

2020

Stability vs. Change in Catholic Schools

Susan Theresa Diverio
Walden University

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Walden University

College of Social and Behavioral Sciences

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Susan T. Diverio

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Review Committee

Dr. Nancy Bostain, Committee Chairperson, Psychology Faculty

Dr. Derek Rohde, Committee Member, Psychology Faculty

Dr. Brian Cesario, University Reviewer, Psychology Faculty

Chief Academic Officer and Provost
Sue Subocz, Ph.D.

Walden University
2020

Abstract

Stability vs. Change in Catholic Schools

by

Susan T. Diverio

MA, University of the Virgin Islands, 2001

MA, Montclair State University, 1996

BA, St. Peter's College, 1985

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Industrial and Organizational Psychology

Walden University

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Abstract

This study was an investigation of innovative practices based upon organizational learning and the life cycle in Catholic elementary and high schools. Limited research exists in the role that these factors play in Catholic school sustainability. The purpose of this study was to examine the relationship of organizational learning, as measured by the Organizational Learning Scale, and life cycle, as measured by Organizational Life Cycle 5-Scale on organizational innovation, as measured by the Organizational Innovation Scale. Organizational design framework, life cycle theory, and transtheoretical model of behavior provided the theoretical framework to investigate the relationship between organizational learning, life cycle stage, and innovation. In this nonexperimental quantitative study, multiple regression analysis was used to determine whether a correlation existed among organizational learning, life cycle, and innovation. Data from 150 Catholic school administrators were collected using an online survey. Data analysis included descriptive statistics, Pearson correlation, and ANOVA. The findings revealed a positive correlation between organizational learning and innovation and life cycle stage and innovation. It was concluded that administrators could benefit from attention to life cycle stage and innovative practices, as well as, organizational learning and innovative practices. A forced field analysis is recommended to determine where a particular school lies on the life cycle spectrum and what is needed to move it towards its desired stage. School administrators may apply the findings from the study by identifying successful innovative practices that could revive faltering schools and strengthen quality educational programs for children from low-income families who attend Catholic schools.

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Dedication

This doctoral study is dedicated to Dr. Kathryn Faughey who has been an inspiration over the decades. Her ideals towards higher education and her belief in me has brought me to this day. RIP Dr. Faughey.

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Chapter 1: Introduction to the Study

Catholic education is the largest private school system in the United States. This study investigated whether organizational learning and organizational life cycle affected innovation in Catholic schools. At its peak in 1965, 5.5 million students attended 13,000 Catholic elementary and secondary schools (Brinig & Garnett, 2012). A continual challenge for the Roman Catholic Church is the closing of many Catholic schools. Between 1965 and 2016, the number of schools dwindled from 13,000 to 6,525 indicating a decrease in students from 5.5 million to 1.9 million (NCEA, 2016) representing a 47% decline in schools (Nuzzi, Frabutt, & Holter, 2012). Findings provided an understanding of the problems faced by many Catholic schools and evidence demonstrated conditions for survival including those necessary for growth and positive development.

Catholic education has a long history of academic excellence; however, in many cases administrators fail to reinvent the schools to serve the changing needs of each generation (Smarick & Robson, 2015). This occurs when organizations do not recognize the slightest changes in decline which eventually leads to the demise of effectiveness. Whetten (1987) described this phenomenon as the “Midas Touch” indicating that an organization adopts an egotistical view due to prior successes without paying attention to external changes. This study needed to be conducted because without innovation and creativity, Catholic schools will continue to decline and close.

A significant factor in the history of Catholic education is the life cycle which is defined as the various stages of an organization from inception to cessation (Kamiouchina, Carson, Short, & Ketchen, 2013). Various forms of organizational learning occur throughout life cycles as administrators create new products and processes

based upon the creation, transfer, integration or modification of knowledge to meet emerging demands (Camison & Villar-Lopez, 2011). Organizational innovation provides a competitive edge as evidenced by new systems, structures, interventions, and preparedness (Kwon & Cho, 2016). Organizational learning is a critical aspect of innovation as evidenced through creativity, a willingness to change, and adaptation of new knowledge. For centuries Catholic schools created positive social change through the education of poor immigrant children. Over time, Catholic school graduates elevated their economic status and obtained prominent positions in the community. This phenomenon still exists today for the vast number of poor immigrant and inner-city children attending Catholic schools. A quality education, steeped in morals and values related to Catholicism, may enhance the lives of students and families and opens doors to a better future (Goldschmidt & Walsh, 2013).

The general theme addressed with this research is the role of innovation used to envision and recreate a sustainable Catholic School System. Chapter 1 encompasses key concepts, the problem statement, purpose statement, proposed research questions, a review of the literature highlighting the role of organizational learning and innovation on the life cycle of Catholic schools, nature of the study, assumptions, limitations, and delimitations.

Background of the Problem

The background of the problem explores the historical context of Catholic schools. The section presents the variables of innovation, organizational life cycle, and organizational learning. Human capital is presented as an organization's asset to innovation.

Innovation

Organizational life cycle. Bos et al. (2013), Filson (2002), Guoqing and Zhongliang (2011), and Kariniouchina et al. (2013) contrasted innovation processes and products among young and mature firms. All authors agree that innovation is at its highest in the early part of the life cycle of an organization and that successful firms are ones that continue to find innovative ways to market their product. Bos et al. concluded that organizations decline when there is a regiment of routine and less radical activity. Guoqing and Zhongliang found that decline occurs when leadership stabilizes and the firm pays more attention to process than innovation. Karniouchina et al. focused on environmental circumstances and the role they play on performance and evolution over the life cycle of an organization.

Research by Teevan (2004) and Nuzzi et al. (2012) addressed the relationship between life cycle and innovation. Teevan's research focused on the works of theologian Bernard Lonergan, who believed that the historical process of Catholic schools combines progress, decline, and redemption. As a result, authentic innovation results from cultivation of oneself and the promotion of vitality among persons. Nuzzi built upon this concept through infusing the traditional ideals of Catholic education with the creative uses for closed Catholic school buildings.

De Guerre et al. (2013) and Ganter and Hecker (2014) assessed competitive advantages resulting from process and product innovations. De Guerre explored the change process through an organizational shift that included connecting, innovating, designing, and implementing new creative strategies to combat stagnation. In a similar fashion, Ganter and Hecker promoted innovation as the key to a thriving and dynamic

organization. Work environments are reshaped through shifts in organizational structures, administration processes, and managerial procedures.

Human capital. Tavassoli (2015) provided information on the determinants of innovation propensity including human capital and knowledge of employees. Findings revealed that innovation decreased in the mature and declining stages of an organization. However, through a skilled labor force and the acquisition of new knowledge, innovation could occur and shift the dynamics of the organization. Dolmans et al. (2014) expounded on this concept through exploration of organizational methods, information, and knowledge of firms. While resources are critical to an organization's survival and growth, findings from the research revealed that large amounts of assets could hinder the firm's ability to innovate and grow. The greater the amount of capital the less inclined to experiment with established routines.

Research by de Souza Bermejo, Tonelli, Galliers, Oliveira, & Zambalde. (2016) showed the critical significance of developing relationships with external counterparts in order to drive innovation. Organizational innovation results from an openness to experimentation and idea generation (de Souza Bermejo et al., 2016). However, de Souza Bermejo et al. stressed the critical significance of routines that serve as a means of promoting retention of knowledge. New information must be fused with historical data in order for innovation to be successful.

Organizational learning. Hailekiros and Renyong (2016) drew comparisons between organizational learning and its impact on innovation. They concluded that the conception of competition is shifting from physical resources to intellectual capabilities, thereby indicating that innovation is the principle instrument for long-term success and

survival. Camison and Villar-Lopez (2011) addressed the role of organizational learning through the implementation of new products and processes. Findings concluded that organizational learning is a sub-process comprised of managerial commitment, systems perspective, openness and experimentation, and knowledge transfer. Innovation occurs when these components are in place (Gamal, Salah, & Elrayyes, 2011). Turkington (2004) examined the role of organizational learning in the Catholic schools associated with the Catholic Education Office in Sydney, Australia. A correlation existed between learning organizations and raising standards, primarily in the area of religious education. Turkington's research also concluded that organizational learning was strongest in the areas of continuous improvement of work, systemic thinking, and shared and monitored vision/mission. Turkington found that organizational learning was weakest in the area of taking initiatives and risks. Scanlon (2011) contributed that religious-based schools, especially Catholic schools, focus on socially just educational leadership initiatives. Results from these practices improve the teaching and learning environment thereby improving student learning. Starratt (2003) and Theoharis (2007) focused on the role of social justice leadership in schools. While Starratt emphasized the building school community and instructional leadership, Theoharis studied raising student achievement, improving school structures, building staff capacity, and strengthening school culture.

Catholic schools. Articles discussing the strong connection between organizational learning and innovation in Catholic schools included Cooney (2012), Goldschmidt and Walsh (2013), Haney (2010), and Smarick and Robson (2015). Suggestions for innovative methods include e-learning and blended learning. Herald (2014) concurred with Sullivan et al. (2015) that innovation in learning is best achieved

through the infusion of technology, blended learning, and virtual learning. In addition, the formation of Catholic school consortiums fosters the sharing of resources and ideas which enables schools to be producers of learning not merely consumers of knowledge.

Sullivan et al. (2015) and Herald (2014) outlined innovative approaches to Catholic school organization and leadership. Sullivan's findings revealed that the Catholic Church needs innovative approaches to school leadership in order to achieve excellence. Research by Knowles (2014) explored traditional governance models that stunt innovation in urban Los Angeles. The focus of the research lays in the relationships between the church hierarchy and the laity. Findings indicated that the traditional governance model, which is authoritarian in nature, places authority for school governance in the hands of the Bishop and pastor as opposed to the principal.

While Cooney's (2012) case study approach of religious education concluded that collaboration and coordination are essential elements of innovation, Goldschmidt and Walsh's (2013) research targeted governance structures and examined the nine different models used in Catholic schools. Haney (2010) also explored innovative models and concentrated specifically on the SPICE model (Selected Programs for Improving Catholic Education). Although Smarick and Robson (2015) scrutinized Catholic School Renaissance movements, their research included a comprehensive approach that surveyed the history of Catholic education from the 1600s to the present day.

Although a vast body of research exists on the ramifications of Catholic school closings and their influences on the Catholic Church and communities, (Convey, 2014; DeNobile & McCormick, 2008; Choocom, 2016), there is insufficient research on the relationship among organizational learning, innovation, and life cycle of Catholic

schools. However, there is significant information regarding several Catholic universities and colleges that countered the decline and developed innovative models to revitalize schools (Smarick & Robson, 2015).

Catholic schools are a mainstay in municipalities, primarily urban areas, where they serve as a collective identity for the neighborhood (Welsh, 2012). These religious institutions embrace faith communities, whereby students not only learn and worship, but also benefit from a complex social capital system comprised of networks, norms, and social trust (Brinig & Garnett, 2014). The loss of Catholic schools weakens the future of the Catholic Church (Gray, 2014) and also may decrease the social capital in the community. The specific problem addressed by this research was the role of organizational learning and life cycle in fostering innovation in Catholic schools. In the absence of a strong Catholic school system there is a decline in social capital and a decay of cohesive urban neighborhoods (Brinig and Garnett, 2014). This study examined the relationship that organizational learning and life cycle have on innovation in Catholic schools. Findings depicted that there was a relationship between organizational learning and innovation based upon the life cycle stage of a Catholic school. Nevertheless, the Catholic school system is still in danger of survival as schools continue to close each year.

Problem Statement

The problem statement section explores the difficulties faced by Catholic schools over the past several decades. This section outlines the the contributions Catholic education has made to the American society, as well, the areas most affected by Catholic

school closings. This section also presents the lack of research on organizational learning and Catholic schools.

Since 1965, the number of Catholic schools dwindled significantly resulting in a decrease of 47% of schools across the nation (Nuzzi, Frabutt, & Holter, 2012).

Researchers have found that in order to understand Catholic school sustainability, it is imperative to examine the historical governance structures of the school system, as well as the longevity of schools serving students in urban and suburban areas. The traditional authoritarian model places the Bishop of the Diocese as the ecclesiastical authority and the pastor as the responsible agent for the school (Knowles, 2014). Research demonstrated that when Catholic schools utilized organizational learning and innovation, through a variety of diversified programs, schools were able to stabilize, strengthen, and sustain themselves (Goldschmidt & Walsh, 2013). Studies have indicated that despite creativity, urban schools are most vulnerable due to financial burdens (Brinig & Garnett, 2014; Cattaro & Russo, 2015; Feverherd, 2007; Gray, 2014; Smith, 2002; Przygocki, 2013; Welsh, 2012). Improved understanding is needed to determine whether or not Catholic schools are going to be a viable educational option for parents in the future based upon organizational learning resulting in innovative processes and services.

Despite the long history of Catholic education in America, there is a limited amount of research in the area of organizational learning and life cycle in Catholic schools. Administrators tend to operate schools from an academic perspective and not a business paradigm. This model tends to eliminate the examination of school vitality based upon crisis, growth, maturity, and implementation of effective change.

Purpose of the Study

The purpose of the study section highlights the type of study, the predictor and outcome variables, and the analysis used. Additionally, it presents the overview of the participants and the goal of the study. The sections concludes with intent of the study and the possible contributions it could make towards future research.

The purpose of this quantitative study, using a multiple regression analysis, was to examine the relationship between organizational learning and life cycle on innovation in Catholic schools. The predictor variables were organizational learning and life cycle. Organizational learning is the process of creating, retaining, and transferring information in order to improve the processes and products of a firm. Life cycle is the various phases of an organization from inception to death. Each phase presents different challenges and crises that requires problem-solving and creativity in order for survival to occur. The outcome variable was innovation. Innovation refers to the creativity, transformation, and modifications made within an organization.

The participants of the study were administrators working in Catholic elementary (Pre-K-8), high schools (9-12), middle/high schools (6-12 or 7-12), and elementary/high schools (Pre-K-12). Sites included Catholic schools located in the United States Virgin Islands, New Jersey, New York, Massachusetts, Pennsylvania, and Tennessee. Schools selected were in rural, suburban, and urban communities. The goal of this study was to broaden the understanding of the relationship between life cycle, organizational learning, and innovation in Catholic schools. The intent of the research was to discover if organizational learning and life cycle predicted innovation in Catholic schools. Through dissemination of this knowledge, other Catholic schools, that may or may not be

struggling, could benefit from innovative academic programs necessary for survival. Additionally, the study may encourage further exploration of the role Catholic school mission, culture, tradition, and charism plays in the future of the schools.

Research Questions and Hypotheses

This section presents the two research questions, as well as the null and alternative hypotheses. The predictor and outcomes variables are noted as are the instruments used in the study.

Research Question 1: Does organizational learning predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?

H₀₁ – Organizational learning, as measured by Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) will not significantly predict organizational innovation.

H_{a1} – Organizational learning, as measured by Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) will significantly predict organizational innovation.

Research Question 2: Does life cycle predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?

H₀₂ – Life cycle, as measured by Lester, Parnell, and Carraher (2003), will not significantly predict organizational innovation.

H_{a2} – Life cycle, as measured by Lester, Parnell, and Carraher (2003), will significantly predict organizational innovation.

Predictor variables included organizational learning and life cycle.

Organizational learning was measured by the Organizational Learning Scale (OLS);

Garcia-Morales, Llorens-Montes, and Verdu-Jover, 2007). Life cycle was measured by the Organizational Life Cycle 5-Scale (OLC; Lester, Parnell, & Carraher, 2003). The outcome variable in this study was innovation which was measured by the Organizational Innovation Scale (OIS; Garcia-Morales, Llorens-Montes, and Verdu-Jover, 2007).

Theoretical Framework

This section explores the predictor variables of organizational learning and life cycle stages and the outcome variable of organizational innovation. It provides the background information that drives the study.

Organizational Learning

Organizational learning results from a change in organizational knowledge. Argot and Miron-Spektor (2011) found that organizational learning is an ongoing cycle that includes active context resulting from organizational and external environments. This stimuli impacts task performance experience which increases knowledge. This process enables changes in routine which foster new growth and innovation. The decisions of managers are of critical significance to the health of an agency. Through organizational learning, employees have the opportunity to assess, plan, communicate, and implement change amidst the acquisition of knowledge.

Senge (1990) purported that individual learning and group learning have a two-way relationship. As individuals learn, they share new knowledge and expand the thinking processes among colleagues. This acquisition, creation, and transfer of knowledge allows for modification of behaviors and adaptation to new internal and external stimuli (Garvin, 1993). Levitt and March (1988) discovered that routine behavior results from a history of encoded inferences; thus, employees' behavior, over

time, becomes the norm and may block creative thinking and new learning. Jan Simmons (1995) agreed with Levitt and March and added that organizational culture develops from embedded rules and practices which become a storehouse of learning.

The theory used for organizational learning was Divakaran, Neilson, and Pandrangi's (2013) organizational design framework which focused on eight elements of organizational design. These are the building blocks that influence how humans think, feel, communicate, and behave (Arraya, 2017). Within the theory, are formal and informal categories which govern different types of learning. The configuration of this organizational framework is connected to the strategy and purpose of a firm. Therefore, there is a strong link between the strategy and the organizational design (Divakaran, et al., 2013).

The four elements of the formal design are decisions, motivators, information, and structure. Decisions embody how choices are made in relation to governance, processes, and rights. Motivators, such as monetary rewards, career advancement, and talent processes, impact how employees perform. Information refers to how an organization processes data and knowledge through the knowledge management systems and the flow of information. Structure determines how work and responsibilities are divided throughout the company. This includes organizational design and the roles of employees.

Goldschmidt and Walsh (2013) purported that governance is the framework used to operate and manage a school. Governance encompasses mission, policy development, operational priorities, hiring procedures, evaluations, and reporting structures. The governing body for Catholic Schools, NCEA, outlines the role of leadership to include responsible stewardship, dedication to continuous improvement, and promotion of

Catholic school mission through the creation of environments for academic excellence and vitality (2013). With the recent scandals of the Catholic Church, there is much criticism and skepticism of not only the church but the schools as well. However, Aucoin (2014) noted that administrators are the guardians of Catholic schools. They must believe in the mission and promote the product through programs that awaken one's faith life. Schools must advocate the fullness of the Christian message, gospel values, and provide for a lived expression of faith.

Due to limited financial resources, money and promotions are not typical motivators among Catholic school employees. The main reason teachers and administrators remain in Catholic education is the religious aspect. A study by Chapman and Green (1986) found that the teacher attrition rate resulted from one's initial career commitment, early work experience, work relationships, and quality of professional life. Other motivators for teaching in Catholic education included that it is a form of ministry (Lortie, 1975), they are able to carry out the mission of the church (Przygocki (2013), the environment possesses a spirit of community (Schwab, 2000), and it is an opportunity to be an active member of a faith community (Squillini, 2001).

The informal design elements consist of norms, commitments, mind-sets, and networks. Norms are the unwritten rules that govern behavior, expectations, values, and standards. These determine how people instinctively perform on a job. Commitments serve as a means of inspiring employees to contribute through shared vision, goals and aspirations, and sources of pride. Mind-sets define how people make sense of their work. This occurs through shared language and beliefs, organizational identity, assumptions,

and biases. Networks enable employees to connect and develop relationships, collaboration, and work teams that influence organizational production.

Ball (2013) found that organizational effectiveness in Catholic institutions increased productivity. In addition, he concluded that Catholic school teachers possess shared values that are rooted in the Catholic faith. The informal design of like-mindedness, beliefs, formation of a strong sense of school community, and Catholic identity foster a school culture that is fundamental to the success of Catholic schools (Squillini, 2013). Duffy, Allan, Autin, and Douglas (2014) studied the link between living a calling and commitment. They concluded that the call among Catholic school teachers led to meaningful work and job satisfaction. Tamir (2014) added that altruistic reasons contributed to Catholic school teachers' sense of vocation and service to others.

