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Disrupting Education: High School Principals' Efforts to Lead Disruptive Innovation and the Influence of Isomorphic Mechanisms

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DISRUPTING EDUCATION: HIGH SCHOOL PRINCIPALS' EFFORTS TO LEAD DISRUPTIVE INNOVATION AND THE INFLUENCE OF ISOMORPHIC MECHANISMS

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ABSTRACT

DISRUPTING EDUCATION: HIGH SCHOOL PRINCIPALS' EFFORTS TO LEAD DISRUPTIVE INNOVATION AND THE INFLUENCE OF MECHANISMS OF ISOMORPHISM

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Students today require skills and dispositions different from those of the past. Despite ongoing efforts to initiate change in schools through reform efforts, little has changed within educational institutions. Current reform efforts do, however, create conditions for principals to lead disruptive innovation within their schools. Research is limited on innovation implementation in education and the various ways isomorphic forces may hinder or contribute to the design and adoption of disruptive innovations. The purpose of this study was to examine how high school principals lead disruptive innovation. Additionally, this study sought to understand how the mechanisms of isomorphism influence the adoption of disruptive education innovations in education.

The findings from this study reveal that sources of disruptive innovation motivation can be internal or external. Sources of motivation were found to correlate with organizational structure. Additionally, constructs of modern institutional theory were confirmed as findings supported a bidirectional influence between organizations and the greater organizational field. Finally, the relationship between principal and principal's supervisor was identified as having a varied influence. A positive relationship was found to encourage both internally and externally motivated disruptive innovations, while a negative relationship was found to have little to no impact on the implementation of internally motivated disruptive innovations.

I would like to dedicate my dissertation to all who supported me on my journey.

I know nothing is possible without You. Thank you for letting Your will be done and establishing my beliefs in my abilities, even when I doubted them.

This journey was a marathon, not a sprint. It was far from a solo run. To my husband John, I say thank you. Thank you for your support in this endeavor. You've always been my biggest supporter and best friend.

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Chapter 1

The goal of America's K-12 educational system is to provide every student with learning experiences that facilitate the acquisition of knowledge and skills in order to provide them with multiple meaningful employment options beyond high school (U.S. Department of Education, n.d.). Economic and political changes, as well as technological advances, create unique societal needs that are constantly evolving. Societal needs and demands today are very different than those of the past (Cuban, 2012). Public schools have attempted to adapt to the changing societal needs through the introduction of various reforms. Reform efforts often are an attempt to disrupt the accepted norms of the public school institution (Cuban, 2012). Past reform efforts have often resulted in structural shifts that have done little to influence the pedagogical shifts necessary for systematic change (Clandinin & Connelly, 1998; Cuban, 2012; Tyack & Cuban, 1995). The vast number of American classrooms and school systems continue to resemble education institutions of the past, where success is determined by standardized measures. The skills required for students to navigate the world, however, extend beyond the standardized content knowledge of traditional schooling (Boix Mansilla & Jackson, 2013).

Statement of the Problem

School reform initiatives have shifted from what Clandinin and Connelly (1998) refer to as a grand-schemes, theory-driven approach to ones that are more practice-driven. However, a reformulation of the schooling process has not yet occurred (Clandinin & Connelly, 1998; Tyack & Cuban, 1995). Cuban (1990) stated that "policymakers' assumptions about the past often become rationales for reform" (p. 3). The likelihood that mandates issued at the federal, state, and district levels have the ability to reformulate the schooling process remains a topic of debate for policymakers (Cuban, 1990).

The Elementary and Secondary Education Act (ESEA), signed into law in 1965 by President Lyndon Johnson, was reauthorized by the No Child Left Behind Act in 2001 and, in 2015, by the Every Student Succeeds Act (Brenchley, 2015). ESEA focused on quality and equality of education (Brenchley, 2015). The succeeding reauthorization acts continued the focus on equality by identifying and reducing achievement gaps (Brenchley, 2015). The No Child Left Behind Act of 2001 established accountability measures requiring all states to develop standards that clearly defined what students should know and how student learning would be measured (Hunt Institute, 2016). School officials viewed implementation of standards as a way to further legitimize schools (Hess et al., 2002). Every state now has standards in place for core subjects, however the level of rigor presented in state standards and assessments varies (U.S. Department of Education, n.d.). Understanding the variation that exists in state standards and state-defined proficiency levels highlights inequities that exist in education.

A comparison of states' performance on National Assessment of Educational Programs (NAEP) revealed discrepancies in state-defined proficiency levels (U.S. Department of Education, n.d.). In 2007, an examination of eighth grade mathematics achievement was conducted and state proficiency levels were equated into a NAEP point score (U.S. Department of Education, n.d.). Comparison of the NAEP scores revealed variations in proficiency levels (U.S. Department of Education, n.d.). An eleven-point discrepancy was present between the NAEP-equivalent proficiency levels for North Carolina and Virginia (U.S. Department of Education, n.d.). The largest discrepancy between NAEP-equivalent proficiency levels was seventy-eight points (U.S. Department of Education, n.d.).

Standardized curriculum and assessment in public education contain both benefits and risks (Farquharson, 2013). Standardization establishes a minimum level of academic rigor based

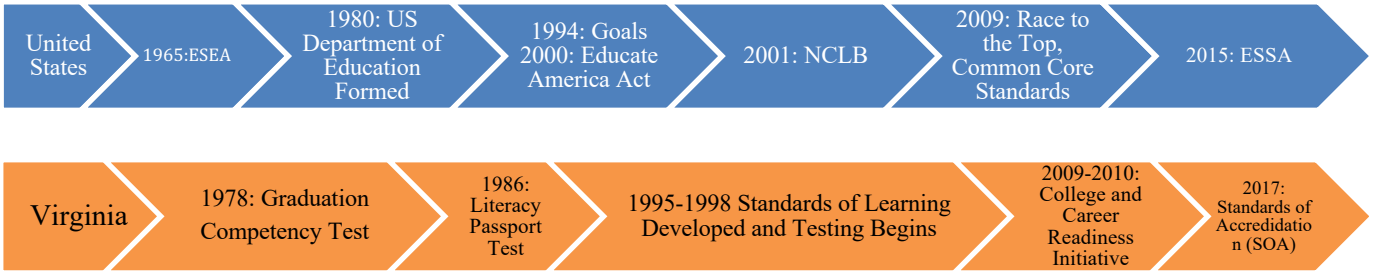
on the belief that quality of education is an important right (Farquharson, 2013). However, such standardization can be limiting to student learning as the focus is placed on prescribed standards rather than diverse needs of students and individual areas of interest. Standardization cultivates homogenization in public education (Farquharson, 2013). As schools focused on increasing test scores as a way to demonstrate student achievement of curriculum standards, time and energy were shifted from the larger goals of education and were placed on the remediation of tested content (Hess et al., 2002). The 1983 report *A Nation at Risk* sounded further alarms regarding student achievement, leading to an increase in per pupil spending and teacher salaries (Hess et al., 2002). Tied to these increases were tougher performance standards for new teachers and tougher academic standards for students (Hess et al., 2002). Such high-stakes accountability is an example of the coercive mechanisms associated with institutional isomorphism. Education reforms placed an increased focus on the role of teachers in increasing student performance on standardized tests (Fujishiro et al., 2017). Some educators ultimately comply with reform measures in order to maintain job security and good working conditions.

Figure 1 compares the implementation of reform initiatives on the national level to implementation initiatives in Virginia. Prior to 1976, Virginia's graduation requirements focused on the number of credits and types of classes (Hess et.al, 2002). Shortly thereafter, Virginia became one of the first states to implement minimum competency testing, beginning with the Graduation Competency Test in 1978 (Hess et al., 2002). The Literacy Passport Test was implemented in 1986, testing all sixth graders in the areas of mathematics, reading, and writing (Hess et al., 2002). By 1987, achievement gaps raised concerns regarding equity, resulting in the lowering of standards for particular groups of students, including students with disabilities (Hess et al., 2002). The Literacy Passport Test was phased out in 1998, making way

for testing of the newly adopted Virginia Standards of Learning (Hess, Wurtzel & Rotberg, 2002). Proponents of the Standards of Learning described the standards as the floor, or minimum competency. Opponents feared the standards would lead to a microfocus and marginalized context, limiting learning experiences to only specified standards and content (Hess et al., 2002). Additionally, opponents viewed the standards as a compromise of political agendas (Hess et al., 2002).

Figure 1

National Education Reform Measures



Note: A comparison of national and state reform initiatives.

While the standards and assessments meet the requirements of the 2001 No Child Left Behind Act, employers reported a lack of required skills and knowledge of high school graduates (U.S. Department of Education, n.d.). Forty percent of high school graduates who enrolled in postsecondary education in 2006 were required to enroll in remedial courses (NCES, 2010). These two trends are due, in part, to a misalignment between state-developed standards and college and career readiness skills. The impact of this misalignment not only increases the likelihood of student dropout in college, it carries a student cost estimated at $1.4 billion dollars a year for remedial coursework alone (U.S. Department of Education, n.d.). The domino effect

continues to impact the larger economy as a whole, as student drop out reduces earning potential and lowers the nation's gross domestic product (Alliance for Excellent Education, 2011).

Understanding that traditional school structures inadequately support the development of the knowledge and skills required of 21st century workforce, Virginia established measures to foster a climate of innovation (VDOE, 2015). Governor McAuliffe stated, "Innovation is essential in building the kind of education system we need to meet the demands of the New Virginia economy" (VDOE, 2015). Evidence of support for Virginia's climate of innovation include state funded innovation grants, the development of the Profile of a Virginia Graduate, and the development of an innovation network (VDOE, 2015, 2016, 2019). Through innovation grants, school divisions are empowered to develop their own individualized programs without the fear of traditionally imposed regulations (VDOE, 2015). Approved grants focus on innovative, nontraditional instructional approaches, real-world connections, and career awareness (VDOE, 2015). In 2016, the Profile of a Virginia Graduate was created (VDOE, 2016). The profile highlights the core competencies believed to be necessary for students to be "life ready" (VDOE, 2016). In 2019, a statewide innovation network initiative was developed through partnerships between the Virginia Department of Education, education innovators, and university and private partnerships (VDOE, 2019). The innovative network, Virginia is for Learners, seeks to assist districts in designing and implementing innovations aligned to the Profile of a Virginia Graduate (Advanced Learning Partnerships, 2018). This new culture of innovation provides Virginia students multiple pathways, including internships, externships, and credentialing, toward college and career readiness (VDOE, 2016).

A new type of graduate is needed to solve societal problems resulting from globalization and innovation (Boix Mansilla & Jackson, 2013). Jobs that require standardization are now fulfilled

by technological innovations at very low cost (Boix Mansilla & Jackson, 2013). Demand is increasing for jobs that require creative and complex thinking (Boix Mansilla & Jackson, 2013). Even though accountability and reform efforts have resulted in institutionalized practices, school and policy leaders continue to explore and implement innovative initiatives aimed at disrupting the norm (VDOE, 2019). However, there is a gap in research examining how these disruptive innovations are implemented in the face of various institutional pressures.

Purpose of the Study

The current climate of innovation seems to "set the stage" for principals to implement disruptive innovations in their schools. However, there is limited research into this current innovation timeframe and how isomorphic pressures hinder or contribute to the adoption of innovations. Therefore, in this study I seek to understand the relationship between leadership efforts to implement disruptive innovation and institutional isomorphism.

Research Questions

1. How and in what ways do high school principals lead disruptive innovation?
2. How and in what ways do the mechanisms of isomorphism contribute to or hinder the adoption of disruptive educational innovation?

Rationale and Significance

Identification of the forces that drive educational leaders to adopt disruptive innovations, as well as the critical requirements of innovation implementation will assist educational leaders' in making decisions regarding innovation adoption and implementation. Isomorphism has been studied in many fields of organizational research; however, the influence of isomorphic mechanisms on the implementation of disruptive innovations in the K-12 educational field has not been thoroughly studied (Mizruch & Fein, 1999). Additionally, while a number of studies

address the leaders' role in reform implementation, little research has been conducted on the effects of educational leaders' actions on the implementation of disruptive innovations in the K-12 educational field. Addressing this gap will provide insight to educational leaders and policymakers when designing, planning and implementing future innovative initiatives. New research has the potential to empower decision makers and educational leaders to cultivate innovation while fighting against the pressures of conformity.

The closure of the majority of schools due to Covid-19 has created an urgent need for the implementation of disruptive innovations in public education. School communities each present a unique set of circumstances. Therefore, disruptive innovations will likely originate from bottom up, grassroots efforts. Learning from leaders who have previously implemented disruptive innovations can potentially provide leaders novice to the concept with an understanding of the critical actions, events, and decisions leaders make when implementing disruptive innovations. An understanding of the influence of isomorphic mechanisms will allow leaders to take a proactive approach.

Key Terminology

The following key terms are utilized throughout the proposed study. The terms are defined below in effort to provide a common understanding of their meaning within this study.

- **Coercive Mechanisms:** A level of expectation formed from cultural, political, and other external environmental sources when an existing power imbalance exists (Greenwood & Meyer, 2008; Farquharson, 2013)
- **Critical Incident Technique:** A set of procedures used to collect observations of human behavior to solve practical problems (Flanagan, 1954).

- **Disruptive Innovation:** New ideas and processes that conflict with existing norms (Charitou & Markides, 2003).
- **Entrepreneurial Leadership:** A leadership style in which a leader engages followers in entrepreneurial behavior by cultivating follower creativity and risk taking with a focus on innovation (Stryon, 2015).
- **Homogenization:** A reduction in diversity among organizations within an organizational field (DiMaggio & Powell, 1983).
- **Innovation:** An idea or process that promotes transformational change (Brown, 2006).
- **Institutional Entrepreneurship:** Activities that transform existing organizations or create new organizations (Maguire et al., 2004).
- **Institutional Theory:** A theory that examines how structures and routines gain legitimacy and establish acceptable behavior (Scott, 2005; Greenwood et al., 2008).
- **Institutional Entrepreneurs**: The actors responsible for initiating change that transforms existing institutions or creates new institutions (Hardy & Maguire, 2008).
- **Intrapreneur:** Entrepreneurial practice that occurs within an organization (Hanson, 2018).
- **Isomorphism:** A concept used to describe the process of homogenization where organizations within an organizational field begin to resemble each other (DiMaggio & Powell, 1983; Scott, 1987; Zucker, 1987)
- **Mimetic Mechanisms:** Mimicking practices of other organizations that are experiencing success that may occur during uncertain environmental times (Greenwood & Meyer, 2008); Farquharson, 2013).

- **Normative Mechanisms:** Rationalized myths or behaviors based on environmental norms (Greenwood & Meyer, 2008).
- **Reform:** Change which leads to the restructuring of organizational processes or procedures (Hanson, 2001).
- **Transformational Leadership:** A leadership style in which a leader, focused on organizational goals, objectives, and follower development, motivates followers to achieve an organizational vision above expected levels of performance to promote change (Dvir et al., 2002; Gregory Stone et al., 2004).

Theoretical Framework

Institutional theory is an approach often used to examine organizations. Institutional perspective has grown and evolved since the late 1970s (Greenwood et al., 2008). First emerging in the 1970s as a theory of stability and a way to explain organizational responses to external pressures (van der Voet, 2014; Greenwood et al., 2008; Hwang, 2015), early institutional theory portrayed organizations as actors who situationally responded to their environment (Greenwood et al., 2008). Those at the top of the bureaucratic structure examined environmental contexts and took action (Greenwood et al., 2008). Early institutional theorists focused on institutional context and the idea of rationalized myths that defined behaviors considered rational (DiMaggio & Powell, 1983; Meyer & Rowan, 1977). The evolution of institutional theory over the last several decades centers on the role of social values. Early institutional theory viewed these social values as having influence upon organizations, while modern institutional theory focuses on the interplay that exists between organizations and their environments (Greenwood et al., 2008). Research has started to take a closer look at the role of

agency, shifting institutional theory from a theory of stability to a potential theory of change (van der Voet, 2014).

Organization of the Study

The remainder of this study is organized by chapters. An introduction to the study was provided in chapter one and the theoretical framework was introduced. The research purpose, research questions and key terms were also discussed. Chapter two will review literature from two bodies of research: institutional theory and innovation. The proposed methodology and research design are presented in chapter 3. Chapter four will provide an analysis of the data. Finally, chapter 5 will provide conclusions, discussion, and future considerations.

Chapter 2

Literature Review

Overview

The topic of organizational innovation is a multi-faceted one. As a result, this chapter addresses several areas of literature. The first part of this chapter examines the evolution of institutional theory. The next section defines innovation and provides examples of disruptive innovative initiatives in industry and education. Finally, factors that facilitate or impede innovation implementation as well as characteristics of innovative leaders are then synthesized from the literature. In an attempt to make sense of isomorphic mechanisms and disruptive innovation implementation, a search was expanded to include journals outside the field of education.

Institutional Theory

Institutional theory is a dominant lens applied to aid in understanding organizations (Greenwood et al., 2008). Institutional theory is a strong explanatory tool to describe

organizational behavior (Seyfried, 2019). Early research contributions to institutional theory focused on the adoption of bureaucratic forms within specific fields (Greenwood et al., 2008). This focus evolved over time to include a wider variety of organizational forms and organizational behavior (DiMaggio & Powell, 1983). In addition, the constraining forces imposed within and across organizational fields were examined (Hanson, 2001).

