goals; professionals from online units can contribute decades of experience offering online education and serving non-traditional students.

Strategic plans, as well as university policies, should include a variety of strategies designed to demonstrate the importance of online education throughout the university. These strategies include the development of budget models that incentivize the offering of online programs for academic departments; the modification of faculty appointments to incentivize individual faculty members to teach online courses or develop online programs; and the formalization of the online unit's leadership role and authority in leading the university's efforts to grow online programming.

Another way for advancing online education within residential universities could be the elevation of online units from departments or divisions to schools or colleges that employ academic faculty. The incorporation of faculty into online units would foster innovation, which, according to scholars (e.g., Uhl-Bien and Arena, 2018), is an essential ingredient in creating conditions for adaptability. The most ideal organization would split faculty appointments between their disciplinary university departments and the new online school or college. These split appointments would closely connect online units and the academic departments within the

university, which would provide online units with a more direct avenue for stimulating academic innovation.

Recommendations for Online Leaders: Amplify University Support

Online leaders should play an active role in amplifying their university's efforts in elevating online education. How online leaders utilize their university's support and how they approach the opportunity to sit at the table is crucial for their online units and the future of online education in their university. Online leaders should assume the role of visionaries, explaining via a variety of communication channels the opportunities online education can bring to students whose success public universities care about. Online leaders should be the champions, advocating for online education by connecting it to university vision. Online leaders should be the educators, demonstrating the benefits of online education to students, faculty teaching, and the university's budget through compelling stories and data. Online leaders should be the motivators, getting faculty excited about new opportunities to share their knowledge and positively impact students. Online leaders should also be the catalysts, connecting and energizing crucial stakeholders and advocates.

In summary, the preceding recommendations for practice highlight the importance of strategic leadership within online units and at the university level for enabling organizational adaptability. The recommendations also emphasize the support of the university in creating conditions for adaptability of online learning units situated within residential universities.

Conclusion

The current study advances existing scholarship on leadership for organizational adaptability in a number of ways. The study provides empirical evidence for the ways senior leaders of online learning units situated within residential public universities influence conditions

for enabling organizational adaptability, which is an area of contemporary challenges in leadership that had not been previously researched empirically. The study, thus, expands the understanding of the ways senior leaders of online learning units enable organizational adaptability.

Additionally, the study provides insights on the application of the Complexity Leadership for Organizational Adaptability Framework (Uhl-Bien & Arena, 2018) in the specific context of online units situated within residential public universities, which prioritize residential students and research. These original insights suggest modifications to the framework to include effectively navigating context as a fundamental element for creating an adaptive space where organizational adaptability occurs.

Furthermore, the current study contributes to current scholarship with new suggestions for future research on the topic of leadership for organizational adaptability. In addition to its contributions to scholarship, the study also provides current insights into practical implications of the findings to aid online leaders and their online units, as well as the universities within which they reside, in developing conditions for adaptability to a changing environment.

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APPENDIX A: REQUEST FOR PARTICIPATION EMAIL

Dear [*Insert Name*],

My name is Silvie Kilworth; I am a PhD candidate in the Higher Education Leadership program at Colorado State University. I am currently working on my dissertation and would like to request your consideration to participate in my research. I will be conducting a qualitative study with supervision and guidance from my doctoral advisor Dr. Sharon K. Anderson, who is a member of the university's faculty.

I am searching for participants who meet the following criteria:

- ✓ Participant is a top leader of an online learning unit with at least 2 years of experience leading the unit.
- ✓ Online learning unit is centralized within a larger public university and responsible for administering online academic programs (degrees and credit certificates). An online learning unit is defined as the organizational unit that oversees the various functions required to administer online programs.
- ✓ Online learning unit has administered online academic programs for at least 5 years and currently administers at least 5 fully online academic programs.

Each participant will spend approximately 90 minutes in a one-on-one Zoom interview and potentially another 30 minutes in a follow-up interview if clarification is needed. I will be asking about your leadership practices related to your unit's readiness to navigate change driven by an external force. Examples of external forces of change could include evolving technology, changing student needs, new directives/expectations from your university, etc. I will also be requesting an organizational chart of the online unit you lead prior to the interview to better understand the organizational context for the interview.