Organizational identity is particularly strong among Catholic school faculty and staff. Schein (2010) identified several factors that attribute to this. First, the Catholic school culture embraces shared assumptions, values, and the necessity for effective performance. Secondly, there is a strong sense of espoused values which are the overarching principles that the teachers try to achieve. Thirdly, the administrators set a climate that fosters cohesion. Fourthly, Catholic school teachers have embedded skills which are displayed by the group. Many of these are passed on from generation to generation within the school to enable certain competencies to continue. Fifthly, there are habits of thinking, mental models, and paradigms that guide perceptions, thoughts, and language used in Catholic schools. Through socialization processes, these are taught to new faculty members. Finally, there are formal rituals and celebrations that reflect the values, artifacts, and, shared meanings.

Networks play a critical role in solidifying faculties within the school setting. These social networks enable the development of a community which is cohesive and effective (Glazer, 2014). Torres (2012) noted that the strength of a Catholic school lies in its small size. In addition, Catholic identity plays a critical role in relationship building. Cook & Simonds (2011) defined five relationships of Catholic school employees. First, relationship with self which encompasses the gifts that an individual possesses. Second, relationship with God which is the basis for religious formation. Third, relationship with others which enables individuals to openly embrace others. Fourth, relationship with the local and world community which allows for the development of global interactions. Fifth, relationship with creation which enables staff to become conscious of environmental issues.

Ultimately the organizational design determines the behavior exhibited at the organizational level (Divakaran et al., 2013). This includes the way that the company develops value and markets its' product. It is critical that the agency aligns their strategies and capabilities to the mission of the organization. Divakaran et al. (2013) noted that organizations have an advantage when they possess clear and differentiated ways of creating value for customers, well-defined capabilities that allow workers to complete tasks at a high standard, and the ability to perform.

The organizational design framework is universal and can be implemented in any company regardless of industry, geography, or business model (Divakaran et al., 2013). Therefore, it is applicable for this study of organizational learning and Catholic schools. The formal dimensions of the theory create a means by which Catholic school administrators can examine the relationship between governance styles, motivation, and

productivity. If faculty and staff are motivated, they may be more likely to be committed and perform to the best of their abilities. This will enhance willingness to learn and implement innovative changes.

As evidenced through the above studies regarding Catholic schools and innovation, the organizational design framework provides a comprehensive approach to determining governance styles, structural practices, and organizational effectiveness. Through the use of formal and informal designs, this research explored the ways in which Catholic school administrators utilize these practices as a means of pursuing creative and innovative methods. Findings revealed whether norms, commitment, and shared values are a significant factor in organizational innovation. Additionally, decision-making, motivators, and information structures established whether a Catholic school was receptive to innovation.

Organizational Life Cycle

The life cycle of an organization spans from inception to death or reinvention. Throughout the course of a business, crises occur which impact the functioning of an organization. According to O’Rand and Krecker (1990), life cycle depicts organizational morality as defined by “organizational and generational processes driven by mechanisms of reproduction in natural populations” (p. 242). The life cycle process examines content, timing, and sequencing of events in organizations. Change is noted through adaptation to environmental changes, understanding patterns of life and death, and the rise of new practices (O’Rand & Krecker). Therefore, the life cycle encompasses movement through a series of structural transformations as a response to environmental phenomena.

The theoretical framework used for life cycle was Freeman's (1982) life cycle theory which characterized the passage of time and structural changes in an organization based upon the assumption of change as indicated through growth and decline. Despite a variation in the number of stages, the life cycle focuses on the treatment of stages (phases), maturation of an organization (development), and generation (production) (Freeman). The theory assumes that life and death is a natural part of an organization's existence.

O'Rand and Krecker (1990) noted that all firms have some sort of beginning, existing, and ending. The key to survival relies on the organization's ability to identify the link between growth and decline. Once detected, the organization has the opportunity to create newness through innovative practices. It is this creation of novel products and practices that prevents the death of an organization. Mortality is often linked to the death of older mature institutions (O'Rand & Krecker). This death invites new organizations to form. As a result, they begin the life cycle with a hands-on approach that emphasizes innovation. Ironically, many new organizations are an updated replication of institutions that recently died.

Freeman's theory holds that newer firms are a liability and more vulnerable to die than older organizations (Ionescu & Negrusa, 2007). This aspect is critical to the study of the life cycle of Catholic schools because a large majority of the schools are over 50 years old (Nuzzi, Frabutt, & Holter, 2012). Therefore, it is assumed that the well-established Catholic schools should be able to remain open and viable. However, Brinig and Garnett (2014) and Welsh (2012) noted the significance that geographical location,

ethnic groups, and urban Catholics play in school sustainability. These factors correlate to Freeman's theory of change as indicated through growth and decline.

While Welsh (2012) and Cattaro and Russo (2015) focused on the decline of Catholic schools, other researchers promoted innovative change, rooted in mission and Catholic culture, as a means to reinvent Catholic schools (Goldschmidt & Walsh, 2013; Haney, 2010; Sullivan, Murphy, and Fincham, 2015). Freeman's life cycle theory focuses on changes within an organization throughout time. This research determined whether the age and stage of a Catholic school impacted innovation. In addition, findings revealed whether innovation was greater at a particular stage, such as start up or maturity stage. Freeman's theory encompasses maturation and generation. These factors are critical to Catholic school existence as they indicate growth and production of new and creative programs which enhance sustainability.

Organizational Innovation

Learning and growth foster innovation. Hean, Willumsen, Odegard, and Bjorkly (2015) highlighted that employees' capacity for innovation and collaboration among staff members is pivotal for positive social change to occur. Through an attitude of experimentation, workers' ability to incorporate change enhances performance, efficiency, and innovation (Bason & Hollanders, 2013). Staying connected to customers and their needs and wants is critical to innovation. Risk increases with the rate of change and turbulent environments (Carstensen & Bason, 2012).

The theoretical framework used for innovation was the transtheoretical model of behavior change (Prochaska & DiClemente, 1983) which outlines the processes an individual and organization make as they determine whether or not to adopt new

practices. Botha and Atkins (2005) purported that the adoption process encompasses policy, social and cultural contexts, climate, geography, and economic conditions of an organization. It requires cognitive abilities including perceiving, understanding, and interacting with the environment. The adoption process begins at a position of ignorance whereby an individual does not possess the awareness to bring new practices or systems to the organization (Prochaska, 1992). Upon achieving awareness, a series of scenarios result in rejection or adoption. The first adoption is interest in innovation. This entails a comparison between what is currently occurring and the proposed idea. If rejected, the idea dies. If adopted, the organization conducts a small-scale test of the innovative concept. If rejected, it dies. If accepted, the idea is adopted and becomes part of the new organizational practice.

The innovation decision-making process theory is the forerunner to the adoption process. Nutley, Davies, and Walter (2003) developed five stages of innovation. The first stage is knowledge. This requires learning about the proposed innovative idea. Secondly, individuals must be persuaded by the merits of the innovation in order to consider implementation. Thirdly, a decision must be made as to whether or not the innovative idea should be adopted. Fourthly, if adopted, the innovation must be implemented. Finally, confirmation must be given to endorse the acceptance of the innovative idea.

De Souza et al. (2016) noted that innovation capability is contingent upon new and improved processes, new organization structures, and the development of new products or services. Process innovation occurs through analysis, development, and design of new policies and products. Goldschmidt and Walsh's (2013) work examined

the innovative practices that the Catholic church used to reinvent some of their schools. This included changes in governance styles, partnerships with Catholic colleges and universities, the development of Private National Network Schools, and blended and e-learning strategies. Haney (2010) concurred that innovation in Catholic schools is contingent upon effective strategies that shift leadership practices an authority.

Catholic education today is grappling with social innovation as well. According to Scanlan and Tichy (2014), Catholic schools need to focus on meeting the needs of all children, including those with special needs. While these religious schools herald being champions for immigrant, minority, and impoverished families (Brinig & Garnett, 2014; Dillis & Hernandez-Julian, 2012; Weiss, 2013; and Welsh, 2012), they lack services for students who have learning differences. The trantheoretical model of behavior change (Prochaska & DiClemente, 1983) fosters guidelines for reflection, decision-making, and implementation strategies for philosophical changes such as inclusion.

Gray's (2014) research found that competition from public schools was a contributing factor for parents not enrolling their children in Catholic schools. In addition, the greatest source of inner-city competition is from charter schools. Smarick and Robson (2015) compared charter schools to Catholic schools and concluded that they shared a similar ecological role as evidenced through a safer environment, character-based values, and a higher quality of educational practices.

In determining the role of innovation in Catholic schools, the trantheoretical model of behavior change (Prochaska & DiClemente, 1983) examines both the decision-making process and the adoption process. The latter is critical to this study because it solidifies the innovation. In the absence of adopted new practices and products, it is

impossible to determine whether there is a relationship among organizational learning, life cycle, and innovation.

Nature of the Study

This section provides the design used for the study and the type of statistical methodology implemented. It concludes with the definition of terms applied to the research.

A quantitative correlational design was used to determine if organizational learning and life cycle impact organizational innovation. This research design was selected to determine if a relationship exists between the independent variables (organizational learning and life cycle) and the dependent variable (organizational innovation). A multiple regression analysis was used to determine whether there was a relationship among the variables and if organizational learning and life cycle predict organizational innovation in Catholic schools. The measurement of innovation is quasi-interval; therefore, multiple regression analysis was appropriate.

Definition of Terms

The following terms, used throughout this study, provide explanations to key concepts in this research study.

Catholic Schools: parochial schools or education ministries of the Catholic Church; schools participate in the evangelizing mission of the Church, integrating religious education as the core subject within the curriculum; communities of faith, knowledge, and service (United States Conference of Catholic Bishops, 2017).

Parochial Schools: Catholic schools that are associated with Catholic parishes (Church Year, 2017).

Blended learning: a combination of direct instruction (teacher-based) and small group activities with computerized instruction (Smarick & Robson, 2015).

Social capital: a social organization comprised of networks, norms, and social trust that facilitates coordination and cooperation for mutual benefit (Brinig & Garnett, 2014).

Depopulation: the shrinking population and pool of potential students (Welsh, 2012).

Life Cycle: the evolution of an organization from conception to death or reinvention based upon innovation and environmental factors (Elsayed & Paton, 2007).

Organizational learning: the capability of an organization to process knowledge; to create, acquire, transfer, and integrate knowledge in order to modify behavior with the intent of improving performance (Camison & Villar-Lopez, 2011).

Innovation: a change process indicating an organizational shift of structures, processes, and invention resulting from creative problem solving (de Guerre, Seguin, Pace, & Burke, 2013).

Resources: assets, capabilities, information, knowledge, and organizational processes that improve efficiency and effectiveness (Dolmans, Van Burg, Reymen, & Romme, 2014).

Slack resources: a cushion of actual or potential resources which allow an organization to adapt successfully, to change policy, and to initiate change in strategies with respect to the external environment (Renzi & Simone, 2011).

Economic decline: depopulation evidenced by a shrinking pool of potential students plus an increase in charter schools (Welsh, 2012).

Assumptions

In conducting this research, the following assumptions were made. It was assumed that participants had a vested interest in the survival of Catholic education and that they honestly completed the questionnaire. Secondly, it was assumed that the participants read and answered the questions correctly. Thirdly, it was assumed that all of the respondents were Catholic school administrators in elementary or high schools. Fourthly, it was assumed that the school administrator was aware of historical information about the school and its leadership that other school personnel may not know. Lastly, it was assumed that the respondents freely provided answers. They were not coerced or threatened to answer in a particular way for fear of retribution from their supervisor.

Scope and Delimitations

The purpose of this study was to determine whether or not a relationship existed between organizational learning and life cycle and innovation necessary to sustain Catholic schools in America. Literature revealed a vast body of knowledge on Catholic school closings based upon enrollment, finances, environmental changes, and staffing issues (Brinig & Garnett, 2014; Goldschmidt & Walsh, 2013; Nuzzi et al.). However, little research was done to discover the role of organizational learning on sustainability. Catholic schools in the United States date back to the 1600s and hold a tradition of academic excellence, primarily in urban areas. Schools vary in age from well over 100 years to institutions built within the past year. Research suggested that older institutions were more likely to survive and yet there was a lack of studies to support this position with Catholic schools. I chose this focus for my study because research indicated that

Catholic education has been in decline for the past 5 decades as evidenced by a decrease in the number of schools by 47% (Nuzzi et al.) and critical elements to explore, namely organizational learning, life cycle, and innovation, remain unstudied.

The study only examined Catholic schools. Findings could be applicable to other faith-based schools, as well as, private schools in suburban and urban areas. The study does not focus on theories of routine resulting from traditions and school cultures. Both of these facets are steeped in Catholic school heritage. Routines influence creativity and innovation or the lack of it in school decision-making. Another aspect excluded from the study is inertia. This state of status quo perpetuates an unwillingness or an inability to change. The study discounted organizational commitment as a variable for innovation. By doing so, it disregarded the valuable contribution of Catholic school staff who bolster declining schools. While there are brief inclusions of governance structures, the study does not focus heavily on school leadership and the hierarchy of the Catholic Church. These significant factors may influence school innovation and organizational learning.

Schools participating in this study included elementary, middle/high schools, high schools, and elementary/high schools. Through findings of this study, potential generalizations could be made regarding the application of organizational learning. Procedures at these schools, such as drawing on prior knowledge, learning from experience, and observing other private and religious schools, could offer useful information for Catholic school innovation and sustainability. Relationships between the age of a school and life cycle could prove beneficial to schools in the start-up phase and also the mature stage. Collaborative projects with well-established organizations, such as colleges and universities, could foster longevity of Catholic schools through favorable

partnerships that nurture teacher development, leadership training, and creative academic practices. Catholic school administrators are chosen as participants because of their vested interest in Catholic education, as well as, their knowledge regarding the daily challenges of running a school.

Limitations

There are several limitations to this study. The first is lack of generalizability. This study was conducted in several locations (U.S. Virgin Islands, New Jersey, New York, Pennsylvania, and Tennessee). This does not include Catholic schools located in other geographical regions of the United States. In addition, Catholic schools located on that mainland United States may adhere to different operating standards than found in the territory of the U.S. Virgin Islands. Secondly, it may be difficult to generalize the results due to various types of governance styles found in the schools (parish, private, diocesan, independent models). Different owners of the schools (for example a religious community) may hold more investment in their school than the diocese. A third limitation was the school's location. There may be a lack of equal participation from the geographical locations (urban, suburban, and rural). In addition, there may be differences between urban and suburban schools based upon economic status and religious orientation.

A sample size that is representative of Catholic schools in America is one way to address limitations. This will reflect greater generalizability. Prior research could provide a listing of Catholic schools that balance the various geographical, cultural, religious, governance, and instructional method categories. Well-defined criteria are a way to avoid sampling bias which could inadvertently exclude some participants. This

study cannot control for participant predisposition; however, an objective outsider could assist in avoiding researcher bias.

Significance

As Catholic education continues to face school closures, long-term results from this study can reverse this cycle through examination of successful, innovative strategies that propel growth and sustainability. Thriving Catholic schools utilize organizational learning and creative practices. While there is literature on the relationship between life cycle and innovation in the business arena, there is limited research that examines the relationship between innovation, life cycle, and organizational learning in the field of education, in particular Catholic school settings. A potential contribution to the knowledge is the critical significance that organizational learning and innovation have on the survival of Catholic schools. Additionally, the study determined that there was a relationship between life cycle and innovation resulting in sustainability. Few studies examined academia from a business perspective and this could prove telling for future strategic planning.

Catholic schools have a long tradition of providing academic excellence in the United States, primarily to minority children in urban areas. Their mission is to serve the underprivileged (Welsh, 2012). Early Catholic schools lifted up waves of impoverished immigrant families and provided rigorous, faith-inspired education (Smarick & Robson, 2015). Scanlan and Tichy (2014) noted that Catholic schools are pluralistic and provide more diversity of socioeconomic status than other private schools. Meyer (2007) confirmed that Catholic schools distribute learning equally with regard to race and class while sustaining student engagement. James Cardinal Hickey, Archbishop of

Washington, summed up the religious diversity present in today's Catholic schools when he stated, "We don't teach them because THEY are Catholic, we teach them because WE are Catholic" (Feverherd, 2007, p. 17). This study may provide significant information that could assist in innovation and reversal of failing urban schools. As noted above, the Catholic Church traditionally serves impoverished immigrant children, many of whom are found in the cities today.

Ironically, while the amount of clergy continues to shrink, the U.S. Catholic population grew from 52.4 million in 1984 to 67.3 million in 2004 (Anonymous, 2004). This population growth attests to the fact that Catholic schools, whose mission is to develop people aware of Catholic beliefs and traditions, are needed because Catholic fundamental beliefs and church attendance declined significantly in the past several decades as did the number of Catholic schools and enrollment (Catholic Education of Council of Priests, 2014). As with all churches, the Catholic Church depends on younger generations to accept the Catholic faith and remain committed to the Church through adulthood. Catholic schools afford children the opportunity to gain a foundation of religious beliefs and practices. Gray (2014) found that students who attended Catholic school were more likely to attend mass as an adult. This study, in conjunction with previous findings on Catholic school enrollment and later church attendance, can potentially help the Catholic Church understand the link between organizational learning, life cycle, and innovation. This could potentially result in allocation of resources to Catholic schools that have the highest potential of innovating to sustainability and growth.

Smarick and Robson (2015) noted that, historically, Catholic education empowered low-economic immigrant families who settled in urban areas through quality education. Today, approximately 40% of Catholic schools are located in urban areas where the majority of immigrants settle (Goldsmith & Walsh, 2013). Urban Catholic schools remain committed to social justice where student populations are diverse and students achieve promising results (Welsh, 2012). Welsh purported that Catholic schools provided the educational, moral, and social foundations that allowed poor immigrant children to acquire the necessary skills to assimilate into mainstream American society. Smarick and Robson supported Welsh's claim and added that Catholic schools are private schools that serve the public good. Therefore, Catholic schools, primarily in urban areas, continue to promote educational rigor necessary for children to develop into responsible adults. In the world that poses many threats to safety and division among groups, Catholic schools continue to develop connections between social capital and educational outcomes as evidenced by students who exhibit good job citizen formation, democratic principles, civic knowledge, community engagement, and a greater tolerance for diversity (Brinig & Garrett, 2014).

Summary

Chapter 1 presented a synopsis of the study including the problem and purpose. The purpose of the research outlined the critical significance of this study on the sustainability and future of Catholic schools. Background information was offered on organizational learning, life cycle, innovation, and Catholic schools. In the wake of substantial Catholic school closings, the role of organizational learning and innovation has become critical to revival and survival of the Catholic education system.

Organizational learning plays a leading role in providing new knowledge necessary for innovative changes in the areas of product development, such as curriculum development, and service delivery to students. Despite dwindling numbers, Catholic schools continue to dominate the private school sector and educate more children than any other religious or independent school organization (Przygocki, 2013). The life cycle of Catholic schools, spanning over 2 centuries, poses an interesting perspective that delves into various challenges and crises faced resulting in school revival or closure. Despite the vast body of literature on Catholic education, little research exists from a business perspective that includes organizational learning and innovation constructs. Few studies have explored the relationship between organizational learning and innovation at Catholic schools throughout their life cycles.

The purpose of this nonexperimental quantitative study was to identify whether a relationship existed between new learning and creative programming among individuals and school staff resulting in greater sustainability of schools. Additionally, the research determined whether or not the life cycle of a school impacted innovation. The study was guided by Divakaran, Neilson and Pandrangi's (2013) organizational design framework, Freeman's (1982) life cycle theory, and Prochaska and DiClemente's transtheoretical model of behavior change (1983). These theoretical frameworks helped formulate two research questions encompassing organizational learning and life cycle. The study used an online survey to collect data and a multiple regression analysis to predict if a relationship existed between organizational learning and life cycle on innovation. Chapter 1 also included assumptions, delimitations, limitations, and definition of terms.