Evolution of the Institutional Perspective

The late 1970s were an important time in the field of organizational theory (Greenwood et al., 2008). Several perspectives introduced during this time still endure today: resource dependence theory, ecology theory, and institutional theory (Greenwood et al., 2008). Prior to this time, organizational theory largely focused on scientific management and the embeddedness of organizations within their local communities (DiMaggio & Powell, 1991). While the study of organizations and institutions began prior to the 1970s, the enduring perspectives that resulted from the contributions made between the 1970s and 1980s will serve as a starting point in this study as the evolution of the institutional perspective is explored.

The contributions to institutional theory made in the late 1970s resulted in the perspective of new institutionalism (Greenwood et al., 2008). The construct of new, or neo, institutionalism was first introduced by Meyer and Rowan (1977) and Zucker (1987). Meyer and Rowan (1977) researched the formation of formal, rationalized bureaucracies that resulted from complex social networks and institutional context. Additionally, they explored the forces that influence organizations, including institutional context established by rationalized myths (Greenwood et al., 2008). Meyer and Rowan (1983) described these rationalized myths as the rules and norms of society. Zucker (1987) described them as common understandings. Meyer and Rowan (1977) clearly distinguished between institutionalized rules and social behaviors arguing that the effects

of institutional rules on organizations are vastly different than the effects of social behaviors surrounding organizations. Meyer and Rowan (1977) defined institutionalization as occurring when accepted norms or rules influence the events and actions of society. New institutional theory views organizations as deeply embedded in social environments (Seyfried, 2019).

Organizations are affected by social values and organize in manner to achieve legitimacy (Greenwood et al., 2008). In the early 1980s, Tolbert and Zucker (1983) studied the diffusion of practices across civil service. They postulated that diffusion occurs in two stages based on motivation (Tolbert & Zucker, 1983). Early adopters were primarily interested in improvement, while later adopters were primarily interested in obtaining legitimacy (Tolbert & Zucker, 1983). It is within this second stage that Tolbert and Zucker (1983) believe the original idea or innovation becomes institutionalized, or rationalized, as it was adopted by more and more organizations. Gruenbaum (2015) explained the addition of late adopters as mutually beneficial. As late adopters join the network, late adopters gain the expertise gained by the early adopters while early adopters benefit from the usage of late adopters (Gruenbaum, 2015). The relationship results in self-sustaining innovation adoption and is what is referred to as critical mass (Gruenbaum, 2015). A few years later, Fligstein's 1987 study of diffusion examined institutional processes and found that disruptive change enables changes in organizational behavior.

DiMaggio and Powell (1983) continued to research the concept of rationalization but also focused on understanding the homogenization that exists among organizational practices. DiMaggio and Powell (1983) suggested that homogenization was a result of structuration. Structuration consists of four parts: increase in organizational field interaction, emergence of well-defined dominating interorganizational structures, increase in information sharing across an

organizational field, and mutual awareness of commonality (DiMaggio & Powell, 1983). The concept of organizational fields emerged as a way to describe the various forces that influence organizations (DiMaggio & Powell, 1983). Organizational fields themselves only exist to the level that they are institutionally defined (DiMaggio & Powell, 1983). DiMaggio and Powell (1983) posit that forces within organizational fields cause organizations to resemble each other; a process called homogenization. DiMaggio and Powell (1983) argue that professions as a whole are subject to such pressures. Srikantia and Bilimoria (1997) used the behavioral science field to illustrate the effect of such pressures. Srikantia and Bilimora (1997) argued that only areas deemed acceptable by business become areas of study in behavioral science. Later application of DiMaggio and Powell's (1983) work led to the misconception that homogeneity and isomorphism were synonymous (Greenwood et al., 2008). Rather, homogeneity is one of the possible outputs, or effects, of institutional isomorphic forces (Greenwood et al., 2008).

Meyer and Rowan (1977), citing research on loosely coupled formal organizations, argue that a problem within organizational theory was the belief that formal structures within organizations lead to success. Meyer and Rowan (1977) describe the incongruence that exists between the quest for legitimacy and the promotion of organizational efficiency. For many organizations, the structures that exist are based on myths rather than rational demands (Meyer & Rowan, 1977). This mythical belief is often supported by public opinion, laws, and the educational system (Meyer and Rowan, 1977). The accepted rules define emerging organizations and redefine existing organizations, increasing homogenization (Meyer & Rowan, 1977). The concept of rationalized conformity evolved as a way to describe how and why organizations become similar (Greenwood et al., 2008). Organizational conformity, described as

ceremonial, leads to the decoupling of organizational practices from the organizational core (Greenwood et al., 2008).

Institutional Isomorphism

DiMaggio and Powell (1983) identify three mechanisms of diffusion, or institutional isomorphism: coercive, normative, and mimetic mechanisms. Coercive mechanisms occur when there is a level of expectation or dependency and an existing power imbalance (Greenwood & Meyer, 2008; Farquharson, 2013). This level of expectation is formed from cultural, political, and other external environmental sources (Seyfried, 2019). Normative mechanisms establish behaviors based on environmental norms (Greenwood & Meyer, 2008). Normatively sanctioned strategies, or rationalized myths, are valued and often adopted by large numbers despite the fact that a strategy's success could be unique to an individual organization and non-transferable to all (Tolbert & Zucker, 1983). Normative isomorphism is associated with widely accepted professional practices (Seyfried, 2019). Finally, mimetic mechanisms occur when organizations implement practices of other organizations that are experiencing success or when the environment is uncertain (Greenwood & Meyer, 2008; Farquharson, 2013). Organizations face many problems with unknown solutions and therefore strategically observe similar organizations to see how they respond (Seyfried et al., 2019). DiMaggio and Powell contend the three mechanisms act jointly, although little research has been conducted to understand their specific roles or effects (Greenwood & Meyer, 2008). The response often creates similar structures within like organizations.

The mechanisms of diffusion introduced by DiMaggio and Powell (1983) also assist in explaining organizations' motivations for adoption of practices and initiatives. Coercive isomorphism results when organizations are motivated to adapt in order to avoid sanctions

(Greenwood et al., 2006). Organizations that are motivated based on respect for social rules and norms are an example of normative isomorphism (Greenwood et al., 2008). Finally, when organizations are motivated by their interpretation of others' success, mimetic isomorphism occurs (Greenwood et al., 2008). An example of mimetic isomorphism is illustrated by quality management in higher education. Quality management diffusion often occurs as a result of imitation among higher education institutions. (Seyfried, 2019).

Organizations' motivations for adoption of specific practices is also driven by what Garcia et al. (2014) describe as letter of the law and spirit of the law perspectives. The letter of the law is the literal meaning of the law, while the spirit of the law is the perceived intention of the law (Garcia et al., 2014; Garner, 2009). The letter of the law perspective demonstrates an understanding of the policy elements for required for compliance (Mavrogordato & White, 2020). Compliance is a factor of coercive isomorphism. Coercive isomorphism encourages compliance by leveraging sanctions if the letter of the law is not followed (Greenwood et al, 2006). The spirit of the law perspective can potentially be motivated by any of the three mechanisms of diffusion identified by DiMaggio and Powell (1983), but can also be motivated by a single, independent actor or organization. For example, an educational leader operating under the spirit of the law perspective might implement innovative organizational practices and policies completely unique to the organization and not yet considered industry norm; acting independently of isomorphic forces. Mavrogordato and White (2020) describe the difference in perspectives as technical versus transformative. It is possible to operate under both of these perspectives simultaneously, while it is also possible to act in ways that align with one perspective and not the other (Garcia et al., 2014).

Meyer and Rowan (1977) identified three consequences of isomorphism. First, isomorphism can cause organizations to incorporate elements based on legitimacy rather than efficiency (Meyer & Rowan, 1977). Also, structural elements within organizations become defined by external criteria (Meyer & Rowan, 1977). Finally, Meyer and Rowan (1977) argued that isomorphism promotes organizational stability and success. Nearly four decades later, Barreto and Baden-Fuller (2006) found that isomorphism enhances symbolic performance but not substantive performance. Srikantia and Bilimoria (1997) state the lack of substantive performance is a result of mismatched models and operations. Avoiding negative effects of isomorphism may depend on institutional leadership (Kraatz, 2009).

Education and Isomorphic Pressures

Educational organizations operate in a highly structured organizational field and face many institutional pressures (DiMaggio & Powell, 1983; Zajac & Kraatz, 1993). Hanson (2001) identifies local school districts, state education departments, teacher certification programs, federal government agencies, school boards, and the larger society as actors within the educational organizational field. Hanson (2001) identifies three forces that can initiate change within educational organizations: environmental shifts, environmental regression, and environmental shocks. Environmental shifts occur when an individual organization or a small group of organizations in the field implement change that results in a change of field expectations (Hanson, 2001). Environmental regression relates to normative isomorphism. If the accepted norms within an educational institution are misaligned with the standards associated with legitimacy, environmental regression can occur (Hanson, 2001). Environmental shock occurs when the external environment places demands or regulations beyond what individual organizations can incrementally implement (Hanson, 2001).

A study conducted by Seyfried (2019) examined institutional isomorphism and institutional entrepreneurship during the adoption of quality management in higher education in Germany. The qualitative study identified positive effects if normative or mimetic institutional pressures were the cause for initiative adoption (Seyfried, 2019). Initiatives introduced as a result of coercive isomorphic pressures did not show measurable positive effects (Seyfried, 2019). Additionally, the study revealed the important role leadership plays during the implementation of organizational change (Seyfried, 2019). Leaders' interest, support, and prioritization of the adopted initiative were most relevant (Seyfried, 2019). While isomorphic pressures are relevant during the adoption phase, leadership characteristics and actions are responsible for success during the implementation phase (Seyfried, 2019).

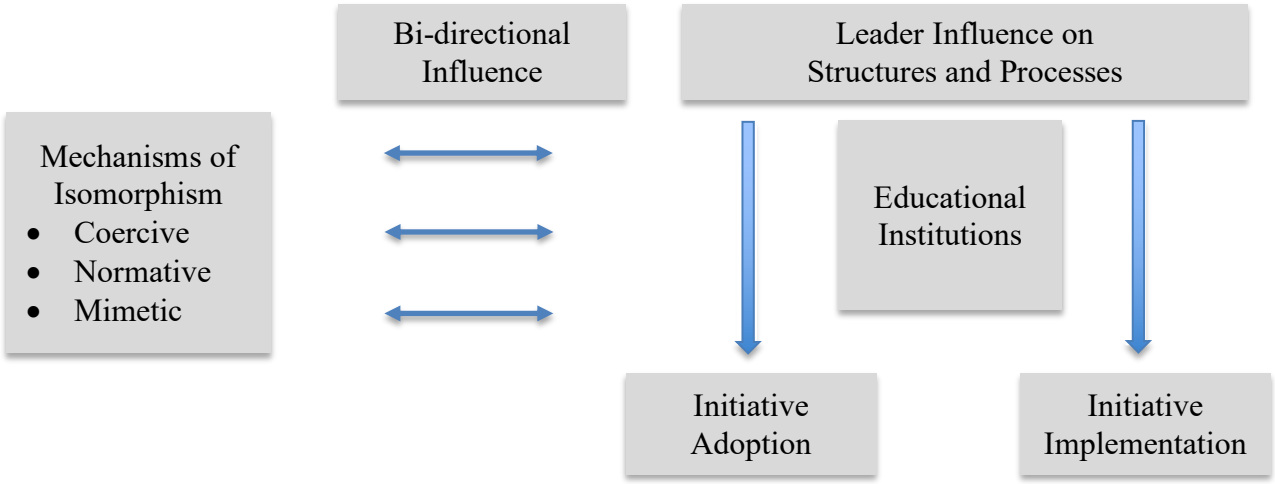
Institutional Entrepreneurship

Institutional entrepreneurship has emerged as an important area of study within institutional theory and is used to explain the role of individual agency (DiMaggio, 1988; Seyfried, 2019). Institutional entrepreneurship literature focuses on the characteristics and actions of entrepreneurs that facilitate internal change (Seyfried, 2019). Institutional entrepreneurs are those credited for initiating the change (Greenwood et al., 2006). The role of institutional entrepreneurs, specifically the areas agency and power explored in new institutionalism, reintroduce the paradox of embedded agency (Greenwood et al., 2006). The paradox exists between central and peripheral actors. In theory, central actors have the resources and power to initiate change but lack the ability to envision new practices due to embeddedness and exposure to normative practices (Greenwood et al., 2006). Contrary to central actors, peripheral actors lack embeddedness and therefore can envision innovative practices, however they lack the power and resources for implementation (Greenwood et al., 2006).

Institutional entrepreneurs generally hold leadership roles within organizations and are key players in organizational change processes (Seyfried, 2019). Leaders play an essential role in shaping institutional initiatives and therefore have the potential to shape the perception of such initiatives (Seyfried, 2019). Seyfried (2019) found that while isomorphism can have a negative impact on perceived effectiveness, institutional entrepreneurship might act as a corrective measure to isomorphism. Institutional entrepreneurship refers to the activities that change existing organizations or create new organizations to realize a specific interest (Maguire et al., 2004). This presents the idea that isomorphic forces are possibly bi-directional, as illustrated in Figure 2, with leaders and internal actors able to enact change within organizations, impacting organizational fields from the inside out.

Figure 2

Isomorphic Mechanisms



Note. Diagram of the bi-directionality of isomorphic forces and the influence of leadership on initiative adoption and implementation.

Social Cognitive Theory

Social Cognitive Theory (SCT) focuses on the reciprocal relationship between individuals, behaviors, and environment (Rubenstein et al., 2018). SCT highlights the role of self-efficacy as a factor that has both indirect and direct effects on behavior (Bandura, 2012). While individual levels of self-efficacy vary across contexts, Bandura (2012) identifies four ways individuals establish these beliefs. Leadership self-efficacy studies have found that leaders confident within a particular domain are likely to lead followers to success within the same domain (Huang, L., Krasikova, D., & Liu, D., 2016). Huang, Krasikova, and Liu's study (2016) of leader creative self-efficacy found a positive relationship between leader self-efficacy and follower creativity.

SCT suggests individuals learn by observing others and by dedicating cognitive resources to reproduce behaviors (Bandura, 1986). As introduced in the study completed by Wu, McMullen, Neuber, and Yi (2008), a leader's behavior has the ability to encourage employee creativity. Their study examined the socio-cognitive principle of regulatory focus and revealed that encouraging employee creativity could be as simple as leading by example (Wu et al., 2008). Creative self-efficacy beliefs require a growth mindset and acknowledgement that skills and abilities are not limited to their current state (Kelley & Kelley, 2013). The mindset of the individual is nurtured through modeled leader behaviors and the positive physical, emotional, and social environment, or climate, of the organization. Observing others succeed, through social modeling, increases self-efficacy beliefs and aspirations (Bandura, 2012).

Leaders support creativity development by modeling their own creativity (Rubenstein et al., 2018). Modeling research provides opportunities for observational learning affects multiple

components of student creativity output (Rubenstein et al., 2018). Attention, retention, production, and motivation are the four key processes of observational learning (Schunk, 2016). Vicarious learning takes place when individuals learn from their observations of modeled behavior (Schunk, 2016). The risks associated with creativity implementation and development are diminished through vicarious learning as individuals are able to learn without experiencing negative consequences (Schunk, 2016).

Innovation

The ability to innovate, or to create and implement new ideas, has been identified as an essential skill to meet the demands and challenges of the 21st century (Brown, 2006; Waldman & Bass, 1991). Innovation has commonly been tied to organizational success and the ability to respond to rapidly changing needs and demands of society (Waldman & Bass, 1991). New inventions must be created to address historically challenging problems (Ancess et al., 2007). Innovation is dependent on industry context, making each innovative reform effort unique to the industry it serves (Christensen et al., 2018). For the purposes of this study, innovation will be defined as an idea or process that promotes transformational change (Brown, 2006). Transformational change is disruptive in the sense that it challenges existing accepted norms (Brown, 2006).

Disruptive Innovation

Charitou and Markides (2003) describe new ideas and processes that conflict with existing norms as disruptive. The theory of disruptive innovation was first introduced in 1995 as a way to think about innovative growth in different industries (Christensen et al., 2015). Since 1995, the theory has been loosely applied leading to the core concepts of the theory being misunderstood (Christensen et al., 2015). These core concepts focus on low-end or new market

footholds and new customers (Christensen et al., 2015). Additionally, disruptive innovations are often initially viewed as inferior by incumbent or existing customers (Christensen et al., 2015). The theory of disruptive innovation has been widely applied to areas to organizations outside the field of education. Disruptive innovation is not an output of change, rather it is a process that overtime has been confused with attempts to sustain innovation (Christensen et al., 2015). To shift from the model of implementing sustaining innovations to those that are disruptive, prescribed standardization must be removed to allow flexibility (Christensen et al., 2017).

Disruptive Innovation in Industry

Netflix is an example of a disruptive innovation (Christensen et al., 2015). Previously established customers of the movie rental industry primarily rented new releases and rented on impulse (Christensen et al., 2015). Netflix appealed to a new customer base more interested in previously released movies and classics (Christensen et al., 2015). This new customer group, paired with the existing companies' lack of attention, allowed Netflix to quietly capitalize on internet video streaming, eventually gaining control of the new and existing customers alike (Christensen et al., 2015). This process of disruptive innovation occurs over time and in many industries focuses on market share and profitability (Christensen et al., 2015). Unlike Netflix, Uber is an example of a sustaining innovation (Christensen et al., 2015). While the company changed the ride service industry and forced incumbents to respond, Uber aimed to make improvements to the experience of existing customers (Christensen et al., 2015). A sustaining innovation can become disruptive. It is all dependent upon the innovation's process and path (Christensen et al., 2015). Disruption innovation does not predict success or provide a game plan as to how to successfully innovate; far too many factors exist within the environment that influence success (Christensen et al., 2015).