I will be requesting a permission to record the interview and publish anonymous data in my final dissertation. The full interview and its transcript will be kept confidential; the transcript will be seen only by me (the student researcher) and the doctoral advisor. If quotes or other data are used in the dissertation, no identifying information about the participant or the institution will be included.

I know how valuable your time is and, in return for your participation, I am happy to share an executive summary of my research that will provide information on how a group of your peers from similar institutions responded to this topic. The data will inform my dissertation and I hope that it will also aid in practical information on leadership practices related to organizational ability to navigate external forces of change to help improve the practice of other leaders in the field of professional, continuing, and online education. There are no known risks to your participation.

Thank you for your consideration to participate in this study. If you have any questions or are interested in participating, please respond to my email. I am looking forward to hearing from you soon.

Sincerely,
Silvie Kilworth

APPENDIX B: INFORMED CONSENT FORM

Consent to Participate in a Research Study
Colorado State University

Introduction and Purpose: My name is Silvie Kilworth; I am a PhD candidate at Colorado State University, working with my faculty advisor, Professor Sharon K. Anderson, in the School of Education. I would like to invite you to participate in my research study, which investigates leadership practices related to organizational readiness to navigate change driven by an external force. The study is being conducted in the context of online learning units situated within larger public residential universities. An online learning unit is defined as the organizational unit within a university that oversees the various functions required to centrally administer online academic programs for the campus/university within which it is located.

Procedures: If you agree to participate in my research, I will conduct a one-on-one virtual Zoom interview. It will be scheduled at your convenience and is expected to last about 90 minutes. The interview will involve questions about your leadership practices as you and your unit navigate changes driven by an external force. With your permission, I will record the interview (audio and video) and take notes during the interview. The recording is to accurately record the information you provide and will be used for transcription purposes only. If you feel uncomfortable or change your mind for any reason during the interview, you can stop the interview at any time. I expect to conduct only one interview; however, another recorded short interview may be needed for added clarification. If so, I will contact you by email/phone to schedule approximately a 30-minute follow-up interview.

Benefits: There is no direct benefit to you from participating in this study. However, you may benefit from being given the opportunity to explain and reflect on your leadership practices related to organizational readiness for navigating external forces of change. This study aims to provide a better understanding of these practices to inform scholarship on this topic, as well as the practice of senior leaders of online learning units, such as yourself.

Risks/Discomforts: As with all research, there is a chance that confidentiality could be compromised; however, we are taking precautions to minimize this risk. You are free to decline to answer any questions or to stop the interview at any time.

Confidentiality: Your study data will be handled as confidentially as possible. Individual names, institutions, and other personally identifiable information will not be used in any publications or presentations, including the final dissertation. We will keep confidential all research records that identify you or your institution, to the extent allowed by law. This study is not anonymous. We will be obtaining your name and other identifiable data from you; however, you will be assigned a pseudonym to prevent persons outside of the research team to identify you. To minimize the risks to confidentiality, we will store all files in a password-protected folder on a password-protected computer, and any notes will be stored in a locked file cabinet in a private office.

Interview records and consent documents will be stored separately from each other. The recording will be transcribed as soon as possible after the interview. All video files will be destroyed after transcription and an accuracy check. Access to any original data, such as transcripts, codebooks, or notes, will be limited to myself and individuals working directly on this project, which includes my advisor and potentially committee members of the Institutional Review Board.

The measures described above will be taken to protect confidentiality of this study data. I may be asked to share the research files with the Institutional Review Board ethics committee for auditing purposes.

Compensation: You will not be compensated for participating in this study.

Rights: Participation in research is completely voluntary. You are free to decline to participate in the project. You can decline to answer any questions and are free to stop participating in the project at any time. There will be no penalty to you whether or not you choose to participate in the research and whether or not you choose to answer any questions or continue participating in the study.

Questions: If you have any questions about this research, please feel free to contact me. You may also contact my advisor, Dr. Sharon K. Anderson.

If you have any questions about your rights or treatment as a research participant in this study, please contact the Colorado State University Institutional Review Board (IRB) at 970-491-1553 or email CSU_IRB@colostate.edu.