The significance of this study provided information on how this research could impact positive social change. The results offered vital knowledge to Catholic school administrators on the positive ramifications of learning and creative decision-making. These contributions could improve schools that are in the decline stage by affording suggestions for new practices. Leaders who operate schools not in danger of closing could also benefit through examination of procedures that are successful in keeping their schools a viable option. The findings not only assisted the individual school governance teams but also provided guidance to a wider population, primarily the Catholic Church hierarchy who possesses the final say on school matters.

Chapter 2 provides a wide scope of literature on Catholic school governance, organizational structures, learning processes, longevity of Catholic education in the United States, and the process of transferring new knowledge to creative practices. Additionally, the review posed challenges Catholic schools face at various stages of their life cycles and what implementations could be taken to avert closing. Chapter 3 describes the design of the study, instruments used to conduct the research, data analysis, and any ethical procedures needed. This section also presented the population, sampling procedures, and recruitment tactics utilized. Chapter 4 contains the results of the study as obtained through Likert Scale survey. Chapter 5 provides a summary of the findings including interpretations, limitations, recommendations, implications, and conclusion.

Chapter 2: Literature Review

Introduction

Catholic education has a long history of academic excellence; however, in many cases the administrators fail to reinvent the schools to serve the changing needs of each generation (Smarick & Robson, 2015). Since the 1960s, the number of Catholic schools in the United States has decreased at significant rates. As noted previously, in the past 50 years, approximately half of the Catholic elementary schools in the country closed due to reduced finances and diminishing enrollments. Presently, 40% of Catholic schools are located in urban areas and these schools are at the highest risk of closing (Goldschmidt & Walsh, 2013). Without innovative and creative programming, Catholic schools will continue to decline leading to their ultimate demise.

While the literature does not speak directly to the life cycle of these Church-based schools, a significant factor to consider in the history of Catholic education is the schools' various stages from inception to cessation. This is critical to understanding the significant role the institutional Catholic Church plays in the formation and oversight of the schools. The commitment of the Catholic Church to the education of its children dates back to the First Synod of Westminster in 1852 when pastors were instructed that it was their duty to attend to the education of Catholic children in their parishes (Smith, 2002). According to the Code of Canon Law, "The Christian faithful are to foster Catholic schools, assisting in their establishment and maintenance according to their means." (Can.800). This duty included forming, financing, and managing Catholic schools. It also established the hierarchical structure of Catholic education which continues to exist today. This focuses on the role that history plays as a shaper and

contributor to present day governance as evidenced through inherited meanings and values (Teevan, 2004).

Historically, Catholic schools served minority urban populations (Dilis & Hernandez-Julian, 2012), a custom that continues today in many communities throughout America. In the Catholic school tradition, history also plays a pivotal role in defining school governance, expectations, mission, and execution of daily practices. However, at times, it can also serve as a hindrance for innovation and growth. The specific problem is that Catholic Schools lack financial resources to reinvent schools and make them sustainable. The Catholic education system needs to examine configuration of schools, governance models, and innovation at various life cycle stages of schools.

Employees and employee knowledge contribute to organizational learning and innovation (Tavassoli, 2015). Innovation leads to the implementation of new products and service delivery which increase an organization's competitiveness and allow for vibrant life within the firm (de Guerre et al., 2013; Ganter & Hecker, 2014). Researchers Cooney (2012), Goldschmidt and Walsh (2013), Haney (2010), and Smarick and Robson (2015) discussed the strong connection between organizational learning and innovation specific to Catholic schools. The most prominent areas in need of innovation are governance, financial resources, and enrollment. While Sullivan et al. (2015) and Herald (2014) outlined innovative approaches to Catholic school organization and leadership from an internal perspective, de Souza et al. (2016) showed the critical significance of developing relationships with external counterparts in order to drive innovation. Terran (2004) and Nuzzi et al. (2012) addressed the relationship between life cycle stages and innovation. Additionally, Bos et al. (2013), Filson (2002), Guoqing and Zhongliang

(2011), and Kariniochina et al. (2013) contrasted innovation processes and products among young and mature firms. This literature review encapsulated the identification of life cycles of organizations from their inception, the critical significance of organizational learning in a firm, and the creation of sustainable organizations through innovative practices.

Literature Search Strategy

This section provided the methods used for the literature search strategy. It explored the tools used to identify relevant literature, as well as, the key search terms which narrowed the search. A wide variety of literature was used to gather information.

Library Databases

The library databases used for the literature review included Academic Search Complete, Business Source Complete, Dissertations & Theses @ Walden University, Education Source, Emerald Insight, ERIC, ProQuest Central, PsycARTICLES, PsycINFO, SAGE Journals, and Taylor and Francis Online. The variety of databases provided diversified perspectives, such as business, education, and psychological, which enabled a comprehensive approach to the major areas of organizational learning, life cycle, and innovation. The search engines utilized were Academic Info, Educational Resources Information Center, Google Scholar, Google Books, and Microsoft Academic (MA). They provided a variety of credible sources in a variety of formats.

Key Search Terms

Key search terms for this literature review included *Catholic education, Catholic identity, Catholic schools, competition, competitive edge, creativity, external environments, governance, industry evolution, innovation, innovation capability, internal environments, life*

cycle assessment, life cycle management, life cycles, market orientation, organizational capability, organizational knowledge, organizational learning, performance, private education, process innovation, religious education, risk factors, slack resources, strategic management, and sustainable growth. The combination of search terms encompassed *life cycles* and *Catholic School, Catholic schools* and *innovation, Catholic schools* and *governance, Catholic schools* and *sustainable growth, suburbanization* and *urbanization* and *Catholic schools, Catholic schools* or *parish schools, organizational growth* or *development, organizational learning* or *knowledge, internal environments* and *external environments, crisis phase* and *Catholic schools, human capital* and *Catholic schools, organizational memory* and *Catholic identity, slack resources* and *catholic schools, schools* and *market orientation* not *businesses, Catholic schools* and *performance* and *sustainability, product innovation* and *process innovation, Catholic bishops* or *pastors* and *governance, Catholic schools* and *barriers to innovation, Catholic schools* and *demographic data,* and *authentic innovation* and *Catholic school mission.*

Scope of Literature

Literature used for this review included periodicals in the form of current peer-reviewed journal articles from education, business, psychology, and sociology domains. Secondly, information came from recently published books, reference books, and book chapters that explored the historical approaches to Catholic education, causes and changes in the system, and innovative programs developed to combat the demise of the schools. Thirdly, websites provided material for specific innovative programs, such as the University of Notre Dame's Alliance for Catholic Education Program and St. Martin de Porres School's Independence Mission School Model. Publication manuals, such as

NCEA's United States Catholic Elementary and Schools 2017-2018: Annual Statistical report on Schools, Enrollment, and Staffing, provided statistical data and historical facts. Lastly, Walden University doctoral dissertations and master's theses offered current studies specific to Catholic education.

In keeping with the guidelines required for current literature, the publication dates for the majority of resources are within the past 5 years. However, reviews of theoretical frameworks and historical accounts of Catholic education required older publications. Dated periodicals provided initial studies on topics, such as life cycle models and innovative practices. These sources complimented newer research and added a rich and deep exploration of the topic. Although researchers published articles on Catholic education, there is a lack of current literature related to the area of innovation and organizational learning. There are even less findings on life cycle stages and Catholic education. Therefore, several of the articles reviewed on Catholic schools are dated earlier than 2011.

Theoretical Foundations

Organizational Learning - Organizational Design Framework

There have been numerous organizational learning models stemming from Lippett and Schmidt's 1967 model which consisted of the birth (entrepreneurial), youth (centralization), and maturity (decentralization) stages of an organization. Each stage characterizes key issues and crisis which require attention and change. Nordstrom, Choi, and Llorach (2012) categorized the stages according to managerial style. The entrepreneurial stage comprised of short-term goals and limited ownership. The centralization stage included planning and coordinating with an emphasis on efficiency.

The innovation or decentralization stage focused on activity and adaptation as the organization searched for new market development.

Bedeian (1980) found that “a true element of an organization’s stage of development is best gained through analysis of how it handles predictable organizational crisis, rather than simply makes judgments based upon its age or economic size” (p. 282). The assumption is that organizations progress through stages in a chronological order and operate within the proposed guidelines. However, Bedeian believed that an established organization may actually remain youthful while a new firm can quickly rise to maturity. Managerial skills are critical to the health of an organization. Bedeian stated that a manager’s knowledge, skills, and attitudes may be helpful at solving a crisis in one stage but ineffective in another stage. Therefore, assessing managerial capabilities and utilizing them appropriately are critical to taking action and solving organizational crisis. However, the model does not adequately explain why some organizations grow and develop while others do not.

Nemeth, DiBella, and Gould (1995) found that organizational learning requires information gathering, awareness of performance gaps, and support for experimentation. In addition, continuous education is critical to organizational learning because it produces a variety of methods and procedures that are unique and progressive. It is difficult for an organization to advance without proper governance and support structures. Therefore, it is imperative that organizations possess multiple advocates at various levels, involved leadership, and interdependence among departments.

The organizational design framework (Divakaran, Neilson, & Pandrangi, 2013) provides a framework that explores organizational learning through informal and formal

categories. These elements influence how individuals process and communicate information which determines strategic planning and decision-making. Rait (1995) purported that organizations learn through collective experiences, perspectives, and capabilities of individuals. Divakaran et al., noted that a strong correlation exists between strategic development and organizational design. In addition, organizational design dictates how work tasks are disseminated and the various roles employees possess.

This organizational model affects a firm's changes through life cycles based upon the ability of members to grow and learn. It is appropriate for this study because it presents learning on individual, group, and organizational levels. Also, it provides a comprehensive examination of innovation and learning within the Catholic school system. When school administrators commit to organizational learning, they influence teachers which enhances teaching and learning (Hsiao, Chang, & Tu, 2010). This directly impacts organizational innovation because the educational environment becomes more competitive. This conclusion is based upon Chang and Tu's (2009) study which concluded that schools need to be creative and innovative in order to compete.

A strength for the Divakaran et al. (2013) model is its versatility. The transfer of acquisition and transfer of knowledge is applicable to any organization despite its mission, size, life cycle, or geographical location. This is critical to this study because educational institutions are often not considered business agencies and therefore, many theories may not align. In addition, the organizational design framework links to the organization's strategy and purpose. Catholic schools are driven by their unique mission and purpose of providing a quality education rooted in the teachings of the Catholic

Church. As a result of this mission, the schools attract like-minded individuals who think, behave, and communicate in ways that reflect the purpose of the school.

As noted by Divakaran et al. (2013), a strong link exists between strategy and organizational design. It appears that amidst the decline of the Catholic school system, administrators are becoming more vigilant in recognizing this connection. The emergence of innovative school programs and structures, such as Cristo Rey and Nativity Schools, is indicative of the renewed sense of purpose resulting from strategic planning. In addition, there is a sense of greater bonding between Catholic Colleges and Universities and elementary and secondary schools. This fosters creative thinking, innovative programming, and shared responsibility among the educational institutions.

Another critical application of Divakaran et al.'s (2013) model in this study is the formal design that highlights governance and decision processes. Goldschmidt and Walsh (2013) noted the shift in several Catholic dioceses away from the traditional parish model to a more collaborative and inclusive model of governance. This includes developing a partnership among diocesan personnel, stakeholders, and parishes. This shift is in response to the crisis in Catholic education, and it appears to impact the dioceses most affected by school closings. A potential pitfall to this model is that some church leaders do not embrace the changes in governance and remain entrenched in traditional styles of leadership.

Based upon this model, it is assumed that Catholic school faculty and staff implement a variety of the informal and formal aspects of Divakaran et al.'s theory. Therefore, the school community has the capability for organizational learning. The foundation of shared thinking, religious traditions, service, and historical significance

enable Catholic schools to work collaboratively toward reviving schools. However, governance processes and structure remains a constant threat to organizational learning if the clerical hierarchy is unwilling to allow for creative, strategic planning and innovative program implementation.

Organizational Life Cycle - Life Cycle Theory

Life cycle plays a critical role in an organization. O'Rand and Krecker (1990) define life cycle as the time span of an organization from inception to death. Within the life span cycle, organizations can experience a rebirth resulting from innovative products and processes. A shift in life cycle stage results from a crisis within the organization. Often, the alterations are so slight, that they are unnoticeable. Therefore, the decline goes unnoticed. Internal and external environmental changes can cause an organization to transition throughout life cycle stages.

Freeman (1982) developed the life cycle theory as a means of examining the transition that occurs with the passage of time. While the human life cycle defines certain ages of life, in a similar way life cycle stages of an organization predict growth or decline. Freeman's theory assumes that organizations, like human beings, experience life and death as part of a normal existence. Classified in three stages including inception, maturation, and generation, Freeman posits that organizations experience change through growth and decline.

Change is a key element associated with life cycle. Change assumes adaptation to environmental alterations in order for survival to occur. It also accounts for a rise in new practices. A potential pitfall of the life cycle model is that organizational leaders do not recognize the decline and therefore do not take steps to address it. Hannan and

Freeman's (1984) study found that inertia plays a role in the speed at which a company will or will not recognize and adapt to necessary changes. It is critical to understand the nature of change and develop a plan to adjust to fluctuations within internal and external environments to ensure survival.

The Freeman (1982) model is appropriate for this research study because it proposes a succinct model that provides flexibility in measuring life cycle change. As with other models, it encompasses the major life stage phases giving particular attention to innovation and centralization. This model provides a flexibility within the life cycle stages necessary for the variation found among Catholic schools. Based upon this model, it is predicted that newer Catholic schools, those in existence for 1-20 years, will indicate the highest innovation. Schools in the centralizations stage, those in existence for 21 – 50 years, will have moderate innovation. However, these schools should exhibit stability, established norms, and routines. It is predicted that schools older than 51 years will have less innovation and be less likely to successfully compete due to shrinking resources.

As noted by O'Rand and Kecker (1990), older institutions are often linked to death. While this contradicts Freeman's theory that newer firms are more likely to die, it does present an opportunity for rebirth. As evidenced through many creative, Catholic school initiatives, the church is attempting to revive and stabilize Catholic education, primarily older, elementary schools located in urban areas. Enterprises, such as the Jubilee Schools in Memphis, Tennessee and Boston College's partnership with St. Columbkille, provide evidence that older institutions can experience a resurgence through strategic partnering.

Elsayed and Paton's (2007) study found that the manager's ability to determine an organization's life cycle stage improves the decisions to implement corrective action. This could result in creating a competitive edge that situates the organization in a rare and valuable position to offer services or products that are difficult to duplicate. Managers take proactive or reactive responses when confronted with crisis. Proactive occurs before change happens but it appears imminent, whereas reactive responses follow the changes. Despite the large number of Catholic school closings, many institutions recognized the internal and external threats and created innovative policies, governance styles, and staffing to remain competitive.

Organizational Innovation – Transtheoretical Model of Behavior Change

Another theoretical base for this study will be Prochaska & DiClemente's (1983) transtheoretical model of behavior change. This framework demonstrates that innovation encompasses consciousness, capacity, co-creation, and courage (Hean, Willumsen, Odegard, & Bjorkly, 2015). Guidelines for social innovation process and outcome result from the combination of existing knowledge and new ways of applying concepts. Further research and application of Prochaska and DiClemente's theory offer ways to create positive social change through collaboration (Hean, Willumsen, Odegard, & Bjorkly, 2015) and the execution of innovation through a new combination of ideas (Howaldt, Domanski, and Kaletka, 2016). As applied to this study, Prochaska and DiClemente theory anticipates that the predictor variable, organizational learning, will predict the outcome variable, organizational innovation.

The transtheoretical model of behavior change focuses on individual and organizational processes necessary to determine whether to proceed with a new idea. A

critical component of this practice is awareness. The model assumes that individuals lack information and therefore cannot bring about a change. One must acquire knowledge and learn about the proposed idea before determining if it should be adopted. Once mindfulness occurs, the choice becomes available for acceptance or rejection of an idea. This includes a comparison between existing processes and the proposed idea.

A compelling concept of adoption process is that the idea must be implemented. However, even with consent to the new practice, confirmation must be given to endorse the acceptance of the innovative idea (Nutley, Davies, & Walter, 2003). This could pose a potential difficulty within the Catholic school system. While the school's administrator and faculty could endorse the change, it could be met with resistance from the hierarchy. This could include the pastor or bishop of the diocese. As noted by Goldschmidt and Walsh (2013), innovation in Catholic schools involves changes in governance styles.

Changes aim at increasing performance, enhancing efficiency, and promoting innovation. Organizations must implement innovation at institutional, process, and service levels. A potential drawback to this model is the ability to define social innovation (Bekkers, Tummers, Stuijzand, & Voorberg, 2013). This occurs through the stimulation and motivation of people to explore new ideas. Employees may express an unwillingness to cooperate and move past barriers that exist in the organization. The Catholic Church hierarchical structure poses, at times, as an insurmountable obstacle. Unless this barrier is removed, it will be difficult, if not impossible, for Catholic schools to adopt new innovative practices and programs.

Although Prochaska and DiClemente designed this model primarily for the corporate world, it remains applicable to Catholic education because it stresses new

vision necessary for governance shifts, collaboration among staff to bring about change, and continuous learning required to achieve a competitive edge. Therefore, this model will enhance the study through exploration and application of Prochaska and DiClemente's adoption process for new practices.

Identifying Life Cycles of Organizations

Historical Overview

An organization is a living organism that grows and evolves over time. It will inevitably encounter the cycles of growth and decline based upon economic markets and the influence of available funds for product development and expansion (Finch, 2012). In 1950, Kenneth Boulding first suggested the concept of organizational life cycles as a means of assessing the goals of companies through examination of profits, growth, and survival (Ionescu & Negrusa, 2007). Miller and Friesen's (1984) research identified birth, growth, maturity, revival, and decline as the five critical phases of an organization. Mulford (2004) added that changes occur in organizations most notably through predictable patterns, organizational activities and structures, and hierarchical progression. Bixia's (2007) later study identified life cycle stages through the relationship of performance measure and value. He classified the five stages as growth, growth/mature, mature, mature/stagnant, and stagnant.

Additionally, organizations evolve based upon the constraints of internal and external forces (Yan, 2006). These create change from one life cycle to another and can vary from the death of a CEO to the birth of a competing agency, financial shifts and unstable markets, and the maturing of an organization. Each life cycle stage contains various characteristics that define trademarks indicative of growth or stagnation.

Employers can use life cycle tools to explain management issues, such as effectiveness, organizational power, performance appraisals, reward systems, and corporate control and product innovation (Elsayed & Paton, 2007). In the case of Catholic schools, primarily in urban areas, the emergence and rapid growth of charter schools has dramatically affected the life of struggling Catholic schools. This phenomenon is apparent in urban areas where Catholic schools once dominated the landscape of cities.

Current Findings

A life cycle model enables members of an organization to understand and anticipate problems through experiences, make necessary shifts in priorities and goals, realign criteria for effectiveness, and understand problems at different stages (Finch, 2012). According to Tavassoli (2015), life cycle stages influence the dynamics and behavior of organizations. Morns and Miller-Stevens (2016) added that life cycles have identifiable phases beginning with a stage that identifies a problem that needs solving. In the early days of the United States, the Catholic Church faced the problem of sending Catholic children to public schools which had a dominant focus on Protestant teachings. In order to preserve the Catholic religion of the next generation, the Bishops decided that parishes should build schools to educate children in the faith. Therefore, the primary function of Catholic education was to combat non-Catholic teachings in public schools by forming a union between the sacred (religious) and secular (worldly) (Smith, 2002). Additionally, as more Catholic families migrated to the United States in the 19th and early 20th centuries, prejudice and discrimination increased and prevented some Catholic children from participating in public education.