Disruptive Innovation in Education

Disruptive innovations have emerged in schools as a result of both top down and bottom up initiatives (Brown, 2010; Hanson, 2018). The term disruptive tends to carry a negative connotation. Disruptive innovation, however, is a positive force that works to transform ideas or processes so that they are accessible to all (Christensen et al., 2008). Research examining disruptive innovation adoption and implementation in educational organizations is limited and the role of the educational leader in the innovation process has received minimal attention (Brown, 2010; Charitou & Markides, 2003; Waldman & Bass, 1991). Much of the research regarding disruptive innovation in education centers around the student experience. One example of a disruptive innovation is The Remaking Middle School Working Papers Series, launched by the University of Virginia, in effort to synthesize research on adolescent development (UVA, 2020). The four working papers include topics focused on physical and cognitive development, positive school climate to students, and leadership support of adolescent development (UVA, 2020). The goal of the Remaking Middle School Working Papers Series is equity and quality (UVA, 2020). The series provides the most relevant research in effort to enhance adolescent learning for all (UVA, 2020). Additional examples can be found in higher education institutions. Historically, higher education universities established prestige on the basis of enrolling the brightest and highest performing, rather than the ability to educate all. With inequities increasing across communities and increasing financial constraints, universities have explored disruptive innovations to change the model of higher education. One example of this is designing more affordable and relevant higher education opportunities.

Entrepreneurship and social innovation encourage experiential learning rooted in real-world context as a way to enhance creativity and risk taking and serve as pathways to disruptive

innovation in education (Kubberod & Pettersen, 2017;Pittaway & Thorpe, 2012). Social innovation education has emerged as a way promote strong thinkers and communities. Entrepreneurship and social innovation support the fourteen changemaker attributes (Rivers et al. 2015). These attributes, such as self-confidence, perseverance, innovation and creativity, and problem-solving are similar to the characteristics identified in the Profile of a Virginia Graduate (Rivers et al.; Cave, 2016; VDOE, 2016). Hornqvist and Leffler (2013) describe an entrepreneurial attitude as a new way of thinking. Shifting the greater environment towards a culture of entrepreneurship takes time (Hornqvist & Leffler, 2013). To encourage a culture of innovation in schools and entrepreneurial learning, VDOE offers innovation planning and implementation grant opportunities to Virginia high schools (VDOE, 2019). VDOE also started designating School Divisions of Innovation in the fall of 2019 to support division-wide implementation of innovative learning (Lane, 2020). School Divisions of Innovation are exempt from specific regulatory constraints and receive additional points in the grant application progress (Lane, 2020).

Intrapreneurship has emerged as a way for K-12 educators to engage in disruptive change while navigating the highly bureaucratic structure of educational organizations (Hanson, 2018). Hartigan and Love (2014) define intrapreneurs as “internal change agents”. Intrapreneurship promotes teacher agency by providing increased autonomy (Smith et al., 2014). This allows actors to initiate organizational change from within (Hanson, 2018). Hanson (2018) found that intrapreneurial mindsets can lead to bottom-up teacher driven reform and increase teacher motivation.

Innovation Design, Adoption, and Implementation

Researchers have identified the generation of a product or idea as the first phase of the innovation process (Waldman & Bass, 1991). However, the innovation process really begins with problem identification (Waldman & Bass, 1991). It is after the identification of the problem that new ideas, processes, or products are generated as potential solutions (Waldman & Bass, 1991). A number of scholars have researched factors related to a variety of innovation adoption and implementation initiatives, such as educational technology (Porter, et al., 2016). Institutional adoption and implementation have been classified by Porter et al. (2016) into three stages. Stage one is the awareness and exploration stage (Porter, 2016). The innovation has not yet been adopted and limited support is shown for employing the innovation (Porter, 2016). During stage two, adoption and early implementation, the innovation has been adopted by the organization and practices are put in place to support implementation (Porter, 2016). In the final stage, mature implementation and growth, well established practices are an integral part of the organization's operation (Porter, 2016).

Factors that Facilitate or Impede Disruptive Innovation

Societal changes rooted in globalization and technology advances require institutions to be innovation ready (Lasakova et al., 2016). An organization’s ability to sustain long term success is dependent up its ability to leverage current practices while exploring new (Levinthal & March, 2013). Makasi et al. (2014) state that alignment of disruptive technologies to the demands of the larger environment is foundational to the organizational success. Internal and external factors have the ability to influence disruptive innovations. Researchers have focused aspects within organizational fields that contribute or hinder disruptive innovation implementation (Lasakova et al., 2016).

Risk Tolerance

The development of new processes or ideas involves risk, and in many organizational fields, anticipated risk creates barriers to innovation (Brown, 2010). The idea of disrupting ideas and processes means deconstructing the various processes that support them (Zietsma & Lawrence, 2010). Public organizations, operating from public funds, face a lower risk tolerance with the introduction of new processes or ideas (Brown, 2010). This is due to the vulnerability of the sector, and the risk of negative impact on individuals the organization is designed to serve (Brown, 2010). Additionally, leader risk-taking is rarely awarded in public sectors (Brown, 2010).

Homogenization

Diversity exists primarily in the beginning stages of an organization's lifestyle (DiMaggio & Powell, 1983). Once organizational fields emerge, isomorphic forces cause them to become similar to each other (DiMaggio & Powell, 1988). One possible result of isomorphic forces is homogenization. As an organization matures, diversity is replaced with homogenization (DiMaggio & Powell, 1983). The environment, created by the decisions of organizational actors, restricts future ability to change (DiMaggio & Powell, 1983). Hwang (2015) found the environment as a constraint to organizational behavior. The value or driving force leading to the development of a constraining environment is the quest for legitimacy (Hwang, 2015). In an attempt to initiate change, rational actors actually make their organizations more similar (DiMaggio & Powell, 1983).

Organizational Structures

Organizational structures are socially constructed and driven by human actions (Morgan, 2006). When policymakers assume structural change equates to a change in practice, they erase

individual agency and the influence of external factors. Organizational structures play an important role in the innovative culture of an organization. School leaders must foster flexible forms of organization to support innovation (Morgan, 2006). An organizational structure that promotes timely decision making allows new ideas to be generated and executed (Evans, 2008). Dr. Kevin Desouza, subject-matter expert for a study that examined the embeddedness of innovations in organizations, summarized three characteristics of innovative organizations: alignment between mission, performance, and reward systems; transparent innovation processes with clear roles and responsibilities; and frequent stakeholder communication (Evans, 2008). The organizational structures have the ability to promote or inhibit the development of an innovative culture in an organization (Waldman & Bass, 1991).

The call for innovation has shifted many organizational structures from a bureaucratic, vertical structure to a horizontal structure where collaboration and shared decision making is valued (Norbom & Lopez, 2016). Several collaboration models have been explored in recent research. The models provide different levels of access to resources and provide different outcomes (Davis, 2016). Dyad describes the collaborative model between two organizations while triads and multi-partner describe the collaboration between three or more (Davis, 2016). The appeal of access to additional resources made available through the formation of multi-party groups began to emerge in the early 2000 (Davis, 2016). Parallel dyads are a model of collaboration where separate collaborations are conducted by different partners simultaneously. Unified triads are formed when single representatives from each group collaborate with shared objectives (Davis, 2016). However, both multipartner models generate problems as they both reduce innovation performance and interorganizational trust (Davis, 2016).

Interorganizational trust is an important foundation to innovation (Davis, 2016). As teacher leaders of the different boundary lines or curriculum areas interact, trust can be gained and after many interactions can be institutionalized (Ring & Van de Ven 1994; Uzzi, 1997). Davis (2016) discovered that one way to maintain interorganizational trust while maintaining innovation performance is through group cycling. Group cycling provides the benefits to resources but eliminates the relationship conflicts through third party isolation (Davis, 2016). Purposeful, sequential collaborations are planned between dyads within the multipartner group after consideration of potential areas of conflict (Davis, 2016). Dyads on a specific purpose at a sequential time in the process (Davis, 2016). Dyads learn from the collaborations of dyads that were held prior to them, cycling the information through the group (Davis, 2016).
Majority of the participants of a blended learning study conducted by Porter et al. (2016) stated that they preferred to have faculty members as policymakers over administration.

Organizational Actors

Early research failed to investigate actors as agents of change and scholars have since focused more on micro-level concepts and organization variance (Hwang, 2015). The micro-level research focuses on institutional forces, both bottom up and top down, that cultivate or change existing norms (Hwang, 2015). Micro-processes offer insight into mechanisms that lead innovations to be resisted or embraced (Hwang, 2015). Actors within an organization act within a greater context (Lunenburg et al., 2020). Possibilities for action are based on actors' perceptions of the interaction between environment and organism (Barab & Roth, 2006).

Individual actors have complex needs that must be addressed if they are to be effective actors within the organization (Morgan, 2006). Abraham Maslow created a hierarchy to describe the different levels of need (Morgan, 2006). Maslow's hierarchy identified incentives used by

bureaucratic systems, such as money and job security, as only meeting low-level needs (Morgan, 2006). Organizations realized that addressing higher-level needs of individual actors would positively impact organizations as a whole (Morgan, 2006). The Hawthorne Studies disrupted classical management theory and provided evidence to support Abraham Maslow's Theory of Hierarchy of Needs (Morgan, 2006). Motivational strategies, such as money and job security, only met lower level psychological needs (Morgan, 2006). This led to alternatives focused on individuals' higher level needs (Morgan, 2006). Structural adaptations that promote flexibility, such as intrapreneurship, increase motivation as a result of perceived autonomy, competence, and relatedness (Hanson, 2018). Frameworks that support intrinsic value promote a higher level of readiness. For example, extrinsic motivators such as mentoring, financial reward and working environment, while important, have less impact on change readiness than intrinsic motivators like self-determination (Hanson, 2018).

Of the three mechanisms identified by DiMaggio and Powell (1983), Seyfried et al. (2019) identify normative mechanisms as a change in mindset and the one mechanism that has the potential to lead to actual change. Such a change in mindset addresses the concept of embedded agency and the paradox that exists when actors are able to affect the institutions to which they are a product of (Zietsma & Lawrence, 2010). The diffusion of ideas is more than a direct replication from one organization to another. Actors within the organization must interpret and translate the idea or practice before applying it to the new organization (Chandler & Hwang, 2015). Institutional pressures place demands on an organization's attention and influence decision making (Chandler & Hwang, 2015). However, the actors within the organization have the skillful ability to interpret institutional pressures and decide how much influence to allow (Chandler & Hwang, 2015). The role of organizational actors is evidence that isomorphism is not

merely mechanical or dependent only on organizational structure (Chandler & Hwang, 2015). Standardization has made it difficult for individuals in the public education industry to think like designers (Stolk et al. 2010). Utilization of processes such as design thinking provides the supports necessary to shift from externally mandated innovation implementation to internal innovation creation (Liedtka, 2014).

Oreg (2006) conducted a literature review and identified seven key antecedents to determine acceptance or resistance to change by organizational actors. The role of leadership impacts each of the seven key antecedents identified: actors' anticipated change outcomes, power, security, autonomy, trust, information, and social influence (Michaelis et al., 2009). Rogers (2003) described the different roles organizational actors play during technology innovation diffusion. Rogers (2003) classified actors into five categories: innovators, early adopters, early majority, late majority, and laggards. Moore (2002) recommends focusing on the innovator group first during innovation adoption. Moore (2002), while not directly labeling them as such, utilized the various mechanisms of isomorphism to explain how organization diffusion of an innovation can occur.

Organizational Readiness

While organizational readiness is a possible determinant of change readiness, alone it does not determine readiness (Weiner, 2009). Organizational readiness for change is defined by a shared commitment to implement change and a shared belief in the ability to do so (Weiner, 2009). Weiner (2009) states that the context of change is just as important as the content of change. Organizational readiness for change can be both psychological and structural (Weiner, 2009). Psychological indicators such as efficacy and motivation increase organizational

readiness (Weiner, 2009). Organizational readiness does not guarantee implementation success, just as implementation success does not guarantee positive outcomes.

Organizational Resources

Institutional entrepreneurs mobilize resources to support change initiatives (Seyfried et al., 2019). Beggs (2000) conducted a study of over three hundred faculty members in U.S. institutions of higher education regarding barriers to educational technology innovation. Two critically important barriers identified were lack of equipment and lack of time (Beggs, 2000). Facilitators included improved student learning, increased student interest, and ease of use (Beggs, 2000). In a study of educational technology implementation, interviewees identified personalized professional development as impactful (Porter et al., 2016). Others identified group professional development as impactful as they would learn from others' questions (Porter et al., 2016). In Porter et al.'s (2016) study of blended learning, interviewees indicated the usefulness of pedagogical support to include examples and review of course design.

Holme and Rangel (2012) conducted a study to understand the organizational conditions needed for school improvement. Specifically, Holme and Rangel (2012) wanted to learn why implementation of school reform efforts were more difficult for disadvantaged schools. Findings of their study suggest that geographic context has an effect on institutional resources (Holmes & Rangel, 2012). Institutional resources include natural, human, and capital resources. Human resources of an organization are required to respond to reform and accountability demands (Holmes & Rangel, 2012). Geographic context can lead to higher teacher and leader turn-over and have a negative effect on organizational stability. Additionally, accountability measures in particular geographic contexts tend to promote attrition as teachers and leaders leave to find environments to work in they perceive as easier (Holmes & Rangel, 2012). Disadvantaged

schools may not have key institutional resources to respond to innovative initiatives (Holmes & Rangel, 2012).

Leading for Innovation

Waldman and Bass (1991) identify leadership as the ability to influence a group. Such influence can be formal, or hierarchical in nature, or informal, resulting from one's unique characteristics independent of title or position (Waldman & Bass, 1991). Leaders across fields agree that innovation is a key indicator of growth and often name innovation as a top priority, yet many organizations continue to struggle to create an environment that supports organizational innovation (Evans, 2008). Often, the struggle is a result of lack of attention from top leadership (Evans, 2008). Certain leadership characteristics that support innovation have emerged in literature, while several others have yet to be researched (Sarros et al. 2010).

The Role of Principal

Hybrid leadership styles are emerging as a way to promote innovative and creative thinking; the skills necessary to compete in higher education and the 21st century (Stryon, 2015). Transformational and entrepreneurial leadership styles have been associated with innovative organizations in many organizational fields (Dvir et al., 2002; Stryon, 2015). Transformational leadership has been defined as the ability to expand followers' confidence to perform above expected levels to promote change (Dvir et al., 2002). Entrepreneurial leaders, similarly, are persistent and embrace change by building upon what currently exists in creative ways (Stryon, 2015). Examination of both leadership styles reveal actions principals can employ to promote disruptive innovation.

Establish Organizational Vision. Jung et al. (2003) found leaders' vision as the main contributor to organizational culture and innovation. Communicating a vision is one of the six

characteristics identified by Podsakoff et al. (1990) of transformational leaders. Aarons and Sommerfield (2012) describe transformational leadership as a visionary form of leadership. Institutional entrepreneurs create a vision for change that motivates others to enact change and sustain the vision (Seyfried et al., 2019).

Bass (1985) described leaders who inspire followers to work beyond expectations through communication of a vision. The impact of such leadership has been found to be similar across different organizational structures and cultures (Aarons & Sommerfield, 2012). Transformational leadership had a similar effect on organizational culture in not-for-profit (NFP) and for-profit (FP) organizations, although the dimensions were different (Sarros et al., 2010). Persistence and inspiration include frequent focusing on the vision and the promotion a collaborative, loyal environment (Waldman & Bass, 1991). Both are essential in the later stages of the innovation process (Waldman & Bass, 1991). Through inspiration, employee creativity and innovation are fostered (Khalili, 2016). In a 2009 study, Kose examined principal practices that influence professional learning in effort to promote social justice. Kose (2009) found the collaborative development of a transformative vision provided both purpose and direction. The transformative vision allowed clear goals to be identified and monitored (Kose, 2009).

Engage Actors Intellectually. Waldman and Bass (1991) identify the leader role as one that acts as a catalyst for change by encouraging followers to evaluate problems in new ways while maintaining a high level expectation and overall confidence of followers. Innovative leaders stay abreast of new research and technologies and build individual and collective expertise of the team (Stryon, 2015). Intellectual stimulation is essential in the early phases of innovation, where conceptualization of problems and confidence in risk-taking is required (Kanter, 1988; Waldman & Bass, 1991). Intellectual stimulation requires the questioning of

organizational norms and established beliefs and is essential during the idea generation and realization phases of innovation (Waldman & Bass, 1991).

Cultivate Individual Growth. Waldman & Bass (1991) describe individualized consideration as respect for followers as individuals with unique problems, approaches, and solutions to work. Innovative leaders create a culture where people feel valued and are encouraged to take risks (Styron, 2015). Additionally, innovative leaders have the ability to identify people aligned with the values and vision of the organization (Stryon, 2015). Institutional entrepreneurship has been introduced as a way to explain the role of individual agency as a bottom up approach to shaping an institution (Seyfried et al., 2019). Kose (2009) found that a culture of collective responsibility and trusting relationships optimizes implementation of initiatives, such as social justice professional learning.