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Please complete the following statements to confirm that you meet the study qualifications and to provide information that will assist with the interview:

I have worked in my current position for _____ years.

The online (or continuing education) unit/organization that I lead employs _____ [*number of*] staff members.

I have _____ [*number of*] direct reports.

The online unit I lead has administered online academic programs (degrees/credit certificates) for _____ years.

The online unit currently administers _____ [*number of*] online academic programs.

Participant Consent: Your signature acknowledges that you have read the information stated and voluntarily wish to participate in this research.

I consent for my interview to be videorecorded under the condition that it will be kept confidential.	
Initial	

I give permission to use direct quotes under the condition that all identifiable information will be removed.	
Initial	

If you wish to participate in this study, please sign and date below. You will be given a copy of this consent form to keep for your own records (3 pages total).

Participant's Name (please print)	Participant's Signature Date
Researcher's Name (please print)	Researcher's Signature Date

APPENDIX C: INTERVIEW PROTOCOL

Participant Name	
Participant Preferred Name	
University	
Date/Time	
Interviewer	Silvie Kilworth

Introduction

- *Thank the participant for their time to meet.*
- *Introduce myself (PhD student in Colorado State University, Higher Education Leadership program; employed in Continuing Education at CU Boulder and involved in administration of online academic programs).*
- *How would the participant like to be addressed?*

Purpose of Study

- *A qualitative study designed to investigate leadership practices related to organizational ability to navigate changes driven by an external force. Focused on senior leaders of online learning units that are responsible for administering online academic programs within a larger university.*
- ***Define "online unit": organization that encompasses the functional departments involved in administration of online programs <u>that you oversee</u>.***
- *Results will inform scholarship on this topic, as well as the practice of online unit leaders.*
- *Interviewing a small number of leaders to gain an in-dept insight into their leadership practices.*

Logistics

- *With permission, interview will be recorded.*
    - *Zoom provides a transcription option that will allow a download of a transcript of the interview. The purpose of the transcript is to accurately capture the content to be later analyzed.*
- *If participant feels uncomfortable or changes their mind for any reason during the interview, the recording can be turned off or the interview can be stopped.*
- *The interview will last about 90 minutes.*
- *I will be taking notes during the interview and may be looking down at times.*

! ! ! TURN ON THE RECORDING ! ! !

Interview Questions:
Background/Context

I'd like to start by asking some background information to better understand the context of your online learning unit/organization that you lead.

1. Does the unit offer other programs besides online academic programs? What are the categories (non-credit, individual credit courses, alternative credentials, in-person degrees/certificates, etc.)?

2. Can you briefly describe the relationship your online unit has with the university/campus and, in general terms, who makes which decisions in terms of strategy, budget, policies, marketing, student support, systems used, academics and program structure (e.g., synchronous vs. asynchronous, term-based vs. self-paced)?

Interview Questions:
Exploring Themes of the Complexity Leadership for Adaptability Framework

3. My study explores leadership practices related to organizational ability to navigate change that is driven by external forces that come from the environment as opposed to being planned internally. Can you describe a recent (within the past 2 years or so) external force of change that affected your online unit? You may think of an external force of change that your unit navigated as coming from the university, prospective or current students, the government, accrediting agency, industry, competitors, etc.

4. How did the unit navigate this change in terms of anticipating and responding to it?

5. What made the navigation process you just described, including the anticipation and response, successful or not as successful?

6. I'd like to learn what role you play in your unit's ability to navigate external forces of change. Please think of both your direct and indirect involvement. Examples of leader involvement include setting up various structures, rules and expectations; allocating resources; making decisions or delegating authority; assigning responsibilities; etc. I see your potential involvement as being present during the process of navigating a specific change and also reflecting prior practices that might have influenced how your unit was able to navigate the change you described or other changes. To learn about your role, I'm going to ask about your direct and indirect involvement in various aspects of the change you described.

    a. Thinking of the change example you provided, what role did you play in the collaboration of the departments and individuals within the unit and with the university?
        i. How did problems get solved? Who was involved?
        ii. How were responsibilities assigned or understood? What role did you play?