Organizational life cycles stages can range from 2 to 33 based upon the organization (Nordstrom, Choi, & Llorach, 2012). Despite this span, the majority of life cycles contain five phases including inception (initial growth stage), expansion (rapid growth), maturity, revival, and decline. (Elsayed & Paton, 2007). These stages parallel with Gort and Klepper's (1982) 5 life cycle stages which include introductory, growth, maturity, shakeout (revival), and decline. Reider (2011) used an active approach to stages that include create/start-up, direction/growth, delegate/mature, coordinate/sustain, and decline/reinvent. Finch (2012) presented a model that focused on critical situations as opposed to stages. The situations include launching the venture, survival and sacrifice, achieving stability, pride and reputation, and developing uniqueness. In 2016, Morns and Miller-Stevens presented a new life cycle model consisting of issues, assembly and structure, productivity, rejuvenation, decline, and dissipation.

Marko (2015) compared the life cycle theory to dividends. As a firm matures, the focus shifts from generating cash to finding profitable investment opportunities. Reider (2011) concluded that an organization's life cycle encompasses inception to cessation with a focus on the interactions and relationships between various interior and exterior factors.

Each stage exemplifies certain characteristics defined by activities and productivity. Inception (Phase I) is the initial, start-up, or birth stage characterized by motivation for profit or the promotion of a new idea or service (Ionescu & Negrusa, 2007). During this stage, risks are high, many short-term pressures exist, and the completion of tasks drives the company (Dibrell, Craig, & Hansen, 2011; Finch, 2012). Additionally, there are clear incentives and limited resources to allocate (Elsayed &

Paton, 2007); however, phase I exhibits the highest levels of innovation and creativity (Bos, Economidou, & Sanders, 2013; Dibrell et al., 2011). Guoqing and Zhongliang (2011) purported that new product innovations spur an organization in infancy; however, it is difficult to develop a competitive edge because of newer assets. In addition to a high level of innovation, start-up organizations possess a high strategy which leaders integrate into the organization (Dibrell & Craig, 2011).

Start-up organizations are typically small with little bureaucracy. Employees make immediate and informal decisions that result from collective input (Reider, 2011). Sethi, Veal, Shapiro, and Emelianova (2010) expanded on organizational structure and added that in the initial phase members in a firm encounter steep learning curves, experience strong oversight, receive quick responses and support from bosses, and embrace heightened energy and professional satisfaction from successes. Finch (2012) agreed with Sethi et al. and added that owners dominate the firm as they try to create a viable business. Despite the innovation and excitement of the start-up phase, this stage reports the highest heterogeneity yet the lowest performance (Karniouchina, Carson, Short, & Ketchen, 2013).

Nuzzi, Frabutt, and Holter (2012) stated that Catholic schools were built largely by immigrant communities with a similar cultural background. These schools protected the children from anti-Catholic sentiments found in the public sector. They added that the U.S. government viewed Catholic schools as a “national treasure” because they provided quality education to diverse student populations. Cattavo and Russo (2015) added that Catholic schools contributed to the common good of the early American society and cultivated human values. Smarick and Robson (2015) concurred that

Catholic education hailed a long history of academic excellence, moral instruction, character development, and investment in the development of human capital among American citizens.

Phase II is indicative of growth for the company. Dibrell et al. (2011) cited that this is a prime phase whereby an organization is eager to excel. Innovation remains high as opportunities continue to exist for employees to create and develop products and services. This rapid growth stage is systemic of short-term focused goals and less engrossed with survival (Elsayed & Paton, 2007). Morris and Miller-Stevens (2016) highlighted assembly and structure during this phase as evidenced through division of labor. These facets exemplify a growing organization whereby members remain passionate about the mission, build networks, and amass resources. As the company excels, goals become less specific and less measurable as exhibited by employees who demonstrate competence and the company that shifts from profit to growth (Ionescu & Negrusa, 2007).

Adizes's (1979) life cycle model encapsulated the go-go stage whereby the organization grows quickly and opportunities are infinite with the adolescence stage which includes increasing internal organization. Reider (2011) concluded that during this phase, the organizational operations become more formalized and centralized, staff grows and takes on new roles and responsibilities, and the structure becomes more hierarchical. Finch (2012) supported these findings and added that this growth stage solidifies certain competencies for an organization and formalizes procedures through the establishment of authority in the form of middle managers. In addition, he stated that despite progress,

this phase challenges personal and financial sacrifices necessary to keep the organization advancing.

Catholic schools succeeded as community institutions because they were religious in nature (Brinig & Garnett, 2014). Welsh (2012) noted that the Catholic Church and school created a neighborhood classified as a sacred territory. The urban communities reflected European villages which served as Catholic ghettos that preserved social and religious values and customs. Welsh continued that the neighborhood, parish, and religious orientation intertwined to form a cohesive urban center comprised of the church, school, rectory, convent, and gym or auditorium. The Catholic Church developed social capital through the promotion of networks, norms, and social trust used to facilitate cooperation and coordination among the church and parishioners (Brinig & Garnett, 2014). Therefore, the faith community where people worshipped became the prominent source of social capital.

The most obvious contribution to the growth of Catholic education during Phase II was the introduction of religious sisters (nuns) into the schools. They became the dominating force in the education and administration of Catholic schools. Pastors approached religious congregations and solicited the help of young vowed women (most of whom were from European countries) to teach and administer the schools. Although smaller in numbers, priests and religious brothers also served as educators in Catholic schools. Brinig and Garnett (2014) referred to the contributions of nuns as “free labor.” Before 1960, nuns comprised the majority of the schools’ workforce (90%); however, by 2000 only 6% were religious and 94% of the staff were lay faculty (Przygocki, 2013).

The mature stage, Phase III, stresses investment opportunities and productivity that enables the organization to carry out their focus (Morris & Miller-Stevens, 2016). Marko (2015) added that growth flattens and Dibrell et al. (2011) found that organizations are no longer eager to excel. Reider (2011) emphasized delegation at this stage in the form of seasonal staff, decentralized decision-making, formal communication patterns, and detachment of top leaders. Finch (2012) concurred that bureaucratic structures solidify as sales stabilize and innovation falls. Bos et al. (2013) noted that this stage comprised of routine regiments and less innovation and radical activities.

A significant facet of this phase is the replacement of innovation with competition. At this stage, an organization has the ability to produce large quantities of product and offer it at reasonable costs. For Catholic education, the pinnacle year was 1965 when 5.6 million students attended 13,000 schools. As a result, competition drives decision-making (Reider, 2011). A healthy organization must be able to keep up with competitors. Since the 1800s, Catholic schools dominated urban areas by providing an alternative to public education. In order to be successful in a competitive market, Catholic schools must offer unique educational opportunities (Cook & Simmonds, 2011). However, Guoqing and Zhongliang's (2011) research contradicted this finding and stated that organizations, in later stages, concentrate more on process than product.

Nystrum and Starbuck (1984) found that success breeds failure when an organization is overconfident about its ability to dominate the market. Finch (2012) warned that during this phase an organization could suffer from atrophy, whereby it loses the edge in the market and fails to adjust to changing times. The major source of competition for Catholic schools is charter schools which posed a threat as early as 1965

(Cattavo & Russo, 2015). These schools, primarily serving urban areas, provide free public education as an alternative to traditional public schools. Charter schools have a similar role as Catholic schools with the provision of a safer environment, character-based education, and a higher quality of academic rigor (Smarick & Robson, 2015). Brinig and Garnett (2014) noted that as the number of charter schools increase, the number of Catholic schools decrease. In order to remain competitive, Catholic schools must provide education that is relevant and worthy of investment (Cook & Simonds, 2011). Therefore, they must focus on purpose, charism, school culture, and the unique contribution they are to the Catholic Church.

NCEA (2016), Smarick and Robson (2015), and Brinig and Garnett (2014) reported statistics about Catholic and charter schools. Catholic schools began to experience the impact of charter schools in 2000. At that time, there were 2,300 charter schools educating 340,000 students and 8,146 Catholic schools teaching 2.5 million children. Ten years later, the number of charter schools increased to 5,300 while Catholic schools decreased to 6,980. While Catholic school attendance declined by 500,000 students over the ten-year period, charter school enrollment soared to 1.6 million students. 2010 marked the last period when Catholic schools surpassed charter schools in enrollment and number of schools. By 2018, charter schools squeaked by Catholic schools by 400 schools, which brought the number charter schools to 6,900 compared to 6,500 Catholic schools. However, the difference in enrollment is striking with 3.1 million students attending charter schools and 1.8 enrolled in Catholic schools.

The revival or renewal stage (Phase IV) signals a need for change. Symptoms of Phase IV include an erosion of trust and communication, an abandonment of the

organization's founding principles, a lack of innovation, and a shift in customers' expectations (Reider (2011). Dibrell and Craig (2011) found this stage lacks urgency and external growth because the organization is smothered by a formal climate which is steeped in aristocratic decision-making. As a result, the organization possesses a sense of complacency exhibited through non-competitive behaviors, bureaucratic policies, and strategic inertia. Ionescu and Negrusa (2007) purported that managers need to reverse the decline by reverting to original goals and making a conscious decision to return to the roots and mission of the organization. Elsayed and Paton's (2007) view of the revival stage stressed limited investment in innovation, a steep decline in performance, and financial constraints, thus indicating an inevitable closure. Catholic schools' decline was a culmination of a decrease in religious sisters, an increase in financial burdens, an exodus of urban Catholics to suburban areas, and a lack of creativity to revitalize inner city schools.

However, Morns and Miller-Stevens (2016) took a pro-active stance for Phase IV and emphasized rejuvenation through the resolution of conflicts. They identified decline in three phases which include blind, inaction, and crisis. The blind phase constitutes a failure to recognize adverse changes and threatens survival of the organization. Inaction surmises that productivity will continue to decrease unless administrators take corrective action. The crisis stage highlights an increase in internal disunity and a need for radical changes to ensure organizational survival. Decline occurs by degrees and is often a slow and unnoticed process (Morris & Miller-Stevens, 2016). Finch (2012) examined this phase from a pro-active stance which emphasized the expansion of new products in the

market and the creation of division structures to help the firm move forward. He found that in some cases the shock of failure stimulated change.

By the 1960s, Catholic education entered into Phase IV. Although still strong in numbers of schools (10,667) and enrollment (4,431,000 students), the system faced outside threats. Cattavo and Russo (2015) attributed faltering Catholic identity, secularism, and the beginning of a decline in religious sisters as potential signs of future problems for Catholic schools. Brinig and Garnett (2014) purported that the Catholic school system began to unravel in the second half of the 20th century when Catholics became wealthier, entered mainstream American society, and left urban areas. Welsh (2012) confirmed this and added that the successful assimilation of U.S. Catholics fragmented the American Catholic identity. He continued that trends, including demographic changes, deinstitutionalization, urban depopulation, the collapse of the urban industrial sector, highway construction, and suburbanization, contributed to the demise of Catholic schools. Traditions also became watered down (Tevvan, 2004) and that administrators did not reinvent Catholic schools to reflect new immigrant populations (Smarisk & Robson, 2015). Goldsmith, O’Keefe, and Walsh (2004) stated that in order for Catholic Schools to survive, new configurations of governance styles, financial structures, and delivery of educational services must occur.

Renewal and revival of Catholic schools is met with conflicting opinions. Brinig and Garnett’s (2014) research found that urban Catholic schools do not make sense anymore because they outlived their purpose of educating ethnic working class Catholics. However, Haney (2010) argued that the Catholic Church administrators should not abandon their schools just because of changes in society that make it difficult to sustain

them. Sullivan, Murphy, and Fincham (2015) believed that changes need to begin with the Catholic Church, as well as, the traditional governance model (Knowles, 2014).

Rapid decision-making, problem solving, and long-term views determine whether the final stage (Phase V) will result in reinvention or death (Reider, 2011). Insufficient effort and a lack of effort will result in death of the organization. Finch (2012) identified the characteristics of the death phase by stagnation, a dried up market, lack of innovation, external challenges, and firm decline. Reider (2011) found that environmental factors and leadership traits cause an organization to reinvent or die.

In many instances the Catholic school system dwells in Phase V. The NCEA calculated that more than 2,000 schools closed or consolidated in the past thirteen years (Herald, 2014). Nuzzi et al. (2012) reported a Catholic school decline by 47% over a five-decade span from 1965 and 2015. According to Brinig and Garnett (2014), New York City's Archbishop Dolan commented that Catholic schools are in a "hospice mentality" whereby church leaders act as if the best thing to do is prolong the schools' death and make them as comfortable as possible. They identified factors that influence school closure decisions as finances, changing demographics, increase in neighborhood disorder, and a decrease in levels of social cohesion. Additionally, a significant contributing issue is the pastor-school relationship. A pastor serves as the head administrator and holds the most influential power in determining school closure.

While Meyer (2007) concurred with traditional thoughts of school closings, such as a loss of religious sisters, change in demographics, failure to respond to the contributing factors, white flight, and sex abuse scandals, he also presented an alternative idea. The need for Catholic schools is imperative because the mission, to spread the

word of God, is more challenged in today's society because of the secular nature of the world. However, Feverherd (2007) retorted that the Catholic school crisis is not about closing schools at a particular time but rather about the involvement of parishioners to keep the parish and school alive over the past 20 to 30 years. This opinion advocates a reversal of attitudes away from the death of schools to reinvention.

Welsh (2012) alluded to the fact that many residents in a community never dreamed of the Catholic school closing and took for granted the role it played in the neighborhood. According to Brinig and Garnett (2014), urban Catholic schools serve as a critical mainstay in urban developments as they preserve neighborhoods and provide a viable option to struggling inner city public schools. The schools foster neighborhood integration and create a collective identity among urban Catholics (Welsh, 2012).

Smarick and Robson (2015) concurred that many Catholic schools, built in the early part of the 20th century, hold a unique place in urban communities serving as an anchor that maintains the community's character. The neighborhood defined the boundaries for the parish school, a concept influenced by the First Plenary Council of Baltimore in 1852 (Haney, 2010). When Catholic schools close, the neighborhood declines rapidly (Brinig and Garnett, 2014).

In contrast to the life cycle progression of stages, Elsayed and Paton (2007) found that while firms do progress through stages, they do not necessarily have to be linear. Movement through the stages results from an event that changes the course of the organization (Greiner, 1998). Morris and Miller-Stevens (2016) identified changes that result from environmental shifts and crisis. Environmental changes could include rapid growth of the industry, competition from outside sources, and a shift in societal values

which make the product or company no longer viable. Crisis is a part of development as evidenced through limitations in confidence, courage to innovate, and an inability to see beyond the present situation (Hrehova, 2012).

Each phase contains expectations, deliverables, and challenges. Reider (2011) found that if the organization's needs are met, they remain in that stage. If unmet, a crisis occurs and signals a transition to another phase. This could result from changing demands and conditions and inadequate performance. Teevan (2004) attributed historical process to a culmination of progress, decline, and redemption. He termed cycles in shorter or longer stages of decline and noted the significance of deliberate choice necessary to promote change enabling organizational existence.

Strengthening Organizations through Organizational Learning

Historical Overview

The first Catholic schools were start-up organizations that began in 1606 in St. Augustine, Florida (Smarick & Robson, 2015). As Catholic bishops recognized the need for faith-based education programs, parishes began to build schools. Schools were small and under the direction of the parish priest. The Catholic Church built the school system one school at a time. They were financed and operated by individual parishes and depended upon the support of the working class minority (Brinig & Garnett, 2014). In 1884, the United States Catholic Bishops promoted the growth of the Catholic school system by requiring Catholic parishes to establish a school and mandating that Catholic parents send their children to the school.

Organizational learning is the ability to create, acquire, and transfer knowledge, as well as, to modify behavior in order to reflect new knowledge and insights (Garvin,

1993). It requires imagination, integrity, and autonomy. Fiol and Lyles (1985) defined learning as the development of insights, knowledge, and associations between past actions, effectiveness of actions, and future actions. Learning becomes encoded through inferences from an organization's history and this lays the foundation for routines that guide organizational behavior (Levitt & March, 1988). It is the combination of increased knowledge and cognitive ability that changes behavior in conscious or unconscious ways (Nemeth, 1997).

Various theorists developed organizational learning frameworks infusing learning cycles with organizational memory and retrieval components. Huber's (1991) Framework for Organizational Learning outlined five components of learning which include drawing on knowledge available at or before organization's birth, learning from experience, learning by observing other organizations, grafting on components that possess knowledge not possessed by the organization, and intentional searching for information about the environment and performance of the organization. Dixon's (1994) organizational learning cycle also posed five elements involving acquisition of knowledge, sharing of knowledge, constructing meaning, organizational memory, and retrieval of information. This framework is similar to Nevis, DiBella, & Gould's (1995) cycle of organizational learning whereby they both encompass knowledge acquisition, development of skills, sharing of knowledge, and knowledge utilization. Daft and Weick's (1984) process of organizational learning condenses the factors into scanning and data collection, interpretation and data meaning, and learning and action taken. Senge's (1990) cycle of change highlighted three stages comprising of deep learning, learning infrastructure, and results. The stages transition through unobservable cognitive

change, overt change resulting from the adoption of learning, and observable and measureable change. Garvin's (1993) five building blocks for learning organization differs slightly from the other theories because it begins with systematic problem solving which highlights the collection and analysis of facts and data used for decision-making. This is followed by experimentation with new approaches, learning from experience and history, learning from best practices of others, and transferring knowledge quickly and efficiently.

Nemeth (1997) purported that organizational learning occurs on group and organization levels. The practices can be formal or informal in nature. Knowledge and skills develop through the implementation of planned instruction and assessment. Senge (1990) found that people continually seek the capacity to expand patterns of thinking, nurtured through a work community, which fosters a continual cycle of change. Simons (1995) added that no learning occurs without individual learning. This must be present before organizational learning can take place. Organizations provide community assistance and support that enables individual learning to prosper. Thus, the organization is a social community which takes place in an individual's cognitive schema with a context of beliefs and understanding of co-workers (Nemeth, 1997). Therefore, new understanding is the result of reflective change, different relationships, and novel assumptions.

As critical as learning is to an organization, Hedberg (1981) discovered that organizations must also possess the ability to unlearn. This entails abandoning the old ways of thinking and being able to adopt to new ones. Nementh (1997) argued that it can be difficult for organizations to forget their history, and they can be unwilling to abandon

old values and norms that exist. However, he added that underlying assumptions could serve as constraints that become counterproductive to new ways of thinking.

Current Findings

According to Hailekiros and Renyong (2016), an organization's capability for learning requires a process that encompasses generating, acquiring, disseminating, and integrating knowledge used for creating alternative cognitive situations. The integration of old and new information is critical to the process of learning and allows for the transfer of knowledge to structures (Camison & Villar-Lopez, 2011). Jerez-Gomez, Cespedes-Lorente, and Valle-Cabrera (2005) developed four dimensions of organizational learning capabilities which include managerial commitment to learning, systems perspectives, openness and experimentation, and knowledge and transfer. These areas predict the organization's ability for learning and new knowledge. Learning companies are organizations that facilitate learning of its' members which leads to continual transformation (Pedler, Burgoyne, & Boydell, 1991). Nevis (1995) found that performance, based upon experience, resulted from an organization's ability to process and integrate learning.