Reflection

Chapter two provides a synthesis of literature on institutional theory and innovation. Isomorphism is often presented in literature as external forces applied to organizations. Institutional entrepreneurship presents a model of change produced by internal forces, creating a bi-directional view of isomorphism (Maguire et al., 2004). A review of innovation literature, specifically characteristics of leaders, highlights specific characteristics associated with innovative leaders. This study, grounded in new institutionalism, seeks to understand the design, planning, and implementation of innovative initiatives in K-12 educational organizations. The next chapter outlines the proposed methodology to critically explore the research questions posed in this study.

Chapter 3

Research Design and Methodology

The purpose of this chapter is to explain the research design and methodology selected for this qualitative study. The origins of Critical Incident Technique (CIT), as well as detailed explanation of the CIT process, are provided and participant selection techniques and data collection methods are discussed. The purpose of this study was to critically examine disruptive innovation in education and the role of isomorphic forces in the adoption of disruptive educational initiatives. This study sought to address the knowledge gap that exists regarding disruptive innovation implementation in high school public education. The study sought to answer the following questions:

1. How and in what ways do school high school principals lead disruptive innovation?
2. How and in what ways do the mechanisms of isomorphism contribute to or hinder the adoption of disruptive educational initiatives?

Research Design

Two commonalities exist across qualitative methodologies (Leedy & Ormrod, 2016). First, qualitative research usually focuses on phenomena, past or present, occurring within real world context (Leedy & Ormrod, 2016). Second, qualitative research seeks to understand phenomena by examining the different dimensions that exist (Leedy & Ormrod, 2016). Critical Incident Technique (CIT) is a qualitative research method that has been identified as a tool for investigation and exploration (Butterfield et al., 2009). CIT is well-established in several fields and can be adapted to meet specific situations (FitzGerald et al., 2008).

Critical Incident Technique

CIT, developed by Flanagan (1954) in collaboration with members of the Aviation Psychology during World War II, is a set of procedures for collecting direct observations or real-life accounts in an attempt to solve practical problems (DiSalvo et al., 1989). Initially, the CIT method was used to document critical incidents of pilots' experiences (Flanagan, 1954; Sharoff, 2008). Originally based in quantitative studies, CIT has been largely utilized in inductive, qualitative research (Bott & Tourish, 2016). CIT has been described as retrospective story-telling of actual events (Sharoff, 2008). The technique allows for open-ended response on a participants' experience of a specific event (Sharoff, 2008).

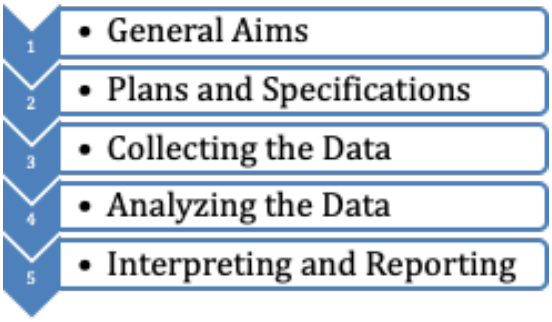
CIT focuses on factual reports, rather than opinions of behaviors that made a significant contribution to a specific event (Woosley, 1986). Participants make judgements regarding effective or ineffective behaviors and actions relating to a specific event (Sharoff, 2008). Then, participants must decide if what was observed is considered significant in terms of contribution (Sharoff, 2008). Consistency throughout the data collection process is essential and a detailed set of procedures must be developed and consistently followed during the data collection process of CIT (Flanagan, 1954, Stitt-Gohdes et al., 2000).

Figure 3 describes the five essential steps developed by Flanagan (1954) of the CIT process. The paragraphs that follow explain how each step will be implemented in this study. Over time, enhancements made to the CIT method, referred to as Enhanced Critical Incident Technique (ECIT), increased credibility and provided context of the studied event (Butterfield et al., 2009). This investigation will employ Flanagan's (1954) CIT and will include the enhancements outlined in ECIT to understand the critical events, incidents, or factors that

enhance or hinder leaders' implementation of disruptive innovations in secondary schools (Butterfield et al., 2009).

Figure 3

Flanagan's Critical Incident Process



Note. This figure illustrates the five step process of Critical Incident Technique as described by Flanagan (1954).

Role of the Researcher

As an elementary school administrator, I entered into this project with basic knowledge of the various forces at play during the design, planning, and implementation phases of innovative initiative adoption. As an administrator of a high performing Title 1 school, I understand the difference between success measured by standardized test scores and success measured by meaningful, authentic learning experiences. I have also observed the influence internal and external forces have on the types of learning experiences offered and the organizational practices adopted. This influence can at times result in practices that are misaligned with personal beliefs. The role of a researcher engaged in CIT is to interpret and articulate the participant's intended meaning based on a single story (Sharoff, 2008). Each individual offers a unique perspective, and examination of critical incidents across diverse perspectives will provide insight that has the potential to influence leader actions during

disruptive innovation implementation. As a school leader, CIT helped me understand the dimensions of my role and the impact of my actions when implementing disruptive innovations (Byrne, 2001). Additionally, CIT provided information regarding the influence of isomorphic mechanisms on innovation adoption and implementation.

General Aims

The general aims, or functional description of an activity, allow the criteria of effective actions or behavior during a specific activity to be clearly identified by activity experts prior to being judged (Flanagan, 1954). Butterfield et al. (2009) noted the purpose of the general aim is to provide the objective of the activity as well as the expectations of the person who engaged in the activity. In developing the general aim, often an introductory statement is provided. The understanding of the general aim is at times requested from experts of the activity (Flanagan, 1954). A trial statement is then proposed, and revisions made until field authorities agree to the general aims in simplest terms (Flanagan, 1954). The general aims of this proposed study were to elicit the significant events, actions, and decisions of leaders during the implementation of disruptive innovation, as well as to understand how the mechanisms of isomorphism hinder or contribute to the innovation process. To ensure participant understanding, the general aims and working definition of disruptive innovation were shared with each participant during the pre-interview.

Plans and Specifications

The purpose of the plans and specifications step of the CIT process is to clearly define the group being studied as well as to provide specific instructions (Flanagan, 1954). To maintain objectivity, observers must follow the same set of criteria (Flanagan, 1954). Flanagan (1954) established the following specifications to clearly communicate to individual observers prior to

the start of data collection: the situations observed, relevance to the general aim, extent of effect on the general aim, and persons to make the observations. To establish relevance to the general aims, the general aims statement will be reviewed with individual observers. Observers will be directed to include observations of behaviors or actions that they believe had an effect on the disruptive innovation, either directly or indirectly (Flanagan, 1954). Next, the extent of the effect on the general aim will be reviewed. The following definition from Flanagan (1954) was utilized to assist participants in making decisions regarding how important an effect is: "An incident is critical if it makes a significant contribution, either positively or negatively, to the general aim of the activity" (p. 4).

Development of an interview protocol occurs during this stage to ensure consistency across interview sessions (Butterfield et al., 2009). Interview questions sought to obtain information about the disruptive innovation as well as the role of isomorphic mechanisms and environmental and situational context (Butterfield, 2009). For each interview, the semi-structured interview protocol in Appendix B was utilized. Table 1 describes the categories, question stems, and supporting literature used to construct the interview schedule (McIntosh & Morse, 2015). A review of literature was conducted to identify the domain and categories represented in this study (McIntosh & Morse, 2015).

Table 1

Construction of Interview Schedule

Category	Item No.	Scheduled Question Stem and Probe	Reference for Category Development
Contextual Component	1	Can you tell me a little bit about your leadership experience at (name of high school)?	(Butterfield et al., 2009)
Contextual Component, Isomorphic Mechanisms	2	What role do you feel innovation plays in education today? How do your views align with the views of your school division? How have these views changed over time?	(Butterfield et al., 2009, Caravella, 2011)
Isomorphic Mechanisms	3	Would you say educational organizations are required to implement disruptive innovations today? Why?	(Caravella, 2011)
Critical Incident Component	4	Tell me about a process or initiative you've implemented that you consider to be disruptive. What norms did the DI challenge?	(Nardelli, 2014)
Critical Incident Component	5	When was the DI implemented?	(Nardelli, 2014)
Isomorphic Mechanisms	6	What were the reasons behind implementation of DI?	
Isomorphic Mechanisms	7	Who was involved in the design and planning of DI?	(Caravella, 2011)
Isomorphic Mechanisms	8	What did your colleagues think of your decision to implement the DI?	
Critical Incident Component	9	What actions or events did you find to be most important in the implementation of the DI? Describe the actions or events and tell why they were important.	(Butterfield et al., 2009)
Contextual Component,	10	What kinds of things made implementation of the DI more difficult for you?	(Butterfield et al., 2009)

Isomorphic Mechanisms			
Isomorphic Mechanisms	11	What were the risks you considered when implementing DI? Were they realized? Were they overcome?	(Caravella, 2011)
Critical Incident Component	12	What were the results or outcome of the DI?	(Nardelli, 2014)
Critical Incident Component	13	What do you think you would do differently if you had the ability to redo the implementation?	
Demographic Component	14	Number of Years as Principal, Length of time at school where DI was implemented, Number of Years in Education, Gender	(Butterfield et al., 2009)

Participant Selection

The study included purposive and snowball sampling of Virginia secondary principals. Specific selection criteria were utilized to select participants who have previously developed, planned, or implemented a disruptive innovation within the secondary school setting. From the initial sample, snowball sampling was utilized until data saturation is achieved. Flanagan (1954) states that saturation is generally accepted after the identification of one hundred critical incidents. Flanagan (1954) elaborated by stating saturation is achieved when few new critical incidents are gathered from participants. Table 2 provides select demographic information on the research participants. Beirnacki and Wolfe (1981) described snowball sampling as a method used widely in qualitative research where study participants make referrals of others they believe meet the specific study criteria or requirements. Such sampling provides first-hand observations from a participant familiar with the initiative (Flanagan, 1954). Participants who are familiar with the studied event and are able to make first-hand observations are able to successfully engage in studies utilizing the CIT (Sharoff, 2008). While the selected sampling methods increase the risk

of bias, Miles and Huberman (1994) state that the sampling methods are appropriate given the explorative nature of the proposed study. Additional steps, such as the development of a research team and member checking, were implemented to decrease the risk of bias associated with the selected sampling methods.

Table 2

Research Study Participants

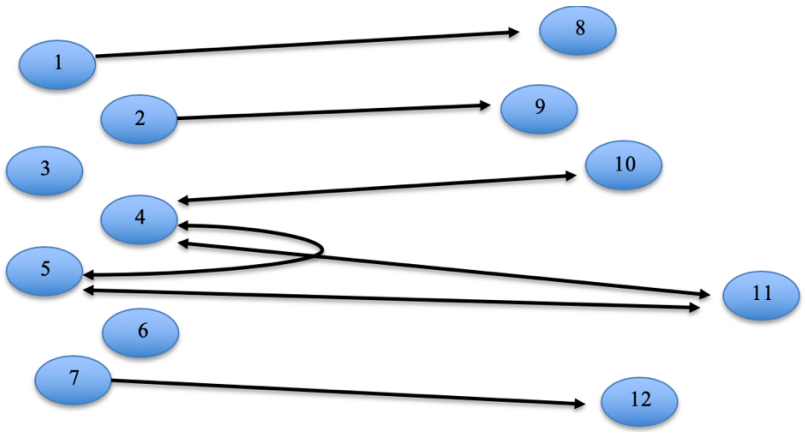
Principal	Gender	Race	Years as Principal	Total Years
Allison	F	W	5-10	15-20
Antoinette	F	W	5-10	20-25
Bill	M	W	5-10	20-25
Daryl	M	AA	5-10	5-10
Dean	M	AA	1-5	5-10
Dominic	M	W	10-15	15-20
Dustin	M	W	5-10	20-25
Eddie	M	AA	10-15	5-10
George	M	W	1-5	15-20
Kelley	M	W	10-15	20-25
Sandra	F	W	1-5	20-25
Thomas	M	W	1-5	10-15

The initial sample of research participants was selected in collaboration with university faculty, district superintendents, directors of higher education, and chief academic officers. As

indicated in Figure 4, seven individuals from the initial sample participated in the research study. Referrals from the initial sample led to five additional participants. In total, twelve high school principals from across the state of Virginia participated in this qualitative study. As illustrated in Figure 4, the initial sample let to a repetition of referrals for specific participants.

Figure 4

Snowball Sampling Method



Note. This figure illustrates participant referrals made by research participants.

Data Collection

CIT frequently uses observations reported by memory (Flanagan, 1954). Accuracy of the reported observations can be measured by the level of detail included in the observations (Flanagan, 1954). The plans and specifications step of the CIT process improves memory by identifying the behavior to be observed (Flanagan, 1954). Additionally, use of recalled incident data, or the recollection of specific events, provides a practical option as it poses minimal demands on observers (Flanagan, 1954). Interviews, group interviews, questionnaires, and record forms are four ways data is collected using the CIT (Flanagan, 1954). This study will utilize data collected via individual interviews. The same level of content exploration across research

participants is a goal of CIT (Butterfield, 2009). Empathy, curiosity, and respect help facilitate the CIT interview process (Butterfield, 2009).

Interviews

In qualitative research, interviews often provide valuable information when questions are aligned to research goals (Leedy &Ormrod, 2016). Compared to quantitative research, qualitative interviews tend to be less structured (Leedy & Ormrod, 2016). When engaging in qualitative interviews, the interview itself may feel like an informal conversation (Leedy & Ormrod, 2016). Interviews are, however, purposeful conversations (Bogden & Biklen, 2007). Preparing interview questions ahead of time through the use of a semi-structured interview protocol, along with probing questions to be utilized as necessary, ensure key information is secured during the interview process (Leedy & Ormrod, 2016).

Flanagan (1954) found that interviews produce reliable critical incidents. CIT is deemed appropriate when a researcher seeks to study recalled critical incidents identifying effective or ineffective behaviors during implementation of a specific activity (Flanagan, 1954). Semi-structured interviews are designed to elicit responses from individuals regarding a particular experience (McIntosh & Morse, 2015). Semi-structured interviews are semi-standardized allowing the use of probing questions to seek clarification (Leedy & Ormrod, 2016). Participant responses during a semi-structured interview maintain a specific inquiry focus and are unable to be obtained through other methods, such as observation or unstructured interviews (McIntosh & Morse, 2015). Semi-structured interviews are, however, time consuming and present an increased risk of bias as clarifying questions are permitted (McIntosh & Morse, 2015). Additionally, virtual semi-structured interview responses may not contain the level of detail that face to face interview responses contain (McIntosh & Morse, 2015).

Interviews lasted between 35-97 minutes and were held through a video conferencing platform. Participants received an email before the scheduled interview to confirm the date and time, to review and sign the informed consent included as Appendix A, and to provide the video conferencing link. The option of participating by telephone was offered to participants unable to meet via video conference. Only one participant selected this option. All interviews were audio recorded via digital recorder and web recorded through the use of the recording tool in the video conferencing platform. All recordings were transcribed verbatim. Audio recordings and interview transcription were stored in the researcher's password protected cloud database and on the researcher's password protected personal computer.

Data Analysis

Flanagan (1954) states that the future use of data should be taken into consideration when classifying incidents. This study sought to examine how school principals develop, plan for, and implement disruptive innovations while examining the roles of isomorphism. Therefore, incidents were classified in a manner that allows data to be utilized by both practitioners and researchers in the future. The principle use of the data for educational leaders is to successfully design, plan, and implement disruptive innovative initiatives. For researchers, the principle use is to gain understanding and opportunities for future research. Policymakers can further leverage this research in the development of future policies.

Research Team

A research team was assembled to assist with the identification of critical incidents and the coding of data. The research team was comprised of the researcher and two additional research team members. Research team members were selected based on qualifications, a commitment to meet synchronously a minimum of three times, and a commitment to complete

asynchronous tasks as required. Research team members successfully completed a qualitative course as part of their program of study and have previously engaged in academic research. Both research team members play active roles within public school systems. The first research team member is an elementary assistant principal and recent PhD graduate. The second research team member is a central office supervisor and a current PhD candidate in the educational leadership program.

The research team met synchronously a total of three times. At the first meeting, research team members were provided with an overview of CIT methodology, as well as the general aims of the study, research questions, and key terminology of the study. Additionally, research team members engaged in a calibration of critical incidents using the Flanagan's (1954) definition of a critical incident, reaching a consensus on one critical incident within the selected transcript. Research team members were provided with the complete calibration transcript to review and code asynchronously after the meeting. Identifiable information was removed from all transcripts prior to being shared with the research team in order to maintain confidentiality. During the second meeting, research team members reviewed the coding of the calibration transcript, discussing the identification of critical incidents and the emergence of themes. At the conclusion of the second meeting, research team members were provided with electronic copies of all transcripts and Appendix C: Disruptive Innovation Critical Incidents. The document, Disruptive Innovation Critical Incidents, listed researcher coded critical incidents for all transcripts. The chart contained the 171 critical incidents identified by the researcher. The chart contained additional columns for research team members to add additional incidents, indicate their agreement, and a notes section to record notes and questions for consideration. The research team worked asynchronously to engage in open and axial coding, while also documenting their

agreement or disagreement of critical incidents and adding new critical incidents for consideration. During the final meeting, research team members reviewed the chart and points for consideration. When team consensus did not exist, the research team engaged in a discussion, each offering their own perspective. Interview transcripts were reviewed during the discussion to provide context and assist the team in reaching a consensus. Nine critical incidents were removed after review of the interview transcript. A total of 162 critical incidents were accepted. The research team reached consensus on the events classified as critical incidents, themes, and research findings.