iii. How was information shared or managed? What role did you play?
iv. How did departments connect with each other? Who brokered the connections?
v. How do you foster interconnectivity? *Prompt: You may think of explicit or implicit rules for collaboration, cross-functional training, joint planning or decision making, etc.*

b. Related to tension, I'm now going to ask about conflict (we could also call it tension or disagreement). Conflict, as I define it, may not necessarily be negative or destructive. It simply describes different viewpoints, competing interests or priorities, competing needs for limited resources, etc. It's a task conflict rather than a personal conflict. Conflict - in my definition - can be productive, as it can lead to novel or useful solutions. Was there this kind of conflict in the change you described? Or can you think of another example of a conflict?
    i. What role did you play in the conflict?
    ii. How did you encourage or discourage the conflict?
    iii. How did it get resolved? How did you bridge differences and broker connections? *(explore how connections were made, focus on commonalities)*

c. How do you create conditions or spaces where diverse individuals work together?
    i. *Prompt: <u>Physical spaces</u> (work space, adaptive architectural designs); <u>Virtual spaces</u> (social networks, online communities); <u>Meetings</u> (design thinking sessions); <u>Head space</u> (dedicated time for innovation); <u>formal work and social events</u>*
    ii. *What role do you play in building or encouraging strong relationships and positive interactions?*

d. What role did you play in the decision-making process *(explore how centralized or decentralized the various decisions were)*.
    i. Is this example typical?

e. How did you handle errors or failures while navigating the change you described?
    i. *Prompt: What kinds of explicit and implicit messages do you convey about risk-taking, errors, and failure?*
    ii. Is this typical of how you handle errors/failures?

Ask follow-up questions to understand interdependency, interaction, conflicting, connecting.

Next Steps

- *The recording will be transcribed for further analysis.*
- *Ask for a permission to reach out with clarifying questions, if needed. Specify that the follow-up interview would last about 30 minutes and would also be recorded.*

- *Will share an executive summary once finished if participant is interested.*

Interest in Executive Summary	YES / NO

- *Encourage the participant to reach out with any questions.*
- *Thank the participant for their time.*

APPENDIX D: DEVELOPMENT GUIDE FOR A PRIORI THEMES & INTERVIEWS

Scholarship	A Priori Theme
Uhl-Bien et al. (2007) Enabling leadership facilitates adaptability process through: - Fostering interaction (developing open-plan workplaces, self-selected work groups, promoting interactions within and between groups and with the environment) - Creating interdependency (affording measured autonomy, leaders refraining from solving problems for employees, creating rules that pressure to coordinate) - Managing tension (embracing dissent and divergent perspectives, making employees responsible for resolving conflict and finding solutions to their problems, hiring to enhance heterogeneity of skills, structuring workgroups to allow for diverse ideas to interact, injecting new ideas/people/information, promoting task conflict) **Uhl-Bien & Arena (2018)** Leaders enable adaptive space by creating structures and processes (temporary decentralization, collaboration, brokering, networks). Adaptive space engages: - Conflicting via the management of tension (see Uhl-Bien et al., 2007) - Connecting (promoting information flow and focusing on commonalities of needs/perspectives) **Schulze & Pinkow (2020)** Leaders create adaptive space by: - Providing employees with space to pursue innovations - Composing diverse teams - Recruiting employees with divergent backgrounds - Developing cohesion through regular team-building events - Providing opportunities for employees to connect with others	**Adaptive Space** - Interdependency - Interaction - Conflicting - Connecting

Havermans et al. (2015) Stimulation of higher complexity of beliefs and actions relate to exploration: - Involving others in projects - Stimulating discussion - Encouraging cross-team interactions - Leader being available and listening to others - Affording autonomy in accomplishing tasks - Encouraging collaboration - Accepting mistakes **Uhl-Bien & Arena (2017)** Entrepreneurial leadership: - Initiates new initiatives - Adapts new initiatives to fit into formal operations - Socializes to generate and adapt ideas - Has propensity toward action - Utilize timing strategically **Jansen et al. (2006)** Exploration is negatively affected by centralized decision making.	**Exploration** - High Interaction/Collaboration - Decentralized Decision-Making - High Autonomy - Prudent Risk-Taking - Idea Generation & Idea Modification
Havermans et al. (2015) Stimulation of lower complexity of beliefs and actions relate to exploration: - Stopping a discussion - Not involving others in projects - Leaders' making decisions themselves - Enforcing rules	**Exploitation** - Low Interaction/Collaboration - Centralized Decision Making - Lack of Autonomy - Formal Rule Enforcement