A key element which prohibits new thinking is routines. Nigam, Huising, and Golden (2016) defined routines as recognizable, repetitive patterns of interdependent action that govern work processes in organizations. Salvato and Rerup (2011) added that routines are collective phenomena resulting from organizational behavior, cognitions, and performances. Eisenhardt and Martin (2000) defined routines as, "complex and analytical processes that rely on existing knowledge, linear execution, and repetition to produce predictable outcomes at different organizational levels. (p. 1106)

Routines emerge and evolve over time and they are foundational blocks of an organization. However, Brauer and Laamanen (2014) questioned the outcome when organizations change, disrupt, or disband routines. They concluded that a variation in routine occurs because of a sense of urgency caused by a deterioration of performance, financial aspects, lack of teamwork, restricted communication, or a crisis mentality. At this stage, tension exists between stability and change. Pentland, Haerem, and Hillison (2011) defined this state as a paradox of an ever-changing world. In order for change to occur, members of an organization must understand this paradox and through conscious decision-making and planned transformation, find the balance between prompting change and preserving the status quo of the organization.

Organizational learning is a collective capability based upon experiential and cognitive processes (Aragon-Correa, Garcia-Morales, & Cordon-Pozo, 2007). Catholic education amassed a wealth of tradition and routines over the centuries. Teevan (2004) noted this long accumulation of information and proposed that administrators reinterpret and make adjustments that reflect the original message of the schools through a modern perspective. This renewed viewpoint would examine governance and staffing practices, as well as, classroom structure and instructional methods. According to Aragon-Correa et al., this tactic is an advanced form of organizational learning known as generative learning. This process allows an organization to question long-held assumptions about mission, customers, capabilities, or strategies and then generate adjustments in practices and approaches.

Organizational memory plays a significant role in organizational learning. This includes the knowledge, skills, procedures, shared assumptions, and beliefs of an

organization (Akgun, Keskin, & Byrne, 2012). Their findings coincided with those of Camison and Villar-Lopez (2011) who contended that organizational memory remains stored in the organization's history and used for present day decisions. Past experiences often dictate present work practices because employees' embedded memories influence work processes.

Druker (1992) believed that the purpose of every organization is to integrate specialized knowledge into common sets of tasks. Thus, the preservation of organizational memory is critical to experiential knowledge and competitiveness. Hailekiros and Renyong (2016) view organizational learning as the source of all knowledge creation that enhances competition through collaboration, team learning, empowerment of people, continuous learning, inquiry, dialogue, and connection to the organization.

Akgun et al. (2012) found that organizational memory is socially constructed by people and their interpretations of events, persons, and objects from the past. Narratives, photos, symbols, artifacts, rituals, and rites serve as ways to retrace historical events, deepen values, convey emotions, and share the integral parts of the organization. Organizational memory can be found in individuals, organizational culture, organizational transformation, organizational structures (internal systems, communication styles, and hierarchy), organizational ecology (physical structures), and external archives (Akgun et al., 2012).

Despite rapid decline, Catholic schools remain the largest independent school system in the world (Przygocki, 2013). They educate over one third of all private school students (Dillis & Hernandez-Julian, 2012) and forty percent of Catholic elementary

schools are in urban areas (Goldschmidt & Walsh, 2013). Teevan (2004) purported that traditions maintain identity through a faithfulness to the original message of the organization and the embodiment and promotion of conversion to new thinking and behavior. At this juncture, Catholic schools are in crisis. While Smarick and Robson (2015) agreed that new customs remain critical for Catholic school survival, they fear that these may dismantle more than a century's worth of practices. These traditions include old mindsets, outdated staffing models, historic governance practices, and accountability procedures. Welsh (2012) held similar concerns including the Catholic schools' collapse of rituals, rapid adoption of ideas influenced by the media, and the fragmentation of the Catholic community. Catholic schools inherited these conventions from bishops, priests, and nuns who held prominent roles in Catholic education through the 1980s.

As early as 1992, Catholic theologian and philosopher, Bernard Lonergan, noted the need for a heightened grasp of past origins necessary to discover and implement historical responsibilities. He held that this was necessary to reverse decline and initiate progress by opening new possibilities. Lately, Catholic researchers emphasize the critical significance of Catholic schools and their role in growing the church. Gray (2013) noted that if Catholic schools disappear, there will be fewer Catholics resulting in a ten percent or less mass attendance rate. "The Catholic Church is weakened by significant future losses of Catholic schools" (Gray, 2014, p. 7). Additionally, Gray reported that Catholic schools provide the pipeline for vocations (priests, brothers, and religious sisters) that declined steadily over the past five decades.

Haney (2010) noted the need for new Catholic school paradigms achieved through a shift in purpose. The proposed plan would place decision-making and

governance in the hands of lay people and draw upon their knowledge, experience, and ability. However, she advocated for a realignment of schools' objectives to those of the church's mission to teach, sanctify, and serve. Nuzzi et al. (2012) added that the Catholic Church must give priority to Catholic education and promote policies that advance the educational mission of the church through the schools.

Creating Sustainable Organizations through Innovative Practices

Historical Overview

Organizational learning plays a significant role in creative practices by influencing the ability of innovation (Aragon-Correa et al., 2007). As firms adapt to environmental changes, they exhibit similar patterns of behavior, identified by Miles and Snow's (1978) typology of business strategies, which include prospectors (pioneering role in the development of new products and exploration of untapped markets), defenders (limited innovation that relies on established positions and practices), analyzers (a hybrid approach that balances exploration of opportunities with exploration of current markets), and reactors (a lack of clear and consistent approaches to innovation and product-market development).

Current Findings

Organizational learning promotes imagination in problem solving and enhances team learning resulting in product innovation (Cheng, Chang, & Li, 2013). Innovation is a critical factor in an organization's viability and survival. Organizational innovation is a firm's capacity to promote an environment that is conducive to openness to experimentation and routines that promote retention of knowledge and innovation development (de Souza, Tonelli, Galliers, Oliveira, & Zambalde, 2016). This process is

critical to cultivating new products, processes, and services. Ganter and Hector (2014) added that innovation also encompasses organizational structures, administration processes, and managerial procedures. These changes spur adaptation to change which allows for a competitive edge. Gamal, Salah, and Elrayyes (2011) focused on innovation as the introduction of a new product or service through utilization or commercialism.

Innovation influences social and economic changes within an organization. Cheng, et al., (2013) found that innovative practices affect new behaviors through generation, development, and implementation of creative ideas. In order to achieve innovation on the organizational level, managers must facilitate knowledge through the exploration and nurturance of new concepts, services, and products (Ganter & Hecker, 2014). Therefore, innovation is a critical force in driving growth.

Dibrell, Craig, and Hansen (2011) stated that an organization's life cycle stage may influence innovativeness. Early stages react to the demands of a growing industry which require innovations and new products. According to de Guerre et al. (2013),

Organizations can become stagnant or maladapted to the environment.

They can be stuck in reliability mentality and run outdated but reliable processes structuring themselves in predictable hierarchical models and attempting to manage innovation instead of creating spaces that allow innovation to flourish (p. 265).

Internal and external factors affect an organization's decision to imagine ingenious practices. Huang, Lai, Lin, & Chen (2013) stated that a current trend is to shift from closed organizational borders to permeable ones that enhance input from outside the firm. One such aspect is technology. Continual updates in technology foster innovation

reflected through process and delivery of services. Martin-Rios (2014) purported that sustainable innovation and change result from overcoming inertia and responding to changes in the external world. He attributed improvements of internal processes to the organization's ability to adapt to changing facets of society. However, market factors, such as the uncertain demand for innovative goods and services plus the potential market established by dominant firms, causes difficulties for organizations (Gamal et al., 2011).

Carstensen and Bason (2012) concurred that the rate of change in external environments increases the risk of losing the people they serve. It is critical for organizations to respond strategically to environmental changes while remaining close to their customer base (Dibrell et al. (2011). This enables organizations to meet changing demands without sacrificing the needs and wants of consumers. Organizations must be attentive to consumer trends. Researchers Martin-Rios (2014) and Hervas-Oliver, Sempere-Ripoll, and Arribas (2015) stressed the importance of departing from traditional methods because they limit innovation and growth. Huang et al., (2013) highlighted a business model innovation that redesigns resources and processes in order to reposition customer value.

Welsh (2012) noted that Catholic schools are at a crossroads as they grapple with three generations of philosophical views. The groupings include Pre-Vatican II (times prior to 1962) which focuses on the hierarchical church with an emphasis on tradition; Post Vatican II (times after 1965) which emphasizes a decrease in church traditions, an increase in democratic process within the church, and a spotlight on individual conscious; and Vatican II (1962-1965) that concentrates on people caught in the middle. The Vatican Council is an ecumenical council where Catholic leaders congregate and settle

doctrinal issues including social, political, and religious trends (Welsh, 2012). He continued that Vatican II was a turning point that transformed the church. Outcomes of Vatican II indicated a rejection of the medievalism Church. This updated the church; however, it weakened beliefs, created a loss of group identity, eliminated a common vision among Catholics, led to the demise of the Catholic subculture, and established a detachment from the traditional marks of Catholicism. Vatican II marked the rise of non-traditional urban parish schools that served the underprivileged (Welsh, 2012).

Prior to Vatican II, there was an abundance of nuns who dedicated their lives to the service of educating children. Their “free” service allowed for affordable private education and in many cases children in elementary grades attended the parish school at no cost. During Vatican Council II (1962-1965), the Catholic schools flourished and promoted social justice, communal change, and service to mankind (Przygocki, 2013). The nuns instilled spiritual development through a culture of discipline, respect, orderly behavior, and a values-laden environment. Post Vatican II saw a departure of religious sisters from Catholic schools as they sought ministry working with social work concerns, prison ministry, unwed mothers, and immigrants (Cattaro & Russo, 2015). As a result, the Catholic school’s human capital evaporated (Smarick & Robson, 2015).

Ironically, during Vatican Council II, Catholic schools in America operated at their highest enrollment (5,600,000 students) and had their largest number of schools (13,000) (Cattrano & Russo, 2015). Brinig and Garnett (2014) added that in 1960, in the city of New York, one child was in Catholic school for every two in public school. However, long-term effects from Vatican II indicated that a decline in traditional

concepts and practices affected Catholic identity and family decisions regarding Catholic school attendance.

The 1960s brought other changes that greatly influenced Catholics in America. The election of President Kennedy (a Catholic) ended the country's perceived discrimination against Catholics. The election signaled assimilation and mainstream into American society for ethnic Catholics. White Catholics migrated from cities to the suburbs and the solidarity among Catholics dissipated as they mixed with populations of various ethnic and religious affiliations. This diminished traditional identities that once shaped values and outlooks (Welsh, 2012).

Despite the significance of external factors, Carstensen and Bason (2012) concluded that today's innovation capabilities focus on internal administration processes rather than generating new services and improved results. This discovery indicates a redirection of efforts for changes within an organization. According to Gamal et al., (2011) there are five elements of innovation. The first is innovation staffing which includes the vision, strategic focus, and implementation of ideas by organization members. Secondly, Gamal indicated that innovation contains organization, cultural roles and responsibilities, organizational structure, and organizational culture and climate. Thirdly, the innovation life cycle process comprises idea management, product and process development, and the launch and continual assessment of improvements. The fourth component is enabling factors such as project management and human resources to occur. Lastly, innovative results are found in evaluations that assess progress and creativity.

Despite the daunting task to reinvent Catholic schools, numerous individuals and organizations around the country committed to undertake the mission. Cooney (2012) stressed the importance of collaboration and coordination as opposed to isolationism. The most paramount issue is governance. Parish elementary schools are the most common school model. In this case, the parish owns and operates the school under the leadership of the pastor. The principal reports directly to the pastor. In order for the school to be successful, the pastor must commit to Catholic education, view education and the school as a central part of the parish's mission, and provide financial support for operating costs.

Goldschmidt and Walsh (2013) identified additional emerging models for Catholic Schools. Private Schools are independent institutions sponsored by religious congregations and not typically associated with the parish. A Board of Directors governs the school, and they possess full decision-making power. Pastors have no involvement in the operations of the school. Lay people own and operate the schools. Many private schools operate now out of closed parish schools.

Inter-Parish Schools are another alternative to the Parish school. These are regional schools sponsored by multiple parishes. A Board of Pastors governs the school. Sponsoring pastors advocate for enrollment within their parishes, pool resources, and offer financial support.

The Diocesan Schools model replaces many former Parish schools. In this case, the Diocese owns the schools. The Diocesan Superintendent manages the school under the authority of the Bishop as opposed to the Pastor. This model is a substitute to closing

Parish Schools. Most schools are still parish run, but the trend is moving towards alternate models which offer a greater variety of governance styles and innovation.

Novelty serves as a strong innovation tactic. Ballot, Fakhfakh, Galcia, and Salter (2014) referred to novelty as the greatest innovation. Their research found that radical modernizations require change in products and production processes, a variation in marketing strategies, a shift in delivery, and diversity among geographic locations. A contemporary method of instruction conveyance is through blended learning and e-learning (Sullivan, Murphy, & Finch, 2015). Blended learning comprises a mix of direct teacher education and small group activities centered on computerized instruction (Smarick & Robson, 2015). Mission Dolores Academy (located in San Francisco, CA) is an example of a school that uses blended learning. Since the implementation of this teaching technique, enrollment data at this school shows an increase by 16% (Herald, 2014). Through the infusion of computer-based learning, students and teachers can connect with schools around the world. The Jesuit Virtual Learning Academy (located in Omaha, NE) is one such school that benefits from this innovative approach to learning. According to de Guerre et al. (2013), creative problem solving requires different ways of organizing procedures that includes shifting structures and processes. They promote a new organizational culture that encourages failure as long as it is “fail forward.” Teevan (2004) added that authentic improvement requires self-cultivation and realization that promotes the vitality of people.

As stated previously, Goldschmidt and Walsh (2013) posited that Catholic schools in urban areas comprise 40% of Catholic elementary schools nationwide. These schools are most at-risk of closing and are in need of new innovations to stabilize,

strengthen, and sustain them (Goldschmidt & Walsh, 2013). SPICE (selected programs for improving Catholic education) is a collaborative program between NCEA and the Roche Center for Catholic Education at Boston College. The joint venture assists Catholic school leaders in choosing innovative strategies and programs to increase the viability of schools. One inventive program seeks to shift governance away from the traditional parish school and transfer the authority from the parish priest to a Governance Board. These boards could take the form of advisory (decision-making for formulating, adapting, and recommending policy to authority), consultative (confer with boards and authority), or limited jurisdiction (determine decisions on some matters). Haney (2010) stated that such reconfigurations are vital to schools where there is a need to increase enrollment, decrease parish financial support, and adjust to demographic shifts.

De Souza et al. (2016) expanded on Martin-Rios's theory on external environments and highlighted the critical role that external relationships play on an organization. They found that networks and communities with similar interests spark the development of new practices. This creates an inbound flow of knowledge from potential competitors. Cooney (2012) believed that, "When any significant need in education is identified, it just takes one person to inspire others to get together to share ideas and start from grassroots to achieve it" (p. 147). Organizations must have growth and competitiveness in order to survive. Gamal et al. (2011) added that this process requires policy analysis and decision-making based upon the relationship between investments in innovation and financial outcomes.

In addition to the four governance models stated above, coalitions of Catholic schools and networks developed out of the need to remain a viable option for families.

Through the formation of consortiums, schools share resources and ideas. Herald (2014) found that schools working in this conglomerate desire to be producers and not just consumers of learning. The Archdiocese of Baltimore created the Archdiocesan Collaborative Schools (ACS) whereby all parish schools will eventually become owned by the Archdiocese. The Omaha Catholic School Consortium is a cluster of Catholic elementary schools comprised of parishes, schools, parents, and community partners working towards sustainable models. The Consortium of Catholic Academies is a non-profit organization that supports inner-city Catholic schools in the Archdiocese of Washington D.C. These schools share administrators, finances, resources, policies, and practices.

The Private Network Schools are a national association of private independent schools that share a common set of practices, beliefs, governance, and standards of mission effectiveness. These schools are independent of diocesan governance. An example of this model is the Nativity Miguel Network which serves 5,000 students in sixty-four schools throughout twenty-seven states (Goldschmidt & Walsh, 2013). A less common model for Catholic schools is the pre-school through 12th grade system. This comprises of several elementary schools and one high school within a specific geographic region. There are eighty Catholic P-12 schools in the country (Goldschmidt & Walsh, 2013).

Philadelphia, a hub for Catholic education since the 1800s, created several unique programs to meet the needs of urban education. Business Leaders Organized for Catholic Schools (BLOCS) is an innovative funding source for economically disadvantaged families. BLOCS comprises individuals, firms, companies, and foundations that donate

scholarship funding for urban students attending Catholic schools. For the 2017-2018 school year, BLOCS contributed 19.5 million dollars to more than 14,000 students (BLOCS, 2018). Friends of St. Martin de Porres is a 501(c)(3) that entered an agreement with the Archdiocese of Philadelphia to assume leadership and financial responsibility for the school (St. Martin de Porres, 2018). The nonprofit corporation utilizes a business approach to school governance and finances repairs and maintenance, as well as, renovations to the school. Scholarships and financial aid are available for families in need. The Archdiocese of Philadelphia also spearheaded the Independence Mission Schools (IMS) network comprised of fifteen Catholic elementary schools throughout the city (Independent Missions School, 2018). Similar to Friends of St. Martin de Porres, IMS is a nonprofit organization serving low income families in the greater Philadelphia area. The schools retain their individual charism and leadership teams, but converge financial issues through a central business office.

A unique paradigm is the University Partnership Schools which are Catholic schools owned by a parish, diocese, and local Catholic university. The university serves as a center for providing best teaching practices, management expertise, and development opportunities. In some cases, the university serves as the strongest financial supporter. Catholic colleges also train principals, share resources, and assist with marketing and fundraising through such programs as Lynch Leadership Academy hosted by Boston College (Smarick & Robson, 2015). In order to prevent the closing of St. Columbkille Elementary School, Boston College developed a partnership with the school and the Archdiocese of Boston. Boston College provides financial assistance through institutional advancement initiatives, technical support and computer equipment, teacher

and leadership training to staff, extra-curricular activities such as band taught by the Boston College Band, tutors, and student teachers (St. Columbkille, 2018). The University of Notre Dame spearheads the Alliance for Catholic Education (ACE) Program which trains college graduates to serve as educators in Catholic Schools at a low cost to the schools. Presently, ACE serves 13,500 students in 120 Catholic schools throughout 35 communities nationwide (Alliance for Catholic Education, 2018).

One of the most celebrated victories for Catholic education was the Jubilee Schools in Memphis, Tennessee. In 1999, Bishop Terry Steib announced the plans to reopen previously closed urban Catholic schools for the 2000 school year. Through a collaborative effort of the Catholic Diocese of Memphis and donors, economically disadvantaged families are able to receive Catholic school education at an affordable price. The coalition of schools, called Jubilee Schools, reflected the liturgical year given the same name. This bold initiative included the reopening of eight elementary schools and one middle school/high school. During the 2015-2016 academic year, 30% of the 1,500 students were Catholic and 70% came from other faith traditions (Jubilee Schools, 2018). Despite their success, the Catholic Diocese of Memphis was unable to sustain the financial burdens of operating these schools at a low cost to parents. As a result, the schools closed at the end of the 2018-2019 school year. According to the Catholic Diocese of Memphis, the Jubilee schools became charter Schools, separate and independent from the Catholic Diocese of Memphis.

Perhaps the most controversial of innovative school models is the faith-inspired charter schools. These are independent public schools run by non-profit organizations that have faith-based and values-based character education programs. Despite the

stability of public funding, there is a lack of religious education instruction, thereby making it a non-Catholic school. Charter schools use many former Catholic school buildings in urban areas.

Organizational knowledge is continually changing as employees enter and leave the firm. Kwon and Cho (2016) discovered that “who knows what” is not enough to ensure innovative performance. Rather, the sharing of knowledge across disciplines is critical to performance. These researchers proposed that knowledge creation is the result of learner-led informal discovery through studying with others, self-experimentation, and acquiring information from external sources.