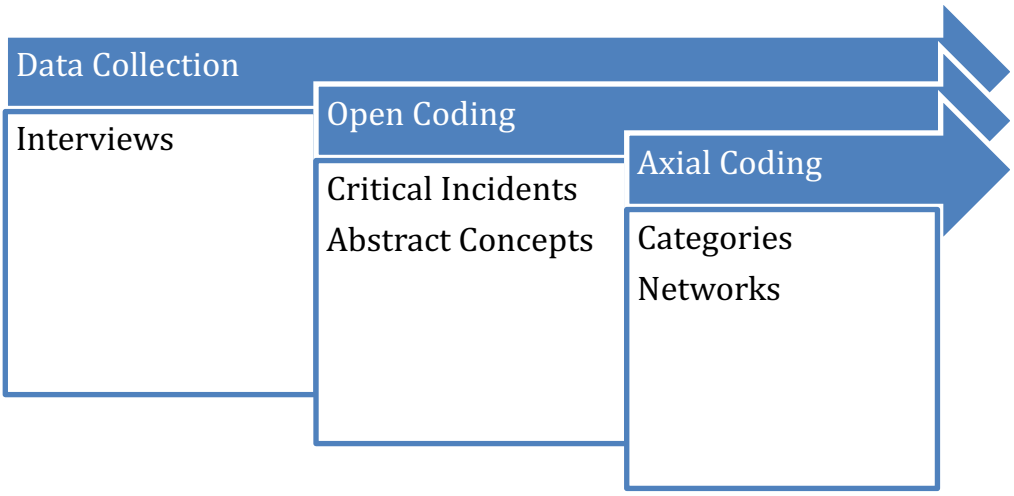
Analyzing the Data

The data was analyzed through a read, code, interpret iterative process. The data analysis software NVivo was utilized to organize the interviews and to code data. As illustrated in Figure 5, a combined open and axial coding approach was utilized (Nardelli, 2014). Through the process of open coding, abstract concepts associated with various incidents were identified (Nardelli, 2014). Incidents were classified into tentative categories for review (Corbin & Strauss, 1990; Flanagan, 1954). Relationships between categories were examined and linked accordingly through the axial coding process (Corbin & Strauss, 1990). The iterative process of revising classifications and defining new categories and relationships continued until all incidents were classified (Flanagan, 1954). Categories were examined, breaking categories into subgroups when appropriate, before reevaluating headings to ensure they communicate the incidents classified (Flanagan, 1954). Categorization is subjective and therefore it is a controversial component of CIT (Polit and Hungler, 1995). Following Lincoln and Guba's (1985) recommendations, the researcher engaged with research team members to identify any bias during data analysis. Following DiMaggio and Powell's (1983) mechanisms of

isomorphism, data was coded as coercive isomorphism if interview statements identify external environmental forces such as political or cultural. Interview responses that indicated accepted professional standards or norms were coded as normative isomorphism. Finally, responses that included observations of other organizations within the same organizational field or processes adopted due to uncertainty were coded as mimetic isomorphism.

Figure 5

The Research Process



Note. This figure illustrates the read, code, interpret iterative process.

Validation and Trustworthiness

Validity is measured by the quality of data and the alignment between the selected research approach and the purpose of the study in qualitative research (Stenbacka, 2001). To increase internal validity of the proposed study, preliminary results were discussed with practitioners. Additionally, member checking, a technique used in qualitative research explore the credibility of results, has the potential to reduce researcher bias by involving research participants in review and confirmation of results (Birt et al., 2016). Research participants were provided with a copy of the interview transcript for review and feedback. Pseudonyms were

assigned to all participants of the study. Identifying information shared during interviews was replaced with unidentifiable information. Transcripts, audio recordings, and NVivo software used for coding were stored on the researcher's personal computer and backed up via hard drive. The personal computer and hard drive are only accessible to the researcher.

Chapter 4

Data Analysis and Findings

This qualitative study utilized critical incident methodology to critically examine how leaders implement disruptive innovations and the influence of isomorphic mechanisms. Twelve high school principals participated in semi-structured interviews in order to gain an understanding of critical behaviors and actions identified by the research participants to impact the implementation of disruptive innovations. The researcher and research team completed open and axial coding of the data. In this chapter, I will describe the findings that emerged as a result of this work and in response to the research questions proposed in Chapter 1:

1) How and in what ways do high school principals lead disruptive innovation?

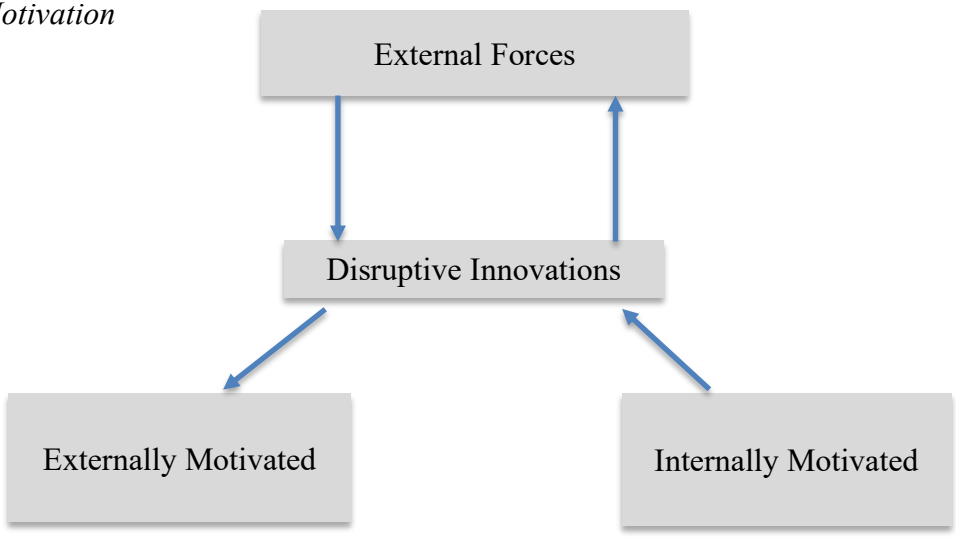
2) How and in what ways do the mechanisms of isomorphism contribute or hinder the adoption of disruptive educational innovation?

Findings are organized by overarching themes and are presented in the following order: motivation, organizational structure, and relationships.

Theme 1: Motivation

Figure 6

Sources of Motivation



Note. This figure illustrates the influence different sources of motivation on the development of disruptive innovations.

Leaders' establish the purpose for disruptive innovations and can be influenced by various sources of motivation. These sources of motivation can be categorized as internally or externally motivated. This study found that leaders with an internally motivated purpose implement disruptive innovations that are a result of bottom up design efforts to achieve organizational goals. External requirements are achieved by default, not by design. Additionally, leaders with an externally motivated purpose design and implement disruptive innovations in order to fulfill external requirements. Accountability measures, such as those established by ESSA, provide examples of external requirements that have the potential to influence the motivation of a leader. As areas are defined by accountability measures, such as chronic absenteeism, graduation rates, and standardized test scores, they can become areas of increased focus for leaders. Leaders can interpret these areas of focus in different ways. To decrease chronic absenteeism, leaders might choose an externally motivated perspective and implement disruptive innovations focused on punitive policies. On the other hand, leaders may choose an internally motivated perspective and implement disruptive innovations to engage students in a way that encourages their attendance at school.

During the semi-structured interview, principals were asked to share an example of a process or initiative they've implemented that they considered disruptive. Principals were also asked to describe the reasons for the implementation of the disruptive innovation. Five of the twelve high school principals described externally motivating factors influenced decisions regarding the design and implementation of the disruptive innovative practices or initiatives; leading to an externally motivated purpose. Seven of the twelve high school principals described

an internally motivated purpose influenced the design and implementation of the disruptive innovations.

Externally Motivated

The motivation of five of the twelve principals can be classified as externally motivated. The principals in this group described how the influence of external motivating forces influenced the design and implementation of disruptive innovations. The principals described disruptive innovations related to the allocation of budgetary items, tardy policies, discipline, and chronic absenteeism. The principals described events and actions that allowed them to shift practices in effort to achieve specific outcomes. Practices were adapted in order to meet specific measures. Principals described how they adapted policies and procedures in an attempt to avoid sanctions and in order to achieve accreditation.

Three of the five high school principals stated that changes at the federal, state, and division levels influenced their implementation of disruptive innovations. The principals responded to federal, state, or division determined outcomes, adapting practices to address any changes. Eddie described how his discipline style changed as a result of the chronic absenteeism measure. He stated:

> When we talk federal down to local level, one of the big things that we have to focus on here is on chronic absenteeism. You know, we've got to get and keep kids in school. Now I can, I can branch that off in a lot of different ways. So, let's start with out of school suspension, because a student suspended out of school is considered an absent student and it affects your chronic absenteeism. I have to be very careful about who, what, when, where, and how I send a kid home. The reality is sometimes you suspend a kid for one day. They may not come back four or five days. Again, chronic absenteeism is a factor in

> terms of accreditation. So, I have to disrupt the norm because when I became an administrator, we had progressive discipline. If you've been suspended one day, next time you do something it's two or three days.

Principals shared how requirements such as ESSA changed their focus over the course of time. Eddie described that such requirements "make you adjust how you do business every day". He explained how he disregarded direction from his superintendent in order to make necessary adjustments in response to chronic absenteeism accreditation measures. Eddie stated:

> Our former superintendent, um, told us that every student had to take six classes. But then take the typical average high school student. If they take eight classes in the ninth grade, 10th grade, 11th grade, they've got 24 credits, only 22 to graduate. And then you got to think about the kids that get caught, uh, high school bearing credits in middle school, unless you start allowing kids to graduate early, which I have done, that disrupts your normal four year process. So, there's another disruption on that same note. You know, we have students who are juniors and seniors, and let's say they only need two classes or four classes to graduate. I'm not going to give them six classes and those kids know what they need to graduate. And then they'll skip those classes, you know? And then what do we have more chronic absenteeism?

Daryl explained the need to look at credentials, advanced placement, and dual enrollment, when previously, his main focus was Standards of Learning test scores. Dean shared how the efficiency of a policy was examined to increase seat time:

> How, how can we be innovative with changing our tardy policy? So, we call it, it's Tardy Sweep 2.0. We decided to, you know, as opposed to having all the kids come to the

> auditorium, you had designated areas and we strategically place people in parts of the building.

Changes in state standards and the development of the Profile of a Virginia Graduate were noted as triggering factors that allowed new disruptive innovations to be implemented. Antoinette described that when "they backed off of the testing" and added the Five C's, it allowed conversations to shift to a focus of engaging instruction.

Principals were asked to describe the norms disrupted by the innovation, those involved in the design and implementation, and the risks considered. Allison described the implementation of the disruptive innovations as "small" and as something that would evolve and grow over time. Principals that described an externally motivated disruptive innovation stated implementation relied heavily on the administration and instructional leadership teams. Both Eddie and Antoinette identified the administrative team as the ones responsible for leading the implementation. Teacher planning was the most common norm disrupted as a result of disruptive innovations implemented through the externally motivated perspective. Other disrupted norms included working in isolation, curriculum design, instruction, and curriculum pacing. The identified risks of the disruptive innovations included staff buy in and a negative impact on student achievement on standardized tests. Antoinette states:

> The problem now that I see is it's not what they're used to doing. And so, some of them are afraid because they still have end of course tests to answer to.

The principals shared results or outcomes of the disruptive innovation. Increased communication and improvements in accreditation measures were identified as the results or outcomes of the disruptive innovations designed and implemented with an externally motivated

purpose. Daryl identified increased communication between students and principal and families and principal, while Dean identified increased communication between staff and principal.

Internally Motivated

Seven principals described a source of internal motivation that influenced the design and implementation of disruptive innovations. The principals acknowledged the need for change in educational institutions and implemented disruptive innovations to create such change. Motivating factors were described as a belief that the purpose of education has changed over time and disruptive innovations are required to change the focus. Bill explained this change as a shift from ranking children on standardized skills to tapping into the unique potential of each child. Leaders with this motivation questioned the status quo. Kelley described it as:

> we're seeing a need to change some, some structures, philosophies, some access, to courses, some structures of the courses, how the courses relate to actual real life. And then in preparing kids for jobs and the next and really the next level of their education, and then realizing their dreams and tapping into their potential.

Thomas described taking "a kid for who they are as a human being and designing the experience around them, instead of saying, here's the mold and to fit into it." Dominic described redefining success:

> I think it disrupts the norm that we will accept that standardized tests, that we're defined by standardized tests.

The principals in this group challenged deeply embedded and accepted institutional norms and beliefs. Accountability policies were noted as motivating forces, but not as a barrier or influence in the design and implementation of the described disruptive innovations. Thomas explained:

> so many times you hear the system of accountability, like high stakes testing. Like I don't, I don't think that gets in the way, like if you're doing the high quality things then the kids will test well enough to keep, keep the state and the feds out of your school.

Members of this group described how their internally motivated purpose was able to shield external forces when necessary. In fact, one principal described having to position himself within the community as a form of protection from the district he served. Thomas shared his belief that if the community viewed him as an asset, they would advocate for him if he ever faced retribution from the district for his actions. Thomas stated:

> Um, but what I will say now in my current role, um, the phrase cease and desist was used with me, like literally a call came to me about high school redesign that I was working on in my school, the phrase cease and desist was used…It causes me to think in different ways, like how do I disrupt the, the lack of, of willingness to disrupt? And that's really what it is like, how do I find a workaround? And it's unfortunate because then I feel sneaky. Like, and I withhold things. I like to share with my colleagues, but if sharing with my colleagues is going to get me the thing that tells me to cease and desist, well, shit, I've got two options. I either do what's right for kids, or I help my colleagues move along, and I'm going to do what's right for kids.

Disruptive innovations designed with an internal motivation include redefining the role of traditionally accepted school norms. Such norms include time and space, as Bill shared:

> So, perfect example is that, um, time is a constant and learning is the variable. So, right, like in my school, basically, no matter what class you take, whether it's welding, English nine, algebra two, whatever it takes you 50 minutes a day for 180 days to complete that course. Time is the constant. And what we know is at the end, some kids have learned it.

> Some kids haven't learned squat. So if we really cared about learning, time would be more of a variable and not that learning necessarily be a constant, but learning would be a more consistent outcome.

The examples of disruptive innovations provided are described as a result of bottom up efforts. As Bill stated, “it did not start with policy”. Bill described the disruptive nature of organically developed efforts by stating:

> It was much more of an organic development of efforts, which I think is why it's been so disruptive. And just the people who are boots on the ground are the ones developing the changes as opposed to somebody else trying to force everybody to change something.

Sandra further described the impact of bottom up efforts on change:

> it was the idea that came from the teachers. And when that happens, that's when change happens, change happens when the teachers are in the people in the building are coming up with the ideas. Change doesn't happen because I sit there and say, “You all need to do this”.

Principals who designed and implemented internally motivated disruptive innovations considered risk differently than those who designed and implemented externally motivated disruptive innovations. George described how he considers risk:

> I just start it. If it's horrible, then at least we know it doesn't work, it doesn't work. But if we talk about how it's going to work and let me never try it. How the heck was it going to happen? And that's the biggest problem I find in education is it takes us a year to get something situated.

Trust was identified by multiple participants as essential to minimizing risk when teachers are pushed to work outside of their comfort zone. Bill described the risk involved with finding the appropriate level of uncomfortableness for teachers. Bill described the balance as:

> I don't want them to be like set in comfort where they are complacent, but yet I want them to, you know, feel at peace and I realize we don't all grow at the same level.

Capacity for change was also identified as a considered risk. Dominic identified capacity for change on the levels of students, teachers, and the community. Two participants noted not meeting people's expectations as a considered risk. Specifically, Kelley mentioned the "hierarchy in the county" and the desire meet the goal of central office to have innovative programs. Dustin identified lack of superintendent support as a factor that would increase risk.

Four of the seven principals who communicated an internally motivated purpose identified inclusivity as a lead motivator for the design and implementation of disruptive innovations. Dustin described that the disruptive innovation was "built on the concept too, that it wasn't all the top 10 students, it was also available to any student upon recommendation that they had leadership ability". Kelley described focusing disruptive innovations on the population of students not involved in the school's IB, dual enrollment, or Spanish Immersion programs. The motivation was to disrupt the norm that only students involved in those programs have a unique experience. Kelley stated:

> then we have a thousand kids who come here because of their zip code. Um, so what we're trying to do is really honor those guys and give them something kind of unique.

Thomas discussed redesigning the high school experience for all students. He provided the example of specialty centers and explained that instead of having specific students benefit from

specialty centers, high schools should make them part of rotation in every student's high school career.