Uhl-Bien & Arena (2017) Operational leadership: - Converts innovations into systems and structures - Sponsors ideas by generating support from formal operations - Facilitates modifications to ideas - Aligns operation system for accepting ideas - Implements ideas **Jansen et al. (2006)** Exploitation is positively affected by formalization of rules, procedures, instructions, and communications.	Exploitation Cont'd - Operational System Modification & Idea Implementation
Bushe & Nagaishi (2018); Dunn (2020); Heifer et al. (2009) Adaptive challenges (as opposed to technical problems) create a need for organizations to adapt. Adaptive challenges: - Difficult to define - Definition requires learning, changes in values, beliefs, relationships & mindsets - Cannot be solved by authorities - Solutions require involvement of stakeholders and experiments - Solutions create new problems Technical problems: - Easy to define - Can be solved by authorities or experts - Solutions based on changing rules or processes in one/few places - Remain solved until a new change	**Adaptive Challenges** **Need for Adaptability**

APPENDIX E: A PRIORI THEMES

1. **Adaptive Space**
   - 1.1. Interdependency
   - 1.2. Interaction
   - 1.3. Conflicting
   - 1.4. Connecting

2. **Exploration**
   - 2.1. High Interaction/Collaboration
   - 2.2. Decentralized Decision Making
   - 2.3. High Autonomy
   - 2.4. Prudent Risk-Taking
   - 2.5. Idea Generation & Idea Modification

3. **Exploitation**
   - 3.1. Low Interaction/Collaboration
   - 3.2. Centralized Decision Making
   - 3.3. Lack of Autonomy
   - 3.4. Formal Rule Enforcement
   - 3.5. Operational System Modification & Idea Implementation

4. **Adaptive Challenges/Need for Adaptability**

APPENDIX F: SELECTED SUBSET OF PRELIMINARY CODES

Diversity - included in core values.
Diversity - included in a strategic plan.
DEI committee recommends/informs actions.
Online leader stimulates creativity - new/diverse ideas.
Decision-making - driven by core values.
Decision-making - driven by data/information.
Decision-making - driven by strategy.
Decision-making - team-based.
Decision-making/doing their job - staff empowered at lower levels.
Decision-making - sharing information.
Decision-making - executive team (higher-level decisions).
Decision-making - discussion.
Decision-making - online leader facilitates discussion.
Decision-making - come to agreement.
Team-based problem-solving.
Decision-making - done in smaller/more focused groups (reduce variance/diversity).
Decision-making - driven by online leader.
Decision-making - reluctance to make decisions (staff/leadership).
Online leader holds leadership accountable to creating safe spaces/willing to listen.
Leader's personal acknowledgement/celebration of success.
Leader engages with online unit; shows they care; staff is engaged.
Culture of psychological safety.
Culture of respect/being heard/trust.
Culture - core values.
Errors/failure - values inform the approach.
Culture - transparency (via communication, etc.).
Errors/failure - online leader acknowledges their own error.
Look for common ground.
All staff decide on values/culture.
Hired consultant to lead staff in identifying/building culture.
Department tensions/competition/jealousy within online unit.
Disrespect among departments/subunits.
New/unclear roles, unestablished interactions/relationships.
In-person presence is important.
Culture is forced to change.
Online leader values learning - provides learning opportunities; serves as a coach.
Online leader values learning - mandates/encourages professional development.
Online leader values learning - provides budget for conferences, training, CE, etc.
Online leader values learning - learns from others.
Culture of learning - leader provides resources for development/training. Fosters interconnectivity - staff doesn't want to miss out.
Culture of learning - messages that celebrate/value learning.
Culture of learning - reflect on what went wrong/well.
Errors/failure - taking risk - learning opportunity.
Errors/failure - learning opportunity.
Errors/Failure - staff unclear of potential consequences.
Not proactively encouraging risk-taking.

APPENDIX G: EXAMPLE OF INTERVIEW EXCERPTS ORGANIZED BY THEME