Organizational innovation results from new knowledge and provides a competitive edge. Kwon and Cho (2016) concluded that new knowledge led to innovation through novel devices, different organizational structures that affect social systems, contemporary managerial interventions that change employees’ strategic behaviors, and cultural preparedness. As a result, an original organizational image emerges and systems align to accommodate the vision (Aragon-Correa, Garcia-Morales, & Cordon-Pozo, 2007).

Researchers (Dibrell et al., 2011; Francis & Smith, 1995; Ganter & Hecker, 2013; Gong, Zhou, & Chang, 2013; and Huang et al., 2013) studied the correlation between firm size, slack resources, and innovation. Slack resources refer to assets, capabilities, organizational processes, information, and knowledge a firm uses to improve efficiency and effectiveness (Dolman, van Burg, Reymen, Romme, 2014). Cyert and March (1956) introduced the concept of slack resources as a means of excess assets used to help a firm adjust to unexpected fluctuations in the market. Paeleman and Vanacker (2015) found

that slack resources are significant to a firm because they enhance innovation. When an organization possesses few excess resources, they tend to take lower innovative risks (Marlin & Geiger, 2015). They categorized slack resources into financial and human resource departments. The optimal use of slack resources is the integration of operative slack (an excess in productivity capacity) and knowledge slack (a wealth of knowledge within an organization) (Renzi & Simone, 2011). Innovation is the result of both types of resources.

Slack resources aid in organizational learning. Reserves are avenues for identification of new skills, exploration of different areas, fresh learning, and resilience to withstand failure associated with exploration (Moreno, Fernandez, & Montes, 2009). They added that organizations use slack resources to counter competitive threats and to exploit opportunities for growth. Slack resources, like organizational learning and innovation, are critical for growth and survival. Product innovation needs slack resources (Cheng et al. (2013). Slack resources are a continual problem for Catholic schools where finances are in short supply. This significantly decreases innovation and upgrades to teaching and managerial practices.

The life cycle of an organization affects slack resources and innovation. According to Dibrell et al. (2011), organizations in the early stages (Phases I and II) seek growth and exhibit high levels of innovation. As the firm matures (Phases III and IV), more resources become available for initiatives, however, complacency and inertia can occur and prohibit organizations from overcoming change. Francis and Smith's (1995) research concluded that the older the company the more likely past successful experiences limit growth and create reluctance among employees to be creative. During

the later stages of the life cycle, innovation decreases as a result of low emphasis on strategic planning and more emphasis on bureaucratic and mechanic styles of administration (Dibrell et al., 2011).

The size of the firm also affects innovation. Ganter and Hecter (2013) found that larger firms possess more knowledge, capabilities, and resources along with increased complexity and division of labor. However, this could lead to a decrease in the amount of attention employees receive and a difference in power and structure which hinder growth (Gong et al. (2013). Through consortiums and consolidated efforts, Catholic schools are to draw upon new approaches, funding streams, staffing options, and governing structures.

Other barriers to innovation are a lack of awareness or knowledge, a deficiency of good and relevant data on how organizations perform, the hierarchical and bureaucratic style of businesses, and fear of divergence leading to a lack of willingness to try something new (Carstensen and Bason, 2012). Additionally, tension may arise between creativity and implementation of new ideas. Gong et al. (2013) compared exploitative tension (selection and implementation) and exploration tension (search and discovery) and concluded that both assist in cultivating internal operations and meeting external demands through improvement in products, procedures, and services. Exploitative innovations meet new and emerging customers and markets that differ from existing products. These innovations meet the needs through enhancements in existing technology and functions that differ from competitors (Chang and Hughes, 2012). However, they cautioned that a balance of innovations must be kept in order to eliminate over commitment.

In order to combat these potential pitfalls to innovation, de Gueree et al. (2013) developed a new organizational model that encompasses three goals. The service goal offers lifelong learning opportunities to individuals, communities, and organizations. The sustainability goal delivers cost effective programming that adds value to the institution and community. The quality of work life goal provides a balanced workload, through flexible and supportive environments, which maximizes the potential of each worker.

As noted, organizational innovations are complex. Changes affect the life cycle of an organization through structure and process which is subject to the aging process (Armbruster, Bikfalvi, Kinkel, and Lay, 2008). They added that these changes effect traditional organizational structures, business processes, and relationships with other companies.

Summary and Conclusions

There is widespread literature available on life cycle stages, innovation, organizational learning, and Catholic education. Despite the extensive research on Catholic education, there is little information regarding the life cycle of Catholic schools in relation to innovation and sustainability. This is a critical gap in the literature because Catholic education can trace its' roots to 1606. Although the number of schools dramatically decreased over the past 50 years, a substantial amount, primarily in the inner city areas, continue to serve underprivileged and immigrant children as they did over 100 years ago. This is a unique factor of Catholic education and significant to the role the schools hold in serving as a foundation for educational, religious, and social activities in urban areas.

Internal and external environmental changes, primarily the dramatic decrease in religious sisters and suburbanization, greatly affected the traditional Catholic school system and left it floundering for stability and viability. Also a prevalent threat is the creation and rise of urban Charter Schools. However, emergent research highlights rudimentary innovative practices in Catholic schools regarding a shift in governance styles, technology-based learning, and collaboration among various stakeholders.

Catholic urban, parish, elementary schools appear to be the weakest fraction of the Catholic school system. In response to this dilemma, a variety of creative alternatives begun to appear dating back several decades. Collaborative efforts involving Catholic universities, community partners, corporate sponsors, and parents are promising a stronger and vibrant future for Catholic education.

This study explored the gap in literature relating to Catholic education and life cycles. With a vast tradition of academic excellence in the United States, Catholic schools provide volumes of valuable information regarding practices and traditions on academic excellence and success. However, few studies merge the educational and life cycle business models which could generate a sustainable and justifiable reason for Catholic schools to continue. Critical to this study was the incorporation of organizational learning. While past literature touched upon this topic, it was not done in the context of the life cycle of Catholic schools. This merger of themes provided vital guidelines for future practices in Catholic schools.

Chapter 3 described methods used to assess the significance of organizational learning and life cycle stages on innovation in Catholic schools. Findings from this quantitative study provided information as to the relationship these factors have on the

vitality of Catholic schools. This chapter also highlighted the instruments used to measure organizational learning and innovation.

Chapter 3: Research Method

Introduction

This quantitative study examined the relationship among organizational learning, life cycle, and innovation in Catholic schools. Through the literature review, researchers indicated that organizational learning promotes innovation, through infusion of new knowledge with traditional practices, which fosters sustainability (Akgun, Keskin, & Byrne, 2012; Camison & Villar-Lopez, 2011; & Hailekiros & Renyong, 2016). As with all living organisms, organizations transition through different phases based upon crisis, challenges, and obstacles from internal and external environments. This evolution affects the dynamics and vitality of an organization (Miller-Stevens, 2016; Tavassoli, 2015). Catholic schools serve as the largest private school system in the United States (Przygocki, 2013) and save the federal and local governments substantial amounts of money (Walsh, 2012). Over the long history of Catholic education in America, which spans over two centuries, school administrators adapted to the changing times. Their presence, as well as their demise, continues to be noteworthy in the education of future citizens.

Research Design and Rationale

For purposes of this study, the predictor variables were organizational learning and life cycle. Organizational learning incorporates new information from individuals and groups within the entities. Based upon this knowledge, employees can implement innovation through the development of insights, interpretation of new meaning, integration of new products or processes, and institutionalization of the latest procedures into the organization's infrastructure (Jenkin, 2013). The life cycle provides for periods

of improvement, structural changes, and modifications to existing practices (Nordstrom, Coi, & Llorach, 2012). Innovation, the outcome variable, materializes as a result of organizational learning. Agency leaders enhance awareness when they identify challenges and crisis that plague an organization. Upon consciousness, employers take action to alleviate organizational failure.

In order to determine the relationship among organizational learning, life cycle, and innovation, a nonexperimental research design was implemented. The purpose of the organizational learning survey was to determine the individual and group dynamics in obtaining new information and using subsequent insights in the decision-making process. The relationship between organizational learning, life cycle, and innovation was examined. The purpose of the innovative survey was to determine if organizational learning and life cycle predicted innovation in Catholic schools and, if so, the nature of that prediction. The regression equation, if significant, allowed administrators to predict the innovation of other schools based on their organizational learning and life cycle.

A survey design was selected to assess the association and relationship among the predictor variables and the outcome variable. This design was a preferred type of data collection for this study based upon the prediction of organizational learning and life cycle on innovation in Catholic schools. Because it was not possible to manipulate organizational learning and life cycle of an entity, an experiment was not possible. As a result, a quasi-experiment was not indicated because there was no comparison of differences between groups. Due to the nature of the study, the research was not longitudinal and could not measure innovation at different life cycle stages in each individual school. Therefore, a cross-sectional approach was used to examine a variety

of Catholic schools throughout the life cycle. Information obtained could advance knowledge in the field of organizational learning and life cycle and make predictions for innovation and sustainability for the future of Catholic schools. While Industrial and Organizational Psychology strategies are used in for-profit agencies and noneducation businesses, this research could expand these tactics into academia and Catholic education, thereby filling a gap that presently exists.

Methodology

Population

The target population was school administrators who govern Catholic schools located on the United States mainland and in the territory of the United States Virgin Islands. The target population size for Catholic schools was 6,352 (5,158 elementary and 1,194 high schools; McDonald & Schultz, 2018). The unit of analysis for this study was Catholic elementary and high schools as assessed by Catholic school administrators.

Sampling and Sampling Procedure

For purposes of this study, nonprobability sampling was used. In particular, snowballing sampling was applied because the population of Catholic school administrators that was surveyed for this study were easily accessible and professional relationships with administrators were known in the various states noted. According to Cohen and Arieli (2011), “snowball sampling methodology is a distinct method of convenience sampling which has proven to be especially useful” (p. 426). This sampling technique was selected because I was personally familiar with administrators who were likely to respond to the survey due to their commitment to organizational excellence. They were able to recommend other participants, with similar commitment, which

enabled the size of the sample to increase significantly. The Catholic school network was widespread and contained many administrators. Therefore, participants knew many possible recruits.

The sample was drawn from initial contact with various religious communities that own and/or operate Catholic schools. Participants in these religious communities recommended other Catholic school administrators whom they believed would be responsive to the survey. The sample frame included administrators of current operating Catholic schools that serve children in grades Pre-K – 12 with school configurations comprising Pre-K-12, Pre-K-8, 7-12, or 9-12. Catholic schools were located on the United States mainland or in the territory of the United States Virgin Islands. To enhance the generalizability of the results, data was collected from schools situated in urban, suburban, and rural locations. Exclusion criteria was residential schools, non-Catholic institutions, nonadministrators, and Catholic schools outside the United States mainland and United States Virgin Islands. To determine the sample size necessary for this study, the effect sizes found by Davis et al. (2002) were examined. They reported effect sizes varying between .07 and .17; therefore, an effect size of .15 was selected to determine sample size. Standard alpha probability of a Type I error was set at .05 and the power (the probability to reject a false null hypothesis) was set at .80. The statistical test was linear multiple regression: fixed model, R^2 deviation from zero. Using G*Power 3.1.9.2, a sample size of 150 was determined.

Procedures for Recruitment, Participation, and Data Collection

A list of six potential Catholic school administrator participants was developed. This included key administrators who work in schools encompassing a variety of

geographical locations, school configurations, and life cycle stages. This list was comprised of six administrators (three men and three women) who were connected to a multitude of other principals. Four of the individuals were members of religious communities. The remaining two were lay people. Two individuals ran high schools, two individuals ran elementary schools, one was a pastor of a parish, and one was the Executive Director of a Catholic neighborhood center. Of the six key respondents, three worked in urban areas and three worked in suburban communities. Three of the schools served low-income families, one school served middle class families, and two schools served affluent families. All six participants had been involved in Catholic education for over 15 years. Three of the individuals were affiliated with Catholic schools in various states. The other three individuals had a tighter network of schools which included an urban setting, an Archdiocesan region, and suburban and rural settings. The members of the religious communities (of which there were four different congregations) included two religious sisters, one religious priest, and one religious brother.

This list represented a small fraction of the total sample needed for the study. Participants on this list recommended additional respondents based upon the sample criteria. For example, those associated with religious communities requested participation from their congregation via an email. In three of the four cases, the religious communities had previously merged with others who were from the same order but located in different regions throughout the United States. The merger was the result of reduction in membership numbers. Therefore, it was possible to have participants from regions of the U.S. that were not yet identified in the study. For example, one community had merged with an order in Michigan and another with an order in

California. In the case of the principal in the Archdiocesan system, he invited administrators from other dioceses throughout the state. This provided diversity in the type of school, configuration, and setting. One participant, the parish priest, previously served on his religious order's provincial council. This position afforded him the opportunity to visit all the schools within the province. As a result, he was able to recommend participants from a variety of these schools.

Halfway through the study permission was granted by the IRB to allow the survey to be posted on Social Media. Two individuals, who hold positions at Catholic universities and work directly with Catholic school principals, posted the survey on their website. This increased the pool of participants and ultimately the number of surveys completed.

A general introduction of the study and a request for participation was sent via email (Appendix A). Participants were asked to identify other key Catholic school leaders willing to participate in the study. Key demographic information acquired and reported was status (religious or lay person), gender (male or female), teaching experience (number of years taught in a Catholic school), school experience (number of years worked in the present Catholic school), business experience (work outside of academia), description of school (Pre-K-8, Pre-K-12, 7-12, 9-12), location of school (urban, suburban, or rural), administration experience (number of years as head of school), and occupational history (other than education).

Participants provided informed consent as the initial part of the online survey (Appendix B). The informed consent served as a gatekeeper to the survey created in Google Forms. Access to the survey was allowed through skip logic if informed consent

was granted. Data was collected via three surveys which include the Organizational Learning Scale (OLS) (Kale, Singh, and Perlmutter, 2000& Edmondson, 1999), Organizational Life Cycle (OLC) (Lester, Parnell, & Carraher, 2003), and Organizational Innovation Scale (OIS) (Miller & Friesen, 1983). In addition, information was gathered through demographic questions. Participants exited the study by clicking submit. There were no debriefing procedures because there were minimal risks involved in the survey. No follow-up procedures were required for the study.

Instrumentation and Operationalization of Constructs

For this research, the three instruments used were organizational learning scale (OLS) as the measure for organizational learning, organizational life cycle 5-scale (OLC) as the measure of organization life cycle, and organizational innovation scale (OIS) as the measure for innovation. The surveys were combined into a single online questionnaire prefaced with the informed consent and followed by demographic questions. The purpose of the demographic questions was to describe the participants.

Organizational learning. Organizational learning is the capability of an organization to process knowledge; to create, acquire, transfer, and integrate knowledge in order to modify behavior with the intent of improving performance (Camison & Villar-Lopez, 2011). The OLS measured perceptions about the organization as a learning entity. The instrument was used with administrators, division supervisors, and teachers and explored the relationship between organizational learning and organizational innovation. Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) created a survey using questions taken from organizational learning measures by Kale et al. (2000) and Edmondson (1999). The newly developed OLS was comprised of four items. Two items

were taken from Kale et al.'s survey and two from Edmondson. The four-item instrument examined behaviors of individuals, management's influence, and the perception of how well the organization met the needs of various groups. A 5-point Likert scale was used with anchors of 1 = "*very strongly disagree*" and 5 = "*very strongly agree*."

Sample items in the survey included: "The organization's members have acquired some critical capacities and skills that provided competitive advantage over the last three years" and "Organizational improvements have been influenced fundamentally by new knowledge entering the organization over the past three years." Garcia-Morales et al. (2007) used Lisrel 8.30 and confirmatory analysis on each construct found in the OLS and OIS. In order to confirm reliability, they "confirmed that the factor loads should be higher than 0.4 and significant ($<1.96; p < 0.05$) and individual reliability was above 50%. Once the individual reliability of each indicator was assured, they studied the composite reliability of each whole scale by applying the Cronbach alpha, composite reliability >0.7 and average variance extracted >0.5 " (Garcia-Morales et al., p. 305). "The confirmatory factor analysis used to validate the scale was $X^2 = 4.04$, RMSEA = 0.05, NFI = 0.99, NNFI = 0.99, and CFI = 0.99" (Garcia-Morales et al., p. 306).

Organizational life cycle. Life cycle is the evolution of an organization from conception to death or reinvention based upon innovation and environmental factors (Elsayed & Paton, 2007). The OLC 5-Scale was used with managers of organizations to help identify organizational life cycle stages. This knowledge and awareness assisted in decision-making with an ability to choose a competitive course of action. The scale was based upon managers' perceptions of their organization at the present time. Not all

leaders chose to move forward; some opted to return to a simpler and more innovative form of business (Lester, Parnell, & Carraher, 2003). Child (1972) proposed that managers' knowledge of the life cycle stage could assist in decisions regarding competitive strategies.

The OLC-5 examined the relationship between life cycle and the strategy taken by organizations which included first mover, second mover, segment controller, breadth, uniqueness, and efficiency (Miles & Snow, 1978). The original OLC-5 scale (Lester et al., 2003) contained 53 items which measured firm size (small to large), ownership (few to many), heterogeneity of markets (niche to varied), power (hands of power to wide distribution), structure (simple to complex), specialization and differentiation (some to high), decision-making (centralized and simple to decentralized and complex), and participation in decision-making (none to high). Results from the OLC pilot test led to the elimination of 33 irrelevant items (Lester et al.). The remaining 20 items were divided into five stages (existence, survival, success, renewal, and decline) with four items per category. A five-point Likert Scale was used with anchors of 1 = *strongly disagree* and 5 = *strongly agree*.

Sample items in the survey included: "Our organization is small, both in size and relative to our competitors." "Our structure is centralized with few control systems." According to Lester et al., there were six possible outcomes. An organization fell into one of the five stages (first is existence, then survival and renewal, then renewal, then renewal and decline, and finally decline) or a 6th cluster indicating that the organization was not clearly in any given stage. The organization was assigned a single cluster based on the cluster with the highest score. "Results were obtained from cluster analysis

utilizing Ward's method and ANOVA's comparing variables across the clusters. Based upon the distance between initial cluster means, the best support was found for a six-cluster solution" (Lester et al., p. 346). Results were determined based upon the distance from the mean in the areas of strategy, organizational life cycle, and performance satisfaction.

Reliability and validity were assessed by the correlation matrix which weighed convergence and discrimination (Bagozzi, 1981). "The coefficient alphas (Cronbach 1951) for the scales range from .57 to .85 indicated that the scale had an acceptable level of internal consistency, an important indication of reliability" (Lester et al., 2003, p. 345). Intra-correlations within the OLC 5 - Scale were moderately high and consistent (.71) and suggested convergent validity (Campbell & Fiske, 1959). Inter-correlations within the OLC – 5 Scale was substantially lower and consistent (.31) which suggested discriminant validity (Campbell & Fiske, 1959; Churchill, 1979). Fornell and Larcker (1981) recommended a ".50 benchmark for establishing convergent validity" (p. 46).

A cluster analysis, using six clusters, was used to measure life cycle. This included Cluster (early stages of an organization), Cluster 2 (middle stages), Cluster 3 (Renewal (need for growth), Cluster 4 (renewal and decline), Cluster 5 (decline of an organization), and Cluster 6 (incorporation of a variety of growth strategies). Using Ward's Method of hierarchical cluster analysis, the researchers compared variables across the clusters through ANOVA. The results indicated an organization's satisfaction with organizational performance whereby Cluster 1 was substantially below the mean with no indication for a strategy for growth. Cluster 2 was above the mean with a need for growth. Cluster 3 was below the mean but tended to pursue new markets for

innovation. Cluster 4 indicated obvious organizational problems but performance had not declined to the point of being negative. Cluster 5 had the lowest satisfaction and performance. Cluster 6 had the highest satisfaction with performance based upon the pursuit of a variety of strategies.