When asked to describe the outcomes or results of the disruptive innovations designed and implemented with an internally motivated purpose, the mentality of the teachers and the culture of the school were identified as two areas of improvement. Increased graduation rates and standardized test scores were described as secondary outcomes. Sandra described it as:

> If you just want to look at just like your just normal test scores type things, we did see improvement in areas there that we wanted to see. Um, I just, I felt that there was, and this is sort of more of a soft result, but there were more conversations around instruction with teachers than we've had in the past. And like they were more comfortable, um, not feeling that we were out to get them, but that we were all, we were working in the same direction and having just an honest conversation about the instruction that was occurring in the classroom.

The outcomes shared by both sources of motivation aimed to achieve increased student achievement. The difference, however, was evident in the description of the outcomes valued by participants. Externally motivated disruptive innovations focused on achieving a particular outcome. In contrast, outcomes of internally motivated disruptive innovations included soft data that provided additional context and insight into the impact of the disruptive innovation on the individuals involved. The next section discusses the influence of the different sources of motivation on organizational structure.

Theme 2: Organizational Structure

Educational organizations, like other institutions, vary widely in their design of organizational structures. This variance exists between school divisions, as well as between

schools within divisions. The second theme of organizational structure is discussed in this section. Supported by the findings, the sub-themes of organizational vision, reflective practices, capacity building, and networks are also discussed. The discussion of organizational structure identifies systems leaders leverage during the implementation of disruptive innovations.

Organizational Vision

Participants were asked to identify the actions or events they found to be most important to the implementation of the disruptive innovation, as well as to identify those involved in the planning and implementation of the disruptive innovation. Additionally, participants were asked to describe what they would do differently if they had the ability to redo the implementation. Eleven principals spoke of the need to involve others in the development of an organizational vision. Some participants described engaging faculty in the development of the vision. Others spoke to the importance of also involving students and the community.

Principals described the faculty stakeholder group as being leveraged in different ways. Allison described the importance of staff involvement to implementation. She described staff involvement as essential to leverage areas of expertise as well as to implement various tasks.

> I have an interdisciplinary group and they were my mappers and, you know, ultimately a great, a great majority of the work has been turned over to them to carry out. And I have, you know, taken a step back and been more of a facilitator. In addition to that, my school counseling team has been huge in regard to this because they're the ones that, you know, manually input the master schedule and coding and have the communication with the division.

Dean described his instructional leadership team as “leaders of the building” and expressed the importance of them understanding the why so they can communicate the vision.

> I was very deliberate. I explained to them what it was we were looking for. I also told them, as we're having this conversation as a team, you are, I'm counting on you guys to be able to go back to your individual teams and let them know why we're making a decision.

Five principals, all who described the implementation of internally motivated disruptive innovations, described leveraging stakeholders in the development of a shared vision. Bill shared that the motivation for disruptive innovation was the result of a grading simulation conversation that took place at a staff meeting. Faculty stakeholders realized the need to examine assessment for learning when the simulation revealed the students' grades were influenced by the teacher they were assigned, not the understanding of the student. From that discovery, Bill described how conversation and sharing continued at follow-up faculty meetings leading to bottom-up change. Dominic described the "fundamental importance of a shared vision".

> We're so large, we are so, I mean, we're so big that, you know, I don't get to see everybody every day…And so one of the big challenges with that is communication. And when folks know here's where we're at, this is a big ship and here's how we're moving this ship. And here's what we're about when you're not able to have this personal day to day conversations. And so, so I think we needed something to unify us and to build that capacity around where we're heading and why.

Dominic described a shared visioning committee that included over thirty school faculty members, a student advisory council with approximately seventy students serving, and community involvement that led to approximately three hundred pieces of feedback. The results of the feedback were shared with all stakeholder groups. Dominic stated that the development of a shared vision is often identified as an area of importance, especially in leadership development

courses, yet good examples of the development of a shared vision are rarely shared. Similar to Dominic, Sandra spoke to the importance of developing a shared vision to provide direction:

> So this is our vision. Well, how are we making that happen? Cause the vision is pretty lofty. How are we making that happen? And we need to give direction. And so that's where we came up with a three year instructional vision.

Thomas described extending the shared vision to a shared leadership structure and "flattening the organization". The administrative team was described by Thomas as "responsible for steering". Thomas described the administrative team as disruptive and an example of flattening the organization by representing "every person" through an inclusive design that incorporates roles such as the office manager, special education, and counseling. Much like Dominic and Sandra, Thomas described the establishment of "our why" as the essential first step:

> And so once we line up our why, we could walk in our purpose together, whether or not we agree on the bridge or the route, or the path that it takes to get there, or the speed at which we need to move.

The lens applied by the leader was found to influence stakeholder group involvement in the establishment of the shared vision. Faculty stakeholder groups were leveraged in various ways. Some leveraged this group in the development of the vision while others utilized this group to carry out the vision. Internally motivated disruptive innovations described a flattened organizational structure with input from many stakeholder groups. The development of a shared vision was identified as an essential element to the implementation of internally motivated disruptive innovations.

Reflective Practices

Principals were asked to describe the norms disrupted by the implementation of the disruptive innovation. The ideas of reflecting and questioning 'the why' were described by principals as disrupted norms. The disrupted norms crossed motivational groups. George described it, "the norms are just the norms of normalcy", so questioning why we do certain things can be disruptive. Dean shared how disrupting instructional questions such as, "Is it really something that's the most effective use of your instructional time?" disrupted the norm during the implementation of technology innovations. Sandra described how she utilizes reflective questioning to encourage her teachers to think in a different way:

> What's the why behind what you're doing? Why did you teach it that way? Why was that the best way? How else could we have approached that?

George described it as questioning why things always have to be "exactly the same" and noted, "that's where innovation is, it's in reflection". Thomas described the five questions he utilizes to improve high quality instruction. These questions include: 1. Who do we teach? 2. What do we teach? 3. How do we teach? 4. How do we assess? 5. How do we respond?

Capacity Building

Participants were asked to describe the actions or events most critical to the implementation of disruptive innovations. Nine of the twelve principals noted capacity building as essential to the success of disruptive innovations either in response to this request or when describing the disruptive innovation itself. A distinction in the role of leader between capacity building pathways was evident. Three principals described a top-down approach to capacity building, while six principals described a bottom-up approach. The pathways between top-down and bottom-up were directly correlated with the motivation behind the disruptive innovation.

The principals who described capacity building through a top-down approach, all who also described externally motivated disruptive innovations, referenced the need to take risks to address a new type of student. Capacity building was described by Allison as “team training to build consensus and understanding”. Administration and instructional leadership teams selected the topics and sequence of the professional development. Antoinette described how the identified professional development focus was supported through the yearly professional development plan.

> We rolled it out in August, end of August, beginning of September, it became our PD plan for the year. So we did quality check-ins on the what, why, how. It was part of our walkthrough form. So it wasn't just kind of, well, you mentioned it in August and then we never came back to it.

Dean referenced the division’s core values when engaging teachers in conversations and described the need to get people “more comfortable being uncomfortable”.

Capacity building was described as a bottom-up effort by six principals, all of whom described internally motivated disruptive innovations. The bottom-up capacity building efforts were described engaged teachers in the capacity building design process. Professional development opportunities were described as embedded and the timing of traditional professional development was changed to meet the needs of the teachers. George explained how professional development traditionally delivered during in-service week was shifted to the last week of school. This shift allowed educators time and space to interpret and apply the professional development to their practice. Time and space concepts were also shared by Dustin. Dustin explained that time and space were necessary to prevent quick solutions and allow for brainstorming. Bill described this effort as “teachers sharing ideas with other teachers”. He

further described his role of leader as that of a cross pollinator. Dominic described the development of a lead innovator program where educators receive support on their own personal pathway. Dustin explained the importance of building the capacity of others. Building capacity of others provides principals with people they can “lean on” to “help operationalize”. Kelley described building capacity on core foundational pieces, such as having conversations with students regarding course selection. Conversations during the shared visioning and reflective questioning identified areas in need of capacity building. The status quo was questioned, often pushing the boundaries of faculty comfort. Thomas stated:

> And what I mean by ledge is I believe that it's my job to find every person's ledge, along with the organization's ledge and push them and hold them right out to that ledge, and then build that capacity. So that ledge extends so that we can keep pushing them out all the, while, not pushing them over that, that ledge.

The concept of thinking outside of the box was discussed by four participants. Three of the participants had previously described internally motived disruptive innovations and one had previously described externally motivated disruptive innovations. Thinking outside of the box was discussed by three principals as a way to think about things in a different way. Thomas described the concept of the box in a unique way. He stated:

> So to say, we're going to think outside of the box, that's bullshit because the box is there. But if you think of a sandbox in the way sand is, if you play with all of the sand within the sandbox, then you're doing the things that are within the system. What I'm interested in doing is playing with the sand so much that it pushes up against the, you know, the, the wood boundaries of the box that it causes the box to shift, and it causes the box to move

outside of, you know what I mean? Like you don't think outside the box, you move the fucking box. So like, that's what I, what I'm interested in.

Unique perspectives on capacity building were evident in participants' responses. Prescribed capacity building efforts were described by some, while others described facilitation of individual growth journeys. Approaches to capacity building were described as a result of both top-down and bottom-up efforts. A connection between the direction of efforts and the source of motivation was evident. The principal's role in capacity building also varied. Some communicated their role as that of the one in charge, while others communicated their role as supportive and facilitative.

Networks

Principals were asked about their colleagues feedback on their decision to implement the disruptive innovation. Additionally, principals were asked to refer others they believe should be considered for participation in the study as part of the snowball sampling method. The sub-theme of networks emerged in the findings. Networks were indicated or revealed in the responses of four principals, each of which had previously described an internally motivated disruptive innovation. Networks did not emerge as a sub-theme in the findings for principals who implemented externally motivated disruptive innovations.

Dominic shared his core network as people who share "similar thoughts and ideas about where we can head". He emphasized the importance of a network that extends beyond district boundaries and acknowledged within all divisions there are individuals who are "okay with the status quo". Sandra shared that finding colleagues who are "like-minded" allows principals to share and get feedback. Through her network, Sandra was able to model her five year plan from others working in a similar direction and has now extended the five year plan to include a three

year instructional vision. Thomas described a network that is “deep within Virginia”. He utilizes his network to meet specific needs.

Organizations, such as Virginia Association of Supervision and Curriculum Development (VASCD), were described by one participant as being “a leader out in front of a number of things”. Access to a state-level organization tied to a parent organization at the international level was described by Dominic as something that helped develop an “outside of a division or even outside of the state” perspective. Participants described the resources and learning from organizations such as VASCD as applicable to their schools. Access to professional organizations, such as VASCD, provides individuals with growth opportunities and extends local divisions professional development efforts.

Theme 3: Relationships

Relationships were a reoccurring theme in principals’ responses to various questions throughout the semi-structured interview process. Principals described relationships as an essential factor to the motivation and implementation of disruptive innovations. A variety of relationships were described. Principals explained how different types of relationships influenced the design and implementation of disruptive innovations. Trust was identified as a key component within relationships.

School and Community

School and community relationships include relationships between leaders, faculty, and students and relationships between the school, students, and the community. Establishing relationships between school and community is essential to building trust and establishing a safe environment that encourages vulnerability and risk-taking while maintaining community support.

Community support was described by Dominic as “folks saying that they really felt like we were moral and ethical are heading in the right direction. They trust kids and be with us.”

Sandra created a board to acknowledge and embrace failures and modeled for staff by placing the first failure on the board. She described it as:

> a place for us to say, it's okay to fail and look, there are all these other people who are failing and they're doing okay. Yeah. And so that I think it helps to create that environment where it is okay to fail and we're going to embrace it, you know, and, you know, I am the first one to acknowledge my own failures.

George described the need for clear expectations as the first step to creating a culture of trust and safety. School and community relationships also served as motivation for disruptive innovations. Thomas identified the following purpose for the described disruptive innovation:

> So the purpose of it is first and foremost, bottom line, it's about relationships and connection. It's about, um, you know, having one adult in the building you can go to and your greatest time of need, or in your greatest moment of celebration, it's about how students relate with each other.

A trusting and safe environment was described by several participants as the freedom to get things wrong. Actors are situated within a larger context. The environment of the larger context has the ability to increase or decrease perceived risk. Relationships between school and community account for many stakeholder groups. The next section will discuss the role the relationship between principal and principal leader plays on establishing a trusting and safe environment.

Principal Supervisors

Principals were asked if their views on innovation aligned with that of the divisions they serve. In response, the relationship between principal and principal's leader was described as an influencing factor. The level of support was also described when principals described considered risks. The term principal leader describes different roles to include executive directors, chief academic officers, and superintendents. The relationship between principal and principal leader was described as having a varied influence on the implementation of disruptive innovations.

Eddie described the challenges that emerge from having a principal leader who lack division building-level experience. Eddie stated:

> we just haven't been fortunate enough to have someone is our direct supervisor who has sat in our seat. The executive directors for secondary schools in our district have never been principals in our district. So their knowledge and know how, it comes from where they came from, not from where we're sitting, and that's sometimes a challenge.

After the phrase "cease and desist" was used with Thomas, he described the professional development and vision of his executive director as "lip service". Thomas described his executive director as the "queen of no" and stated, "she has a mantra, and she wears it like a badge of honor, crushing hopes and dreams". For that reason, Thomas shared that he does not always involve his executive director in his plans.

Eight principals identified their relationships with principal leaders as aligned with their views on innovation. Freedom and support were identified as characteristics of these relationships. Allison described feeling "tremendous support" from both her superintendent and central office. She described being given the freedom to "do it and do it well". Daryl echoed this view by describing his relationship with his superintendent as a partnership where he can do

what he needs for his school. Dominic described how he uses intentionality and transparency from the beginning to form supportive relationships with his leaders. He stated:

> I've been pretty intentional. I feel like I'm pretty open and transparent with my supervisors about my intent and where we are in each time. And the times that I've interviewed, I have been clear about that.

George translates the freedom provided by his principal leader as an indicator of trust and the starting point for disruptive innovation. He extends the same to his teachers by providing them autonomy. Principal leaders were also described as an encouraging force for innovation. Dean described how his director pushes him to innovate:

> Well, you know, my director really is, is really big on thinking big, really big on using the resources that you have, but also really big on just reading, learning, and being in understanding the challenges that you face. So we get like a Sunday communication and enclosed articles and includes just different things that we need to look at as principals. And then he is very, he's very involved in the, the, the process. So for example, you know, he will give you something and then as opposed to him giving you the answer, he will allow you to be able to work through it. And in getting his feedback or him being able to provide feedback for us really gives us the opportunity to kind of work through the process.

Kelley described his director as someone who is “really interested in pushing the envelope on the status quo”.

The data above illustrates the influence of the relationship between principal and principal leader on the design and implementation of disruptive innovations. Positive relationships encouraged disruptive implementation. Negative relationships, however, were not

identified as having a negative influence. The majority of participants felt alignment existed between their views and those of the divisions they served. Source of motivation was found to influence principals' responses to the relationship with division leaders.

Summary

This study explores how and in what ways high school principals lead disruptive innovations and the influence of isomorphic mechanisms in the adoption of disruptive innovations. This chapter presented the findings from twelve semi-structured interviews of high school principals. Open and axial coding were utilized, and three themes emerged: motivation, organizational structure, and relationships. These themes were further examined through the identification of sub-themes. The next chapter will further discuss the findings as they relate to literature, theoretical and practical implications, and opportunities for future research.

Chapter 5

Discussion of Findings and Implications

Overview

This qualitative study examined how high school principals lead disruptive innovation and the role isomorphic mechanisms play in the adoption of disruptive innovations. Two research questions, first proposed in chapter 1, guided the study:

1) How and in what ways do high school principals lead disruptive innovation?

2) How and in what ways do the mechanisms of isomorphism contribute to or hinder the adoption of disruptive educational innovation?

The literature review presented institutional theory as a framework for understanding the influence of isomorphic mechanisms that facilitate or impede the innovation. Semi-structured interviews and critical incident methodology were utilized to examine the critical behaviors and actions identified by the twelve participants. In this chapter, the findings of the study are presented, and implications discussed. Opportunities for future research are also presented.

Summary of Methodology

This qualitative study engaged twelve participants, all high school principals, in semi-structured interviews. The participants represented ten school divisions across the state of Virginia. Principals varied in years of experience as well as job experience within the division. Years of principal experience ranged from two years to fourteen. Job experience prior to becoming a high school principal included classroom teaching on multiple levels and central office roles. One participant had a career in an outside field prior to becoming an educator. Three of the participants are female and nine are male. Interviews were conducted through ZOOM video conferencing. One interview required a second meeting and was completed over a phone

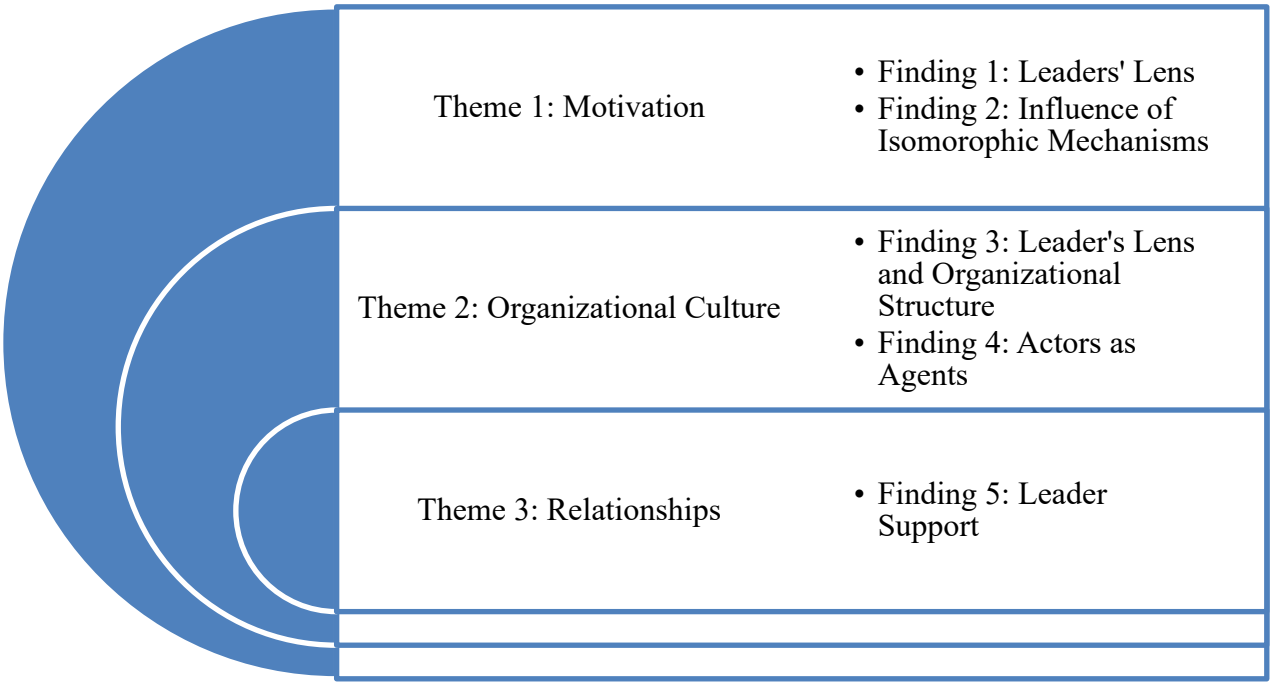
conference. Interviews were audio recorded. The twelve interviews were transcribed and provided to participants with the opportunity to review for accuracy and provide additional clarification. Participants were reminded of their anonymity and pseudonyms were assigned. The research team held three meetings to analyze the data. During the meetings, critical incident methodology training was completed, critical incidents were calibrated, and open and axial coding was utilized to analyze transcripts for the emergence of themes and sub-themes from identified critical incidents. A total of 162 critical incidents were accepted and analyzed. The research team also discussed themes and potential research findings.

Summary of the Findings

This study sought to understand how and in what ways high school principals lead disruptive innovation and the influence of isomorphic mechanisms in the adoption of disruptive innovations in education. Figure 7 illustrates the connection between themes and findings that emerged through the data analysis. Participant data supporting the themes and findings were presented in Chapter 4. This chapter will discuss the themes and findings as they relate to the literature review presented in Chapter 2. Additionally, in this chapter there will be further discussion of the first research question as outlined in findings one through five. Evidence of the influence isomorphic mechanisms have on organizations addressing research question two are outlined in findings one through four.

Figure 7

Correlation Between Themes and Findings



Discussion of the Findings

Theme 1: Motivation

Motivation describes the source of inspiration for the design and implementation of a disruptive innovation. The theme of motivation was introduced in chapter 4 and provided insight into the ways leaders implement disruptive innovations, as well as the various isomorphic forces at play. The sub-themes of externally motivated and internally motivated further examined the source of inspiration for disruptive innovations. Externally motivated disruptive innovations were designed and implemented to reach a specific outcome or measure determined by external values. Internally motivated disruptive innovations were designed and implemented in response to school-level values.

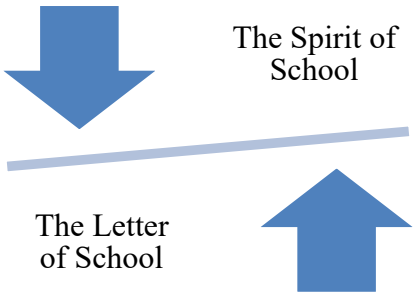
Finding 1: Leader's Lens

Examination of a leader's lens helps identify the various ways high school principals lead disruptive innovation. Garcia et al. (2014) describe two perspectives: the letter of the law and the spirit of the law, Mavrogordato and White (2020) describe them as technical approach and transformative approach. The letter of the law, or technical perspective, focuses on the literal meaning of the law (Garcia et al., 2014; Garner, 2009; Mavrogordato & White, 2020). The spirt of the law, or transformative perspective, focuses the perceived intention of the law (Garcia et al., 2014; Garner, 2009; Mavrogordato & White, 2020). The letter of the law and spirit of the law perspectives can be applied to educational leaders' lens.

As noted by Seyfried et al. (2019), leaders play a key role in shaping the perception of initiatives. Transfer of the perspectives communicated by Garcia et al. (2014) to education leaders' lens can be described as a letter of school lens and a spirit of school lens. Leaders with a letter of the school lens focus on precise policies elements that foster compliance, while those that act with a spirit of the school lens focus on the purpose or intent of the policy . Motivation can be gained through the interpretation of the perceived intention of policies, fostering spirit of the school lens. Principals with this lens view policy as an opportunity to enact change (Mavrogordato & White, 2020). As noted in figure 8, disruptive innovations in this study identified as externally motivated, or the letter of the school lens, were a result of top-down efforts, while the internally motivated disruptive innovations, or the spirit of school lens, were often a result of bottom-up efforts.

Figure 8

The Lens of the Leader



Finding 2: Influence of Isomorphic Mechanisms

This study finds that the three mechanisms of isomorphism influence educational institutions in various ways. Data supports a bi-directional influence between isomorphic mechanisms and educational institutions. Examination of the influence of each of the three mechanisms reveals varying levels of influence.

Eleven of the twelve participants stated they did not feel innovation was a requirement in educational organizations. This initially indicates a lack of coercive isomorphic influence. However, the findings support that when school leaders exercise a letter of school lens, coercive isomorphism does in fact have an influence on educational institutions. Examples of coercive isomorphism can be found in the motivation of the disruptive innovation. Disruptive innovations that are externally motivated to decrease chronic absenteeism and increase test scores are examples of coercive isomorphism. Additionally, participants who inherited externally motivated disruptive innovations described their participation as happening "by default" and "not a choice they made", further indicating the influence of coercive isomorphism on educational institutions who are externally motivated. The data suggests that principals influenced by coercive isomorphic forces may also impose similar coercive mechanisms on their faculty.

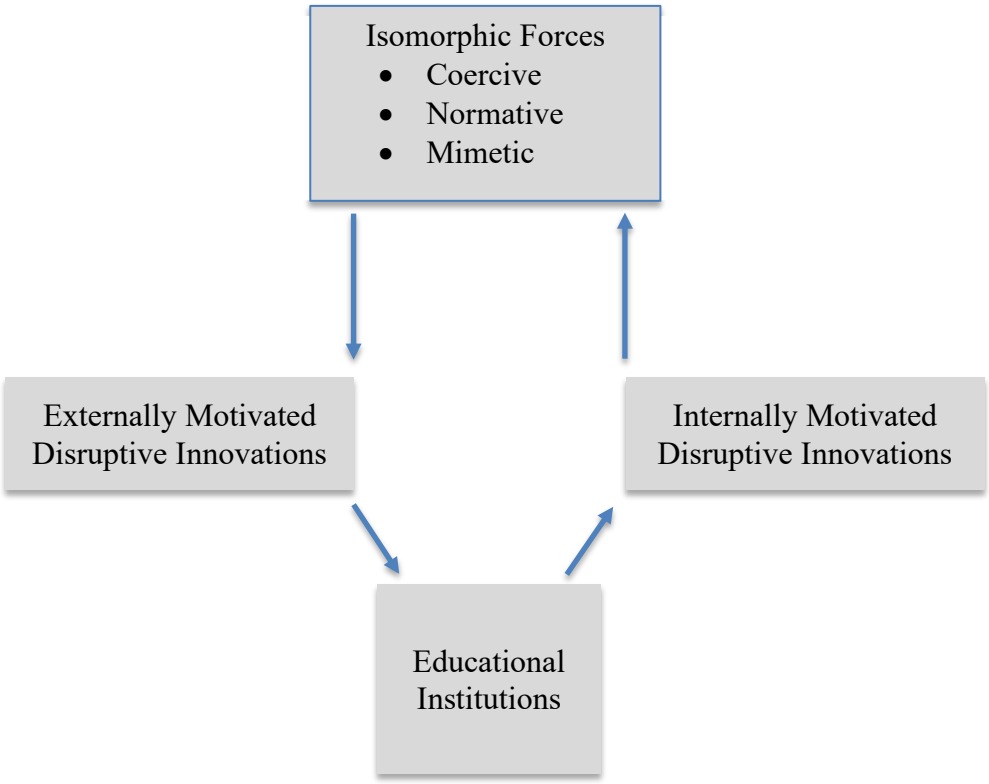
In recent years, additional measures have evolved to encourage innovation (VDOE, 2015). These measures, such as the development of the Profile of a Virginia Graduate and innovation network, help inform the spirit of the school lens and the skills needed for students to be "life ready" (VDOE, 2016). This lens shifts beyond standardized test scores and communicates an understanding that student success is not standardized. These changes have helped to change the accepted norms of education. The findings of this study suggest that normative isomorphism has had limited influence on the adoption of disruptive innovations. As educational organizations operate under the newer norms, they will become more widely accepted as necessary for normative isomorphism (Seyfried et al., 2019).

The findings of this study support the idea that internal actors are able to enact change both within organizations and organizational fields (Maguire et al., 2004). Principals discussed leveraging networks of like-minded individuals to model practices and gain feedback. This example of organizations imitating practices of others is an example of mimetic isomorphism (Greenwood & Meyer, 2008; Farquharson, 2013). While the evidence of networking in this study can lead to mimetic practices, this study revealed that leaders who implement internally motivated disruptive innovations customize ideas gained from the network. This indicates that leaders are able to operate and control the influence of isomorphic forces. Such leaders, through organizations such as VASCD, can influence mechanisms of isomorphism by establishing new normative measures, thus influencing state policy. Figure 2, previously shared in Chapter 2, illustrated the possible bi-directional flow of isomorphic forces on educational institutions. Figure 6, introduced in chapter 4, illustrated sources of motivation. Using these figures as a basis for understanding the findings, Figure 9 emerges as a way to illustrate the influence of

isomorphic forces on educational institutions, as well as the influence of educational institutions on isomorphic forces.

Figure 9

The Bi-directional Influence of Isomorphic Forces



Theme 2: Organizational Structure

Organizational structure was introduced as the second theme in chapter 4. Organizational structure includes the systems and practices leveraged by principals leading disruptive innovations. The sub-themes of organizational vision, reflective practices, capacity building, and networking emerged during the analysis. The motivation for the implementation of the disruptive

innovation identified the leader's lens. The lens applied by the leader was found to influence elements of organizational structure in different ways.

Finding 3: Leaders' Lens and Organizational Structure

In examining how principals lead disruptive innovation, the theme of organizational structure emerged. Styron (2015) described innovative leaders as those who have the ability to identify individuals who share a vision similar to that of an organization. Alignment between individual and organizational visions assists in the establishment of a shared vision. The sub-themes of shared visioning, reflective practices, capacity building were referenced by principals from both groups. The difference, however, was the effect the leaders' lens had on the sub-themes of organizational structure.

Five of the seven principals identified as leading disruptive innovations through the spirit of school lens, or those who demonstrated internal motivation, began with the development of a shared vision beyond the immediate administrative or instructional leadership teams. For this group, the data suggest an interconnectedness between the sub-themes shared visioning, reflective practices, and capacity building. Principals leading disruptive innovations through the spirit of school leans described how reflective practices were used during the formation of a shared vision and as a guide throughout the implementation journey. Shared visioning, reflective practices, capacity building were described as interconnected; each guiding the other. Principals leading internally motivated, or spirit of school, disruptive innovations described a flat organizational structure in the development of a shared vision, including a variety of stakeholder groups, and an interconnectedness between shared vision, reflective practices, and capacity building.

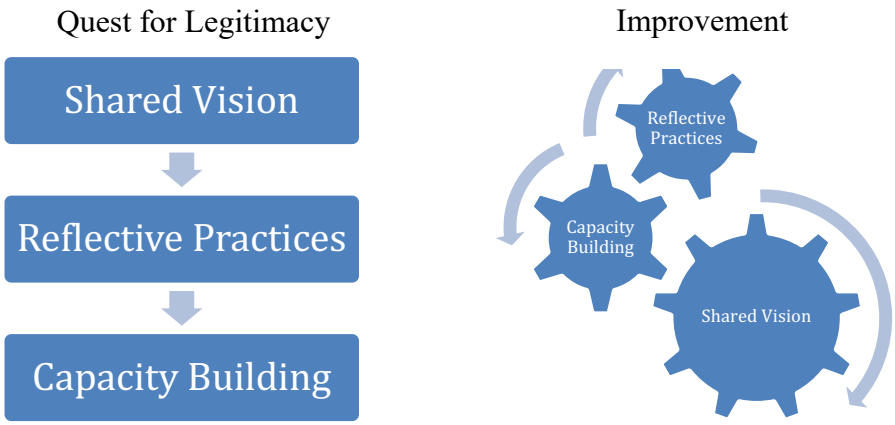
In contrast, three of the five principals, who described leading innovations through the law of school lens, outlined a hierarchical development of a shared vision. The leadership teams and administrative teams developed the who, what, when, where, and why and the message was then communicated to the faculty and staff. Reflective practices were described as influencing capacity building, but the bidirectional influence was not present as capacity building efforts were not described as leading to reflective practices and reflective practices were not described as influencing the shared vision. Principals leading externally motivated, or letter of the school, disruptive innovations described a hierarchical development of a shared vision and a linear relationship between shared vision, reflective practices, and capacity building.

Waldman and Bass (1991) described the influence organizational structures have on the innovative culture of an organization. These findings are supported by the work of Greenwood (et al., 2008) and Tolbert and Zucker (1983). Greenwood (et al., 2008) described principals leading externally motivated innovations on a quest for legitimacy influenced by societal norms. In contrast, Tolbert and Zucker (1983) described the interest of early adopters as improvement. Legitimacy is achieved by reaching an identified external outcome. Improvement, however, is iterative and connected. Figure 10 illustrates a possible effect of a leader's lens on organizational structure. Leaders with a letter of school lens in this study worked with their administrative and instructional teams to communicate a vision to other stakeholders. Once the vision was established and communicated, teams reflected and determined sequential steps to capacity building. In contrast, leaders with a spirit of school lens worked with stakeholders to develop a vision. Reflective practices and capacity building were embedded and ongoing. Chapter 2 examined the principal's role. Within that role, establishing an organizational vision, engaging actors intellectually, and cultivating individual growth were identified as factors that promote

innovative thinking. The findings of this study support that the factors are interdependent when an improvement is the goal and a spirit of school lens is leveraged.

Figure 10

The Effect of Leaders' Lens on Organizational Structures



Finding 4: Actors as Agents

The fourth finding, actors as agents, addresses how high school principals lead disruptive innovation. The principals' responses explain how different actor roles are able to serve as agents for change. The finding of actors as agents further supports the bidirectionality of isomorphic mechanisms and the idea that actors work within a greater context (Lunenburg et al., 2020). Actors within organizations base the potential for action on their perceptions of the interaction between the organization and the larger environment (Barb & Roth, 2006; Lunenburg et al., 2020). When actors are able to initiate change within organizations, they influence normative mechanisms within the greater organizational field (Chandler & Hwang, 2015; Seyfried et al., 2019).

Principals described how they networked across the larger organizational field. A network of innovative educators was revealed through the snowball sampling process. Individual participant's names were repeated during the snowball process. Upon connecting with each individual, the level of the connection became clear; stretching beyond division boundaries. The majority of the individuals who referenced an ongoing cross-division reference worked with the other within the division at a point of time.

The networks between high school principals leading internally motivated disruptive innovations supported the development and implementation of disruptive innovations even when leader support was lacking. Organizations such as VASCD were identified as honing innovative initiatives and connecting local leaders with an international knowledge base. Principal with networks described themselves as having similar mindsets. Networking across the larger environment has the ability to influence normative mechanisms. Dominic described how organizations such as VASCD are seated at the "policy table". Presently, organizations such as VASCD are being consulted on topics such as micro-credentialing. The influence of organizations on a state policy is an example of actors can be agents of change. Actors as agents are an example of micro-processes (Hwang, 2015).

Theme 3: Relationships

Various examples of relationships were noted in the principals' responses. Within these relationships, the establishment of trust was identified as an important component. A variety of relationships were discussed. School and community, principal and principal leader, and networks emerged as sub-themes. One relationship, the relationship between principal and principal's leader, provides insight into the role leader support plays in leading for disruptive innovation.

Finding 5: Leader Support

Leader support refers to the support principals receive from direct supervisors, central office, and superintendents. Support includes encouraging ideas and processes that disrupt established norms as well as creating a safe environment where failure is viewed as a learning experience. Leader support was found to have a positive effect on the implementation of disruptive innovations. Supported principals described efforts as a partnership with the leader support actively involved in the process. Leader support encouraged "thinking big", supporting the capacity building, reflection, and development of innovative ideas. Leader support was also described as providing ongoing feedback. Principals also credited leader support to the intentionality and transparency of the relationship between principal and principal leader.