There was no guidance provided by the developer of the instrument for scoring purposes. The only indication given was the delineation of questions per life cycle cluster. Each cluster indicated results from the survey in regards to size of the organization, power distribution, organizational structure, and decision-making processes within the organization. Therefore, results from the multi-dimensional scale only reflected how the organization was categorized based upon life cycle stages. There was no direction on how to weight the items, other than totaling their scores.

Organizational Innovation. Innovation is a change process indicating an organizational shift of structures, processes, and invention which resulted from creative problem solving (de Guerre, Seguin, Pace, & Burke, 2013). It results from organizational learning. Garcia-Morales et al., (2007) found a correlation between individual knowledge and organizational knowledge. As an individual employee's knowledge increased, so did the organization. For it was a person's learning that contributed to the formation and expansion of organizational learning. Therefore, as organizational learning increased, innovation also grew.

The OIS used for this research was developed by Garcia-Morales et al., (2007) based upon the previous work of Miller and Friesen (1983). The three-item survey used a 7-point Likert scale with anchors of 1 = *totally disagree* and 7 = *totally agree*. Sample items included: "The rate of introduction of new production methods or services rendered

in the organization has grown rapidly” and “In comparison to competitors, the organization has become much more innovative.” The validity of the scale, based upon the confirmatory factor analysis, indicated the removal of item 1 from the survey. Thus the instrument was reduced from four items to three. The unidimensional scale yielded a high validity and reliability of ($X = 0.753$; Garcia-Morales, p. 307).

Data Analysis

According to Walden University Research Resources (2018), IBM SPSS 25 was the required version used for statistical analysis for researchers using PC/Windows. The procedures for the online survey used for this research required that participants completed all answers which went directly into a Google Form spreadsheet. The responses were copied and pasted into SPSS.

The research questions and hypotheses were:

Research Questions and Hypotheses

Research Question 1: Does organizational learning predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?

H₀₁ – Organizational learning, as measured by Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) will not significantly predict organizational innovation.

Ha1 – Organizational learning, as measured by Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) will significantly predict organizational innovation.

Research Question 2: Does life cycle predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?

H_{02} – Life cycle, as measured by Lester, Parnell, and Carraher (2003), will not significantly predict organizational innovation.

H_{a2} – Life cycle, as measured by Lester, Parnell, and Carraher (2003), will significantly predict organizational innovation.

Multiple regression was used to determine if the predictor variables of organizational learning and life cycle predicted the outcome variable of innovation.

According to Field (2012), in multiple regression it is assumed that there is a linear relationship between predictor variables and the outcome variable. However, minor deviations could affect the assumption, and therefore it was advised to examine the bivariate scatterplot of the organizational learning, life cycle, and organizational innovation variables. “Obvious outliers on a partial plot represent cases that might have undue influence on a predictor’s regression coefficient, and non-linear relationships and heteroscedasticity can be detected using these plots” (Field, p. 348).

The second assumption is normality whereby the residuals are distributed normally such as with a normal curve found on a histogram. As noted by Field (2012), if the scatterplot indicated outliers deviations from normality exist, there was not a normal distribution of scores and heteroscedasticity was possible. If this occurred “the predictor variable(s) had unequal variances” (Field, p. 876) which could result in a bias of standard errors. Therefore, the assumptions of linearity and homoscedasticity were met if the points were randomly and evenly dispersed throughout the plot (Field, p. 348).

Threats to Validity

One potential threat to internal validity was the size of the population. Secondly, the self-reported surveys may have affected internal validity. Podsakoff and Organ

(1986) found that social desirability bias may have resulted from self-reported surveys. Thirdly, the time given for the data collection may have affected internal validity. This included the time of year that the survey was administered. Schools operate by established calendars and yearly events, such as graduation, which may have impacted the administrator's ability to respond in a timely fashion. Finally, subject variability may have resulted from the level of experience among administrators, individual school's financial factors, governance styles, and different organizational life cycle stages among schools.

A potential threat to external validity may have been the selection of participants. This research utilized snowball sampling which may have resulted in oversampling or under sampling a specific network of peers which could have led to bias (Wheeler, Shanine, Leon, & Whitman, 2013). In addition, this sampling technique did not guarantee that the sample was representative of the total population (Cronise, Teixeira, & Rogers, 2016). In this study, participants were all Catholic school administrators who may have been in similar regions with comparable school histories. Through the use of nonprobability sampling, there was non-random sampling which may have resulted in more schools from East Coast suburban areas. One reason for this is the high density of Catholic schools that exist in East Coast areas, particularly in New Jersey, New York, and Pennsylvania. Convenience sampling may have ensured responses rather than risk the chance of non-responses. In addition, there may not have been ample representation from each type of school (Pre-K-8, Pre-K-12, Pre-K-6, 7-12), the various types of governance (Parish, Private, Religious Order, Inter-Parish, Independent), and

geographical regions based upon population density and the distance from the city center (urban, suburban, and rural).

Constructs provided an explanation for a particular aspect of nature. According to Peter (1981), a construct's meaning was rooted in a theory of attitudes that applies to a researcher's specific meaning. Potential threats to construct validity may have occurred due to inadequate definitions and measures of variables (Peter, 1981). In this proposed study, the product studied was people and the process of learning. This may have proven hard to determine because the learning may not have been directly observable.

Ethical Procedures

There were no foreseen risks to participants in this study. Prior to the study, the participants were administered an informed consent. This identified full disclosure of the study, the nature of the participant's involvement in the study, a list of benefits and potential risks, and the likelihood that the benefits or risks would occur. Each participant needed to sign the informed consent before beginning the study. This indicated that the participant had read and understood the nature of the study and the risks and benefits. At any time throughout the study, the participants had the opportunity to discontinue the study. At no time were participants coerced to continue in the study. The ability for participants to remove themselves from the study was designed to protect the participants and prevent any adverse effects resulting from the study.

There were no concerns about confidentiality as all information gathered was coded and all participants were assigned a unique identifier. The data was also anonymous which prevented the subject from being linked to the submitted data. Only pertinent and relevant demographic information was collected from each participant in

order to prevent a mosaic effect. All written and electronic data was protected through the use of storage passwords. This included survey responses and demographic data. The protected database had no identification information that could connect individuals with information. The data was only accessible by the researcher, dissertation chair, and committee members. The data will be retained for five years before being destroyed.

Summary and Conclusions

The preceding section focused on the research design, rationale, and methodology of the study. The predictor and outcome variables were described and connected to the research questions. Chapter 3 provided information on the instruments used to measure organizational learning, life cycle, and innovation, as well as, descriptions of the methods used to assess the significance of organizational learning and life cycle stages on innovation in Catholic schools. The target population of Catholic school administrators was identified, as well as, the sampling procedure snowballing. Based upon the target population size, a power analysis was conducted to determine the sample size necessary for the study. Informed consent procedures and data collection practices were presented.

Chapter 4 addresses the research questions and reports the findings regarding the relationship between organizational learning and life cycle on organizational innovation. The chapter presents the data analysis, obtained through multiple linear regression, and exhibits tables and figures to better summarize the findings.

Chapter 4: Results

Introduction

The purpose of this study was to analyze the relationship between predictor variables organizational learning and life cycle on the outcome variable organizational innovation in Catholic elementary and high schools located in the United States and United States Virgin Islands. Organizational learning is the process of creating, retaining, and transferring information to improve the processes and products of a firm. Life cycle is the various phases of an organization from inception to death. Each phase presents different challenges and crises that requires problem-solving and creativity for survival to occur. Through a multiple regression analysis, the variables were examined to determine if new knowledge and skills led to innovative practices. Additionally, the study examined whether a relationship existed between life cycle stages and Catholic school innovation. Organizational learning was addressed through the context of the organizational design framework (Divakaran, Neilson, & Pandrangi, 2013) and life cycle through the life cycle theory (Freeman, 1982).

This chapter contains the results of the quantitative study conducted to answer the research questions:

Research Questions and Hypotheses

Research Question 1: Does organizational learning predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?

*H*₀₁ – Organizational learning, as measured by Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) will not significantly predict organizational innovation.

Ha1 – Organizational learning, as measured by Garcia-Morales, Llorens-Montes, and Verdu-Jover (2007) will significantly predict organizational innovation.

Research Question 2: Does life cycle predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?

H₀₂ – Life cycle, as measured by Lester, Parnell, and Carraher (2003), will not significantly predict organizational innovation.

Ha2 – Life cycle, as measured by Lester, Parnell, and Carraher (2003), will significantly predict organizational innovation.

In this study, the predictor variables were organizational learning and life cycle. The outcome variable was organizational innovation. The null hypotheses posited that no relationship existed between organizational learning and innovation and no relationship existed between life cycle and innovation. The alternative hypotheses posited that Catholic schools would tend to have greater sustainability as measured by innovation.

This chapter also includes discussion regarding data analysis and how the analysis ties to the research questions. The use of tables helped to summarize the results. Multiple linear regression analysis was used to analyze the 40-question survey completed by administrators who work at Catholic elementary or high schools within the 50 United States and the Territory of the Virgin Islands. Analysis included descriptive statistics, Pearson correlation (2-tail), and ANOVA.

Data Collection

Questionnaires were sent (via Google Forms) to six Catholic school administrators who were principals or headmasters for three years or longer in schools

located within the 50 United States or the Territory of the U.S. Virgin Islands. Through snowballing technique, these participants recommended potential respondents based upon the sample criteria. In addition, the survey was posted on various social media sites which made it accessible for Catholic school administrators to participate. Upon indicating their consent to participate in the study by signing the consent form, they were directed to begin the survey.

A total of 150 Catholic school administrators completed the online consent form, demographic information, and survey between October 2019 and February 2020. The sample size necessary for this study was estimated based upon the effect sizes found by Davis et al. (2002). The sample for this study was 150; therefore, it met the sample size estimate.

The sample size of 150 Catholic school administrators was based upon the assumption that all participants worked in Catholic schools within the 50 United States or the U.S. Virgin Islands Territory. Snowball sampling was used whereby six key administrators were identified to assist in recommending other participants. It was determined, halfway through the data collection process, that using social media would boost participation in the survey. Upon approval from IRB (#10-30-19-0295169), the survey was posted on several websites affiliated with Catholic universities.

Description of the Sample

The data from the questionnaires were analyzed using SPSS version 25. Of the 150 participants, 2% preferred not to identify a gender. The majority (64.9%) were women and the remaining 32.5% were men. At the time of the survey, the respondents' ages ranged from 29 to over 60. Most respondents (44.4%) were between the ages of 51

and 60, followed by 41-50 (27.2%) and over 60 (21.2%). It should be noted that Catholic school administrators are hired to leadership positions after several years of teaching and earned advanced degrees. Therefore, it is not surprising that only .7% of principals were between the ages of 21 and 30. Most Catholic school administrators (58.9%) held doctorate degrees, followed by 25.8% with a Master's plus additional graduate courses and 1.3% with a Master's degree.

The majority of respondents worked in urban settings (58.3%). The remaining administrators represented 35.1% in suburban schools and 6% in rural schools. There are seven different grade configurations of Catholic schools. The most common grade configuration for respondents' schools were PreK – 8 (57.6%) and 9-12 schools (25.8%). These are the traditional Catholic school models. School configurations with the lowest representation were those with grades 7-12 (4%), 6-12 (2%), and 5-8 and 6-7 (.7%).

There are a variety of Catholic school models. The traditional school model is the Catholic elementary school attached with a parish. The predominant school model for respondents was the parish school (35.8%). Diocesan/Archdiocesan and Religious Order Schools both indicated 21.9%. Private schools represented 13.2% of respondents while Inter-Parish comprised 5.3% of Catholic schools. Independent (.7%) were the least represented. Table 1 depicts the various school settings, grade configurations, and school models of the respondents.

Table 1

Descriptive Statistics for Catholic Schools

Descriptive Characteristic	Frequency	%
Setting		
Urban	88	58.3
Suburban	53	35.1
Rural	9	6.0
Configuration		
PreK – 8	84	57.6
9 – 12	39	25.8
PreK – 12	13	8.6
6 – 12	3	2.0
7 – 12	6	4.0
5 – 8	1	.7
6 – 8	1	.7
School Model		
Parish	54	35.8
Diocesan/Archdiocesan	33	21.9
Religious Order School	33	21.9
Private	20	13.2
Inter-Parish	8	5.3
Interdependent	1	.7

The majority of Catholic school administrators spent their career in Catholic school (63.6%) while 15.2% split their career between Catholic school, public school, and the business world, and 11.9% worked in both Catholic and public schools. The majority of respondents worked in Catholic schools from 6-10 years (17.9%). There was a similar distribution of participants who worked over 40 years (13.9%) with those who

worked 11-15 years (13.2%), 16-20 years (13.2%), and 21-25 years (13.2%). The lowest years worked in Catholic schools by administrators were 36-40 (10.6%), 26-30 and 31-35 (6.0% each) and 3-5 years (5.3%).

Catholic school administration spanned in years of working from 3 to over 40. Most Catholic school administrators served as heads of school for 6-10 years (30.5%). Other ranges were 3-5 (14.6%), and 16-20 years (11.9%). Approximately 10% were administrators for 21-25 years and 9.3% served for 31-35 years. The fewest number of years were 11-15 (8.6%), 26-30 (6%), 36-40 (6%), and over 40 (2.6%).

Despite the long history of Catholic education in America, the age of schools varied tremendously. Seven schools have existed over 100 years, while 12 schools have run for 71-100 years. Twenty-five schools have existed from 41-70 years while 102 schools have been operational for 11-40 years. None of the respondents worked at new schools (10 years or younger).

Table 2 provides demographic statistics on the age of schools and the number of staff members. This is indicative of the size and longevity of the respondents' schools. Only three Catholic schools (.9%) employed over 150 employees. Eighteen schools (2.1%) employed between 121 and 150 employees, while 47 schools (5%) employed 91-120 staff members. Twenty-five schools (8%) employed between 61 and 90 employees and twenty-seven schools (35%) had between 31 and 60 workers. The schools with the smallest faculty size (49%) had between 1 and 30 employees. As a result of the longevity of Catholic education in America, a great diversity exists among schools in regards to size and age. The majority of schools had moderate sized faculty with 20 – 30 faculty members.

Table 2

Descriptive Statistics for Number of Staff and Age of School

Demographics	<i>N</i>	Minimum	Maximum	Mean	Std. Dev.
Staff Employed	148	11	205	39.59	28.75
Age of School	146	3	172	78.71	40.71

Table 3 displays the psychometric characteristics for the three scale scores (organizational learning, organizational life cycle, and organizational innovation). The Cronbach alpha reliability coefficients for the organizational learning scale, organizational life cycle scale, and organizational innovation scale were all $> .80$. According to Cronbach (1951) and Diedenhofen, & Musc (2016) the scales had adequate levels of internal reliability.

Table 3

Psychometric Characteristics for the Summated Scale Scores (N = 150)

Score	Number of Items	<i>M</i>	<i>SD</i>	α
OLS	4	17.06	3.18	.923
LCS	20	56.75	7.20	.850
OIS	3	16.25	4.58	.934

Data Analysis

Assumptions of Multiple Regression

In order to conduct multiple regression, certain assumptions must be met. The following four assumptions were addressed and met, as shown in Figure 1:

- Assumption #1: The relationship between the predictor variables and the outcome variable is linear. The scatterplot shows that this assumption has been met.
- Assumption #2: There is no multicollinearity in the data. Analysis of collinearity statistics shows this assumption has been met, as VIF scores were well below 10, and tolerance scores above 0.2 (statistics = 1.092 and .916 respectively).
- Assumption #3: The values of the residuals are independent. The Durbin-Watson statistic showed that this assumption had been met, as the obtained value was close to 2 (Durbin-Watson = 1.73).
- Assumption #4: The variance of the residuals is constant. The plot of standardized residuals versus standardized predicted values showed no obvious signs of funneling, suggesting the assumption of homoscedasticity has been met (Figure 1).

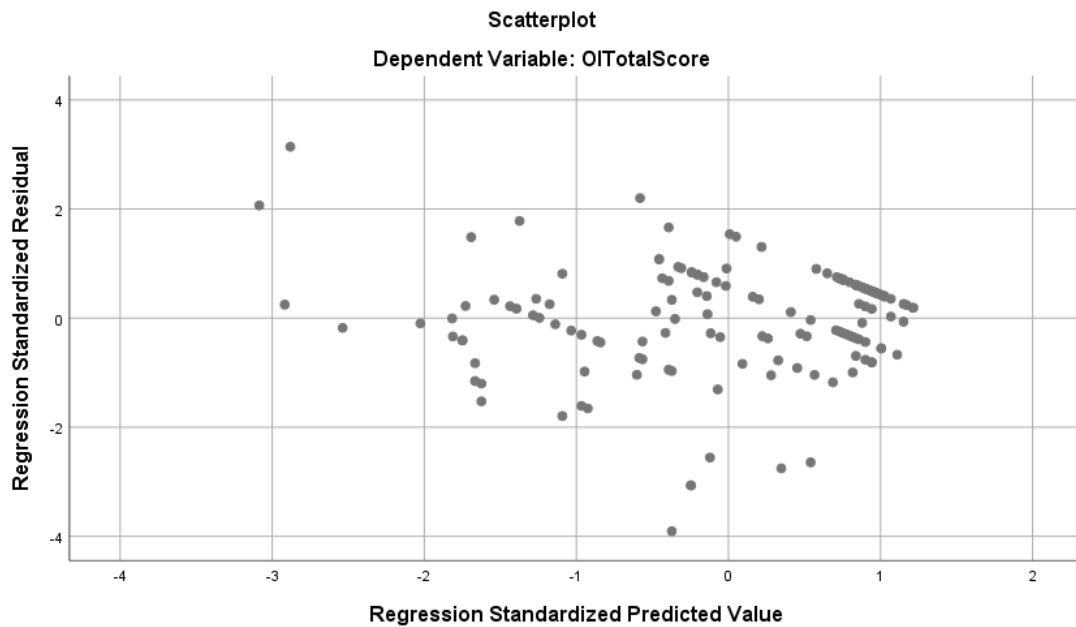


Figure 1. Regression scatterplot for organizational innovation.

The fifth assumption assumes that the values of the residuals are normally distributed. The P-P plot for the model suggested that the assumption of normality of the residuals may have been violated. However, as only extreme deviations from normality are likely to have a significant impact on the findings, the results are still valid. The assumption has been met (Figure2).

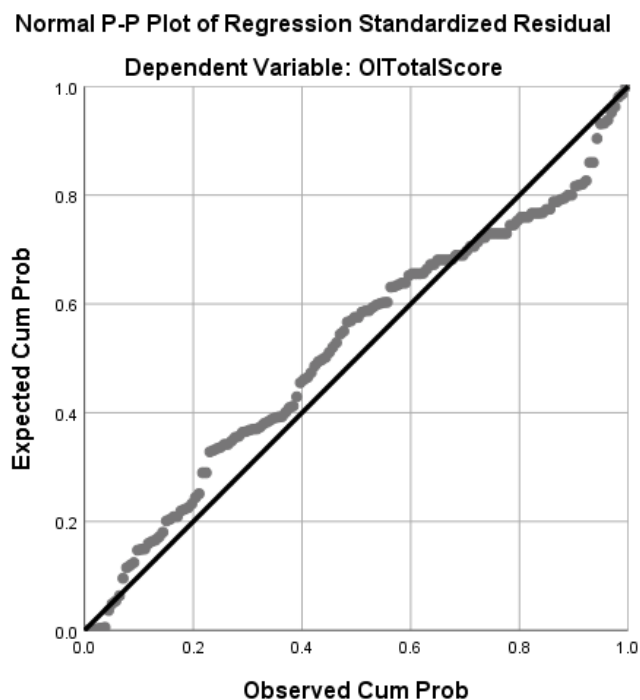


Figure 2. P-P plot for regression standardized residual.