Leader support was found to encourage risk-taking by reducing perceived risks. Risk-taking often goes unrewarded in public sectors such as public education (Brown, 2010). While often unrewarded, Styron (2015) described innovative leaders as those who create a culture of safety that supports risk-taking. Lack of leader support was identified by principals to increase the perceived risk of the disruptive innovation. However, it was not found to hinder principals' internally motivated innovative thinking in this study. Leaders who described a lack of support shared how they continued implementation of the disruptive innovation without involvement of the leader.

Morgan (2006) described different levels of need presented in Abraham Maslow's hierarchy. Lower-level needs are described as extrinsic while higher-level needs were described as intrinsic. Within this hierarchy, addressing higher-level needs were found to positively impact the overall organization (Morgan, 2006). Leader support meets the higher-level needs of autonomy and trust and as a result, increases motivation (Hanson, 2018).

Theoretical Implications

This dissertation set out to contribute to an understanding of the interplay between innovation and isomorphism in educational organizations. Overall, the theoretical contributions of this work lay in the construct of actors as agents of change. The findings of this study support the ideas presented by new institutional theory, specifically institutional entrepreneurship, and the idea that institutional fields are able to be influenced by internal actors. The findings further illustrate the paradox of embedded agency presented by Greenwood et al. (2006). Principals in this study served the role of central actors. In theory, central actors have the power to initiate change, yet lack the innovative ideas and ability to envision new practices due to their embeddedness (Greenwood et al., 2006). The findings of this study disrupted the paradox as certain central actors were found to have innovative ideas not limited to the normative practices of the organization or organizational field. Central actors with internal motivation exhibited both the power and vision to initiate change, while central actors with external motivation demonstrated only the power to initiate change.

The idea of homogenization as a final outcome is disrupted when actors are identified as change agents. When norms are accepted and established, homogenization may occur (DiMaggio & Powell, 1983). However, as supported by this study, as agents can enact change from within organizations, the established norms have the potential to remain in a state of evolution as they are influenced by individual organizations and actors. Extending the work of DiMaggio and Powell (1983), the findings of this study support homogenization occurs as various points of commonality in which late adopters value and accept the norms of early adopters (Tolbert & Zucker, 1983). This pushes DiMaggio and Powell's (1983) work which posits homogenization is a result of structuration by adding new layers. DiMaggio and Powell (1983) identified four

parts to structuration: increase in organizational field interaction, emergence of well-defined dominating interorganizational structures, increase in information sharing across an organizational field, and mutual awareness of commonality. Increased organizational field interaction and increased information sharing across an organizational field are two elements of structuration the findings of this study expand. The motivation for increased interaction is a layer not yet addressed by institutional theory that has implications for established norms and homogenization. If the motivation for increased interaction is internal, or improvement seeking, new norms may emerge and thus disrupt the old. Evidence of an improvement motivated increase in organizational field interaction can be found in the development of Virginia is for Learners Innovation Network. Educators from thirty one divisions, motivated by improvement, gathered to discuss ways in which innovative environments can be established in Virginia's public schools (Advanced Learning Partnerships, 2018). Within such networks, a mutual awareness of commonality among members of the network exists. However, instead of resulting in homogenization through the acceptance of previously established norms, new norms are developed and begin their diffusion across the organizational field. In contrast, if motivation is focused on legitimacy, mimetic mechanisms facilitate the process of homogenization. The findings of this study support the idea of structuration presented by DiMaggio and Powell (1983), but suggest structuration is influenced by motivation; resulting in different outcomes at different points.

This work also contributes to theories on innovation implementation in the public education context. This study confirms the organic development of networks that occur between individuals of similar innovation motivation. Such networks are described by Slyke et al. (2007) as diffusion networks. Slyke et al. (2007) identified managerial approaches to increase the spread

of innovations. One of these methods, the impression of critical mass, deals with the perception of critical mass across an organizational field. This impression of critical mass leverages normative isomorphic influences to encourage the adoption and implementation of specific innovations.

Flexible organizational structures foster innovation (Morgan, 2006). One characteristic of innovative organizations identified by Evans (2008) is frequent stakeholder communication. The findings support principals' leading internally motivated disruptive innovations utilized a flattened organizational structure involving many stakeholder groups. Hierarchical organizational structures were most evident among organizations implementing externally motivated disruptive innovations. This research finding highlights how theories on the relationships between institutional theory and innovation in education can be further developed. A flattened, horizontal structure where collaboration, shared visioning, and decision making are valued supports innovation. Disruptive innovation theory, largely applied in industry, focuses primarily on market share and profitability (Christensen et al., 2015). Future extension on disruptive innovation theory as it applies to the education field is warranted as measures within this field vary from that of industry.

Practical Implications

This dissertation tackles an issue of pressing importance, innovation in education. As noted by Cuban (2012), societal needs today are different than the needs educational organizations were originally designed to address. Reform efforts have attempted to address the new needs, yet the majority of classrooms today look like those of the past (Cuban, 2012). Limited research on the implementation of disruptive innovations in educational organizations is

available. This study provides evidence of how leaders from one state lead disruptive innovations.

This study found that individuals and organizations can be motivated to lead disruptive innovations through sources of internal motivation as well as sources of external motivation. Policies, such as changes in accreditation, that focus on new criteria aimed at ensuring today's students are college and career ready promote the disruption of the norms of traditional education. Education policies should continue to focus on the skills and dispositions identified in graduate profiles as a source of external motivation. To encourage the development of internally motivated disruptive innovations, the state grants and awards should continue to highlight and support the efforts of principals leading internally motivated disruptive innovations. As an additional layer to supporting grantees and award-winners, a mentoring component could be included partnering those previously supported with leaders just starting out. Doing so will also further support the development of networks.

Several factors can support the development of a spirit of school lens. Engaging in professional organizations such as VASCD provides leaders with access to resources and supports that promote the implementation of disruptive innovations. Engaging in professional networks and organizations provides leaders with the knowledge necessary to view policies within a larger context. It also provides leaders with examples of disruptive innovations others are leading. Including stakeholder groups in the visioning process further supports the spirt of school lens by utilizing many voices and perspectives to define the purpose of the disruptive innovation. Connecting and collaborating with others, on all levels, promotes a spirit of school lens.

Including course offerings that support the development of shared visioning in practice in educational leadership development programs would allow leaders with examples and practice. Additionally, programs should consider leveraging systems such design thinking that encourage problem solving processes. Ensuring aspiring leaders engage in concrete examples through the use of case studies is supported by the findings of Clandinin and Connelly (1998) that school reform initiatives have shifted from theory to a more practice-driven focus.

For principals leading disruptive innovation, this study highlights the importance of involving many stakeholder groups. Communication of a vision to stakeholders is not sufficient for the development of internal motivation. Stakeholder groups must be involved in the shaping of the vision in order to develop internal motivation. By engaging multiple stakeholder groups in the development of a shared vision, elements of the organizational structure, such as reflective practices and capacity building, become integrated into daily practice. This integration further supports the development of internal motivation to lead disruptive innovation.

Limitations of the Study

While providing an understanding of how high school principals lead disruptive innovation and isomorphic influences, this dissertation is not free from limitations. First, due to Covid-19, participant semi-structured interviews were conducted through video conferencing. In person interviews and site observations were not permitted. Second, the findings from this study are a result of twelve semi-structured interviews with participants recruited through a snowball sampling method. Participants of this study were viewed by their colleagues as leading innovative change and do not fully represent high school principals across the state. While participants in this study represent many divisions, they represent one state. Each state has different state-level initiatives that may influence how leaders within that state lead disruptive

innovations. Therefore, the findings are not generalizable to all schools within Virginia or to other states. Finally, while CIT methodology offers many benefits, a limitation of CIT is it relies solely on the participants recollection of events. While participants in this study recalled recent events, it is possible that some details surrounding the leading of disruptive innovation were omitted.

Recommendations for Future Research

Future research will further contribute to understanding of innovation implementation in public education. Additionally, additional research will increase the understanding of the ways in which principals lead disruptive innovations, the influence of organizations on organizational fields, and the influence of isomorphic mechanisms. Future research will expand the theoretical understandings of institutional theory. Also, theories such as disruptive innovation theory will be expanded to the educational field. Many future areas of research on this topic are needed to develop a full understanding of the supports necessary to redefine the educational experience.

Additional areas for future research include concepts touched upon in this dissertation but not fully examined. Further research on the concepts of benevolent disobedience and critical mass would further enhance the understanding of the implementation and diffusion of disruptive innovations. Specifically, the outcomes of a shared vision developed from bottom-up versus top-down and the concept of rational organization versus natural organization will likely provide practical implications for school leaders. Sustained change is also topic for future research. The impact of the lens or motivation for change on the sustainability of the disruptive innovation was not included in this study. Participants of this study were in various phases of disruptive innovation implementation. Future research that examines disruptive innovation implementation

over specified intervals of time will provide information on the impact the motivational source has on the sustainability of the disruptive innovation. Such research could also assist in identifying systems and processes that support ongoing innovation.

This study identified contextual and participant variables but did not thoroughly examine the impact of those variables on the principal's ability to lead for disruptive innovation. Examination of factors unique to individual principals and school organizations, such as accreditation and free and reduced priced lunch, tenure, experience and gender are areas in need of further examination. Each principal brings unique background knowledge to the role, just as the unique characteristics of educational organization. School divisions within this study varied greatly. Some principals were part of large school divisions while others were part divisions composed of one high school. In the future, research examining components unique to the system is needed to examine the impacts of various external influences. Future research into the different variables, individually, would provide further insight into contextual factors that support innovation implementation.

This study utilized the term disruptive innovation. Disruptive innovation is defined as new ideas and processes that conflict with existing norms (Charitou & Markides, 2003). While all innovations in this study met the definition of disruptive, not all set out to redesign the educational experience. Providing clarity to the types of disruptive innovations that redefine the educational experience in future research will provide insight into the implementation of internally motivated innovations. Future research into the implementation of innovations designed to redefine the educational experience is needed.

Conclusion

Understanding how educational leaders lead and implement disruptive innovation is crucial to the redesign of education. This study sought to critically examine how high school principals lead disruptive innovations and the ways in which they do so. Additionally, this study examined the influence of isomorphic mechanisms in the adoption and implementation of disruptive innovations. An understanding of how isomorphic mechanisms can be leveraged to promote disruptive innovations and the spread of ideas from ground up is critical for educational leaders. Educational policy reform has set the stage for schools to initiate new ideas. The findings of this study support that in order for disruptive innovations to become internally motivated, leaders must understand how to engage stakeholders in school-level visioning. Results of this study also support the influence individual organizations can have on the greater organizational field, as well as the influence principal and principal supervisor relationships have on the implementation of disruptive innovations.

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APPENDIX A

PROSPECTIVE PARTICIPANT E-MAIL INVITATION AND INFORMED CONSENT

SUBJECT: Research Study for K-12 Principals

INTRODUCTION: You are invited to participate in a research study conducted at Old Dominion University (ODU) for the Educational Leadership Department. The investigator of this study is Katie Catania. Approximately twenty participants will be enrolled in this study. Initial participation should require about thirty to sixty minutes of your time.

ELIGIBILITY: You are eligible to participate in the study if you an are an acting K-12 principal and have designed, planned, and/or implemented an innovative initiative during the 2019-2020 school year.

PURPOSE: The purpose of the study is to examine how school principals design, plan, and implement innovative initiatives. Results of the study will serve as data for Mrs. Catania's dissertation requirement towards completion of the PhD Program at ODU. Responses will remain completely anonymous.

PROCEDURES: If you participate in the study, you can expect the following as a participant: a single interview lasting between thirty and sixty minutes. The interview will be audio recorded to help the researcher accurately capture your experience as you described. The recording will only be heard by the researcher for the purpose of this study. Participation in this study is voluntary, and you have the right to withdraw at any time. There is no compensation for participating in the study. There is no penalty or negative consequence for discontinuing participation.

RISKS, INCONVENIENCES, AND DISCOMFORTS: It may be inconvenient for you to participate in the interview.

BENEFITS: Potential benefits for participating in this study include 1) opportunity for personal and professional reflection, 2)professional development points. There is no financial compensation.

ANONYMITY: Records of information you provide for the research study and your personally identifying information (name, school, or other identifying characteristics) will not be linked or shared in any way. It will not be possible to identify you as the person who provided any specific information for the study.

QUESTIONS: You are encouraged to ask questions, at any time, that will help you to understand how this study will be performed and/or how it will affect you. You may contact the investigator, Katie Catania at kcata002@odu.edu or the investigator's faculty advisor, Dr. Karen Sanzo at ksanzo@odu.edu. If you have any questions or concerns about this study or your rights as a study participant, you may contact Adam Rubenstein, Director of Compliance, Office of Research with the Human Subjects Research Office at ODU.

VOLUNTARY CONSENT

By signing this form, you are saying several things. You are saying that you have read this form or have had it read to you, that you are satisfied that you understand this form, the research study, and its risks and benefits. The researchers should have answered any questions you may have had about the research. If you have any questions later on, then the researchers should be able to answer them:

Katie C. Catania

Kcata002@odu.edu, 757-241-1618

If at any time you feel pressured to participate, or if you have any questions about your rights or this form, then you should call Dr. Laura Chezan, the current chair fo the Darden College of Education and Professional Studies Human Subjects Review Committee at 757-683-7055 or lchezan@odu.edu.

And importantly, by signing below, you are telling the researcher YES, that you agree to participate in this study. The researcher should give you a copy of this form for your records.

Subject's Printed Name and Signature	**Date**
Witness' Printed Name and Signature (if applicable)	**Date**

INVESTIGATOR'S STATEMENT

I certify that I have explained to this subject the nature and purpose of this research, including benefits, risks, costs, and any experimental procedures. I have described the rights and protections afforded to human subjects and have done nothing to pressure, coerce, or falsely entice this subject into participating. I am aware of my obligations under state and federal laws and promise compliance. I have answered the subject's questions and have encouraged him/her to ask additional questions at any time during the course of this study. I have witnessed the above signature(s) on this consent form.

Investigator's Printed Name and Signature	**Date**

APPENDIX B

PRINCIPAL SEMI-STRUCTURED INTERVIEW PROTOCOL

The semi-structured interview questions are numbered below. Lettered items will serve as prompts and utilized as needed.

Pre Interview:
Thank you (name) for your willingness to meet with me. I am a doctoral student at Old Dominion University and would like to know about your experiences implementing disruptive innovations. I would like to record our conversation, so I have an accurate record. Are you comfortable with that? As a reminder, our conversation is confidential, and I will not use your name or any other identifiable information. Please take a moment to review the general aims and working definition of disruptive innovation shared on the screen. Do you have any questions before we begin?

Questions:

1. Can you tell me about your leadership experience at (name of high school)?
2. What role do you feel innovation plays in educational organizations? How do your views align with the views of your school division? How have these views changed over time?
3. Would you say educational organizations are required to implement disruptive innovations today? Why or why not?
4. Tell me about a process or initiative you've implemented that you consider to be disruptive. What norms did the disruptive innovation (DI) challenge?
5. When was the DI implemented?
6. What were the reasons behind implementation of the DI?
7. Who was involved in the design and planning of DI?
8. What did your colleagues think of your decision to implement the DI?
9. What actions or events did you find to be the most important in the implementation of the DI? Describe the actions or events and tell why they were important.
10. What kinds of things made implementation of the DI more difficult for you?

11. What were the risks you considered when implementing the DI? Were they realized? Were they overcome?
12. What were the results or outcome of the DI?
13. What do you think you would do differently if you had the ability to redo the implementation?
14. Demographic Information: number of years as principal, length of time at school where DI was implemented, number of years in education, gender

Post Interview:

Thank you for talking with me today about your experiences with innovative initiatives. After I have read and reflected on the transcript of our conversation, I may contact you to schedule a follow-up interview. Additionally, you will be provided the opportunity to review today's transcript. This review is completely voluntary. Review of the transcript helps validate the research and increase credibility and reliability. It may take a few weeks to receive the transcript for review and will take approximately thirty to sixty minutes to review and respond.

APPENDIX C

Disruptive Innovation Critical Incidents

Critical Incident Technique: A set of procedures used to collect observations of human behavior to solve practical problems. A research method in which research participants are asked to describe a behavior, action, or occurrence that impacted an outcome.

Research Questions:

1. How and in what ways do high school principals lead disruptive innovation?
2. How and in what ways do the mechanisms of isomorphism contribute to or hinder the adoption of disruptive educational innovation?

Key Terms:

1. Disruptive innovation: new ideas and processes that conflict with existing norms. (Flanagan, 1954)
2. **Isomorphism:** A concept used to describe the process of homogenization where organizations within an organizational field begin to resemble each other. (DiMaggio & Powell, 1983; Scott, 1987; Zucker, 1987)
3. **Coercive Mechanisms:** A level of expectation formed from cultural, political, and other external environmental sources when an existing power imbalance exists (Greenwood & Meyer, 2008; Farquharson, 2013)
4. **Mimetic Mechanisms:** Mimicking practices of other organizations that are experiencing success that may occur during uncertain environmental times (Greenwood & Meyer, 2008); Farquharson, 2013).
5. **Normative Mechanisms:** Rationalized myths or behaviors based on environmental norms (Greenwood & Meyer, 2008).

Disruptive Innovation in Education: Critical Incidents			**Team Agreement**			
CI#	**Critical Incident**	**T#**	**1**	**2**	**3**	**Notes**