Last, the sixth assumption assumes that there are no influential cases biasing the study. Cook's Distance values were all under 1, suggesting individual cases were not unduly influencing the model. The Pearson correlation coefficient ($r = .75$) indicated a strong correlation between organizational learning and innovation. The correlation coefficient ($r = .57$) indicated a strong correlation between life cycle and innovation.

Organizational Learning

Research Question 1 asked “Does organizational learning predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?” The null hypothesis stated that no relationship existed between organizational learning and organizational innovation. The alternative hypothesis posited that there is a relationship between organizational learning and innovation. Therefore, Catholic schools with greater organizational learning tend to exhibit greater innovation which could possibly lead to sustainability.

This section of the survey consisted of four questions on organizational learning that focused on acquisition and use of knowledge, acquisition of skills and capabilities, organizational improvements influenced by new knowledge, and the perception of the school as a learning organization. The results indicated that a high correlation existed between the four components of organizational learning as would be expected if they are measuring the same construct. Among the Catholic school administrators who responded to the survey, the means and standard deviations are as follows: $M = 4.13$ and $SD = .964$ (new and relevant knowledge), $M = 4.19$ and $SD = .888$ (skills provided competitive advantage), $M = 4.23$ and $SD = .878$ (organizational improvements), and $M = 4.51$ and $SD = .792$ (learning organization). The Pearson’s correlation coefficient indicated that none of the OL components were below 65 with $r = .873$, $r = .797$, and $r = .680$ which signified a strong positive correlation between these items.

Results from the linear regression analysis indicated that four predictor variables of organizational learning predict the outcome variable (innovation). This suggested that

organizational learning may be a sufficient predictor of organizational innovation evidencing the alternative hypothesis. There is statistical significance between the two variables of this study as indicated by the $P < .05$ finding in the data. Therefore, there is a relationship between organizational learning and innovation which supports the alternate hypotheses (Table 4).

Table 4

Organizational Learning, Life, Cycle, and Organizational Innovation Correlations, Means, Standard Deviations and Reliabilities (N = 150)

	1	2	3	4	5	6	7	8	9	10	11	12
1. new and relevant knowledge	1	.873**	.797**	.680**	-.509**	.546*	.516**	.308**	-.426**	.627**	.646**	.714**
2. skills for competitive advantage	.873**	1	.820**	.671**	-.494**	.536**	.495**	.286**	-.367**	.626**	.661**	.694**
3. org. improvements	.797**	.820**	1	.649**	-.435**	.507**	.414**	.244**	-.343**	.606**	.578**	.649**
4. learning organization	.680**	.671**	.649**	1	-.386**	.515**	.398**	.161**	-.293**	.562**	.532**	.612**
5. LC exist	-.509**	-.494**	-.435**	-.386**	1	-.602**	-.705*	-.568**	.534**	-.373**	-.405**	-.428**
6. LC survival	.546*	.536**	.507**	.515**	-.602**	1	.736**	.564**	-.554**	.556**	.550**	.574**
7. LC success	.516**	.495**	.414**	.398**	-.705**	.736**	1	.722**	-.611**	.416**	.459**	.493**
8. LC renewal	.308**	.286**	.244**	.161**	-.568**	.564**	.722**	1	-.587**	.282**	.304**	.354**
9. LC decline	-.426**	-.327**	-.343**	-.293**	.534**	-.554**	-.611**	-.587**	1	-.455**	-.437**	-.491**
10. intro of new products	.627**	.626**	.606**	.562**	-.373**	.556**	.416**	.282**	-.455**	1	.911**	.760**
11. intro of new services	.646**	.641**	.578**	.532**	-.405**	.550**	.459**	.304**	-.437**	.911**	1	.811**
12. org. innovation	.714**	.694**	.649**	.612**	-.428**	.574**	.493**	.354**	-.491**	.760**	.811**	1
Mean	4.13	4.19	4.23	4.51	12.31	12.64	10.51	9.05	12.24	5.45	5.39	5.42
SD	.96	.89	.88	.79	4.17	3.87	4.16	4.56	3.62	1.57	1.63	1.67
Cronbach's Alpha Reliability	.88	.88	.89	.94	.76	.69	.69	.80	.58	.89	.86	.95

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

* Correlation is significant at the 0.05 level (2-tailed)

Organizational Life Cycle

Research Question 2 asked “Does life cycle predict organizational innovation in Catholic elementary and high schools located in the United States Virgin Islands, New York, New Jersey, Massachusetts, Pennsylvania, and Tennessee?” The null hypothesis stated that the life cycle of an organization would not significantly predict organizational innovation. Whereas, the alternative hypothesis posited that the life cycle of an organization predicted innovation. Therefore, Catholic schools within a particular life cycle stage may not only predict innovation but also reveal which stages are more likely to predict sustainability.

This section of the survey consisted of 20 questions that examined the relationship between life cycle stage and organizational dynamics. The life cycle instrument was scored using five clusters. Each cluster contained four questions from the survey pertaining to organizational size, power, information processing, and structure. Variables were compared across the clusters based upon the ANOVA results and the distance from the initial cluster means (Lester, Parnell, and Carraher, 2003). Table 5 provided statistical data on the various scales of organizational life cycle including Exist, Survive, Success, Renewal, and Decline stages.

Table 5

Means and Standard Deviations on Five Stage of Life Cycle by Question

Category	<i>n</i>	<i>M</i>	<i>SD</i>
Exist			
• Organization is small	150	3.65	1.56
• Power rests with founder	150	1.93	1.26
• Simple structure	150	3.53	1.39
• Simple information processing	150	3.21	1.41
Survival			
• Power spread among several owners/investors	150	3.15	1.44
• Some specialization	150	3.25	1.22
• Information processing - monitoring performance	150	3.46	1.30
• Decision making includes some analysis	150	2.77	1.39
Success			
• Larger than most competition	150	2.51	1/61
• Power distributed among numerous shareholders	150	1.82	1.32
• Structure is functional and becoming more formal	150	3.31	1.27
• Information processing is sophisticated	150	2.87	1.54
Renewal			
• Widely dispersed organization	150	2.38	1.45
• Structure is divisional or matrix	150	1.90	1.30
• Information processing is complex	150	2.29	1.51
• Decisions emphasize growth and participation	150	2.48	1.51
Decline			
• Centralized structure with few control systems	150	3.13	1.32
• Information processing not sophisticated, but needed	150	2.98	1.45
• Centralized decision making, not complex	150	3.68	1.25
• Decisions be a few conservative managers	150	2.45	1.41

Cluster 1 is indicative of organizations in the early stages (existence). These organizations are small, young, and homogeneous. Their structure is informal, simple, and owner-dominated with a decision-making style that is centralized and executed by trial and error. The strategy used in the existence life cycle stage is prospector. Cluster 2 (survival) is indicative of medium-sized organizations with an environment that is more competitive. These organizations are functional and exhibit some formality as indicative

of some delegation and the beginning of information processing. The strategy used is analyzer. Cluster 3 (success) contains heterogeneous organizations with large environments. Their structure is formal, functional, and bureaucratic. Decision-making is based upon internal information processing with a defender strategy. Cluster 4 (growth) has very large environments with a heterogeneous population. The structure is divisional and decision-making has sophisticated controls and formal analysis processes. The strategy is analyzer with a combination of differentiation. Finally, Cluster 5 (decline) exhibits organizations that are homogeneous and have competitive environments. The structure is formal, bureaucratic, and mostly functional. Decision-making tends to be moderate and centralized with less sophisticated information processing. The strategy is reactor with product and services at low cost.

Results from the Pearson Correlation Coefficients indicated a positive correlation between the life cycle stages of decline and exist. The life cycle stages of Survival, Success, and Renewal are negatively correlated. A positive result in Success is negatively correlated with the Exist and Decline life cycle scales. Therefore, if a Catholic school is in the Success cycle, it is not exhibiting signs of exist and decline stages. Additionally, Pearson's correlation coefficient indicated a positive correlation between decline and exist ($r = .534$) and a negative correlation among survival ($r = -.554$), success ($r = -.611$), and renewal ($r = -.587$) on the LC scale. Additionally, survival is negatively correlated to exist. Hence, Catholic schools exhibit similar signs in the Exist and Decline stages but do not show any relationship to survival, success, or renewal. The means and standard deviations are as follows: $M = 12.31$ and $SD = 4.167$ (exist), $M = 12.64$ and SD

= 3.87 (survival), $M = 10.51$ and $SD = 4.16$ (success), $M = 9.05$ and $SD = 4.56$ (renewal), and $M = 12.24$ and $SD = 3.62$ (decline). There is statistical significance among the variables of this study as indicated by the $P < .05$ finding in this data. This suggests that life cycle is a significant predictor of organizational innovation. There is statistical significance between exist and decline stages and innovation, as well as, survival, success, and renewal stages and innovation. Therefore, life cycle is a predictor of innovation.

Organizational Innovation

This section comprised of three questions that focused on the rate of production of services, production methods, and the level of innovation of the organization. The concept of “new” to an organization referred to any service or product that occurred within the past three years. The final question looked at the rate of innovation compared to competitors. The results from the regression analysis confirmed the relationship between organizational learning and organizational innovation. They indicated that the data was statistically significant $F = 81.42$; $R^2 = 0.56$. The findings supported the hypothesis that organizational learning significantly predicts organizational innovation.

Data indicated that a strong correlation existed between organizational learning and the introduction of new products ($M = 5.45$, $SD = 1.57$), the introduction of new methods ($M = 5.39$, $SD = 1.63$), and organizations that tend to be more innovative ($M = 5.42$, $SD = 1.67$). Findings were significant at the $p < .05$ level suggesting that there is a relationship between these items and organizational innovation.

The regression analysis used to assess life cycle and innovation was significant at .000 where $F = 19.49$ and $R^2 = .41$ when examining all stages (exist, survival, success, renewal, and decline). However, when the variables exist, success, and renewal were removed, the regression results indicated that survival and decline stages predict creativity and innovation whereby $F = 47.41$, $R^2 = .36$. These findings supported the alternate hypothesis that life cycle significantly predicts organizational innovation. While the other stages (exist, success, and renewal) added little predictive value. Survival is negatively correlated to exist and positively correlated to decline. This indicated that survival, and therefore success and renewal, are positive predictors of innovation and decline, and therefore exist, are negative predictors of innovation.

Summary and Conclusion

Chapter 4 presented the results of the study through data analysis, tables, and figures. The purpose of this study was to analyze the relationship between the predictor variables organizational learning and life cycle on the outcome variable organizational innovation in Catholic elementary and high schools located in the United States and United States Virgin Islands. Findings, as determined through multiple regression analysis, revealed that organizational learning and life cycle have a positive correlation with organizational innovation. Chapter 5 presents the findings and related them to previous studies. This interpretation led to conclusions made about the study and recommendations for future studies. Additionally, limitations of the study are explained, including the generalizability aspects.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this study was to analyze the relationship between the predictor variables organizational learning and life cycle with the outcome variable organizational innovation in Catholic elementary and high schools located in the United States and United States Virgin Islands. Organizational learning is the process of creating, retaining, and transferring information in order to improve the processes and products of a firm. Life cycle is the various phases of an organization from inception to death. Each phase presents different challenges and crises that require problem-solving and creativity in order for survival to occur. Through a multiple regression analysis, the variables were examined to determine if new knowledge and skills led to innovative practices. Additionally, the study examined whether a relationship existed between life cycle stages and Catholic school innovation. Organizational learning was addressed through the context of the organizational design framework (Divakaran, Neilson, & Pandrangi, 2013) and life cycle through the life cycle theory (Freeman, 1982).

Key Findings

Findings from the study purported that there was a relationship between organizational learning and innovation. The multiple regression analysis revealed that the four components of organizational learning (new and relevant knowledge, capacities and skills that provide a competitive advantage, organizational improvements, and the organization as a learning organization) were highly correlated.

According to the multiple regression analysis, organizations in the survival stage tend to be more innovative than organizations in other stages. Survival and exist stages are negatively correlated; whereas, survival is positively correlated to the decline stage. Survival was also well-correlated with success and renewal stages. The life cycle stages are not as discrete as the life cycle model would portray. Instead they appeared to be more fluid, whereby participants perceived their schools in more than one stage at the same time.

Interpretation of Findings

Organizational learning and life cycle were measured by organizational innovation as indicated by the OLS (Garcia-Morales, Llorens-Montes, and Verdu-Jover, 2007) and the OLC 5-scale (Lester, Parnell, and Carraher, 2003). For a Catholic school to be innovative, organizational learning must take place. This results from a change in organizational knowledge (Camison & Villar-Lopez, 2011). As a result of new knowledge, employees have the opportunity to assess, plan, communicate, and implement change, thus creating a vibrant, innovative environment.

All organizations experience a beginning, existing, and ending period. They shift through life cycles as the result of the passage of time and structural changes. However, not all organizations die. Change is noted through adaptation to environmental changes, understanding patterns of life and death, and the rise of new practices (O’Rand & Krecker). The key to survival relies on the organization’s ability to identify the link between growth and decline (O’Rand & Krecker, 1990) and create newness through innovative practices. Although Catholic schools have decreased in number from 13,000

(1965) to 6,525 (2016), they have not ceased to exist (NCEA, 2016). Programs such as Cristo Rey and the Nativity Schools are examples of Catholic school innovation found in urban areas throughout the United States.

Camison and Villar-Lopez (2011) addressed the role of organizational learning through the implementation of new products and processes. The findings of this study confirmed this position which found that there is a positive correlation between organizational learning and organizational innovation. Bos et al. (2013), Filson (2002), Guoqing and Zhongliang (2011), and Kariniochina et al. (2013) agreed that innovation is at its highest in the early part of the life cycle of an organization and that successful firms are ones that continue to find innovative ways to market their product. However, findings from this study indicated that Catholic schools in the survival life cycle tend to be more innovative. De Guerre et al. (2013) and Ganter and Hecker (2014) assessed competitive advantages resulting from process and product innovations.

Theoretical Framework

The organizational design framework, life cycle theory, and transtheoretical model of behavior were used as the theoretical foundations for this study. While the organizational design framework is universal and can be used in any company regardless of industry, geographical location, or business model (Divakaran et al., 2013), it was used for this study with Catholic schools. The premise of the organizational design framework is that organizational design determines behavior at the organizational level by providing a comprehensive approach to determining governance styles, structural practices, and organizational effectiveness.

Divakaran purported that findings reveal whether organizational norms, values, and commitment are significant factors in organizational innovation. Additional factors, such as decision-making, information processing, and internal motivators establish whether an organization is receptive to innovation. Divakaran's study revealed that size of an organization and structure played a significant role in decision-making. This affected whether innovation occurred.

The null hypothesis of this study was that there is no relationship between organizational learning and innovation. In keeping with the findings of Senge (1990), this study's findings revealed that there was a positive correlation between organizational learning and innovation whereby individual learning and group learning have a two-way relationship. As a result of individual learning, shared new knowledge, and expanded thought processes among colleague, new modification of behaviors and adaptation to new internal and external stimuli occurs (Garvin, 1993).

Organizational Learning

All four components of organizational learning were highly correlated with innovation. The findings revealed that new and relevant knowledge, skills that provided competitive advantage, organizational improvements, and the school as a learning organization predicted organizational innovation. The findings from this study showed that Catholic school administrators believe that organizational learning predicted innovation through the use of new knowledge (71%), skill that allow for competitive advantage (69%), and organizational improvement (65%). The regression analysis confirmed that organizational learning can predict innovation.

Organizational Life Cycle

According to life cycle theory life and death are a natural part of any organization and all agencies pass through beginning, existing, and ending stages. However, death does not automatically signify the ending of an organization. It can be a time of renewal and rebirth (O'Rand & Krecker, 1990). Rand and Krecker also contended that organizations can avert death through innovative practices. The key to survival is the ability to identify the link between exist and decline. This allows organizations to create new products and services to remain competitive.

The second null hypotheses of this study was: A relationship does not exist between life cycle and innovation. Consistent with the findings of Freeman (1982), a positive relationship existed between life cycle and innovation. As indicated in Chapter 4, findings revealed that life cycle predicted innovation. By contrast, Catholic school administrators' perceptions supported a correlation between life cycle exist and life cycle decline and that there is a correlation between the life cycle exist (1%) and decline (53%) and that survive, success, and renewal are well-correlated.

Organizational Learning Findings

Data analysis revealed that the four components of organizational learning were highly correlated. It is not surprising that organizational learning was linked to innovation. The literature revealed a relationship between the two and the study confirmed that new learning influences innovation. This is in keeping with findings by Hean, Willumsen, Odegard, and Bjorkly (2015) that learning and growth foster innovation. The research conducted by Goldschmidt and Walsh (2013) and Haney

(2010) coincide with the findings of this study whereby Catholic schools need to reinvent, through effective strategies and governance styles, themselves in order to stay competitive.

Life Cycle Findings

The life cycle stages of success, survival, and renewal supported innovation. However, life cycle stages of decline or exist restricted innovation. It appeared that the five scales were more fluid than initially believed; however, the results did not specifically indicate that. Instead, the results indicated that Catholic school administrators did not view their institutions as categorical, as the life cycle suggested, or the perceptions of the participants were imperfect. This was indicative in results that exhibited schools being in more than one life cycle at the same time.

It can also be concluded that Catholic schools themselves are somewhat fluid as they move in between cycles. For example, a school may exhibit signs of decline while also showing signs of survival. There also may be implications for using the life cycle in an academic setting. Perhaps results from business organizations are more predictive in nature.

Limitations of the Study

While conducting this study, certain limitations to the generalizability were noted. These limitations were a) geographical location, b) diversity in governance style, c) school configuration, and d) size of the school.

With the exception of a small number of schools located in the United States Virgin Islands, the majority of the schools were located in the Mid-Atlantic United

States. This included New York, New Jersey, Pennsylvania, and Massachusetts.

Historically, this area of the country has older and more established. Most of the schools were urban (58.3%) or suburban (35.1%) and the findings indicated very little representation from rural Catholic schools (6%). Secondly, there was a great variety in schools based upon governance structure. The majority of the schools were parish-based schools (35.8%) with the seat of power being with the pastor of the parish. This differs greatly, in terms of ownership, from Religious Order Schools (21.9%), whereby the power lays in the hands of the religious community that sponsors the school. There was a total of seven different types of school configurations which impacted the generalizability of the study. The majority of responses were from administrators who worked at PreK-8 schools (57.6%) or 9-12 school (25.8%). However, other grade levels schools, such as 6-12 (2%), 7-12 (4%) and 5-8 and 6-8 (both at .7%) may not be fully represented in the study. These varying factors may affect the generalizability of the findings.

Recommendations for Future Research

Subsequent research could include a forced field analysis whereby each item in the life cycle scale is measured against a particular stage, such as success. This would prove helpful when planning for improvement whereby a school would be able to determine where they were in a continuum and what was needed to get to the desired result. For example, if the school is in decline, what would it take to get to the success stage? In addition, future research could assess each individual innovative score and determine which score specifically impact the life cycle stage. Therefore, if a school wanted to be in the renewal stage, which implementation plan for innovation would work

best? This research would benefit Catholic schools who are looking for ways to become more innovative by having specific suggestions, based upon data analysis, readily available.

Secondly, future studies could account for the variation in language among educators. More explanations and examples could be provided to make the survey more comprehensible for Catholic school administrators who may be unfamiliar with business and Industrial and Organizational Psychology terminology. This may prevent confusion and perhaps yield less fluidity in the result of the life cycle survey questions.

Based upon the strengths and limitations of this study, in addition to the literature review in Chapter 2, the section explored recommendations for future study. First, that participants reflect the Catholic schools located in all 50 states, rather than just several states. Secondly, if this survey were administered through Diocesan/Archdiocesan Superintendents' Offices, it may yield a greater response which would equally reflect each school based upon type of school and school governance structure.

In addition, Catholic school administrators typically do not participate in studies of this nature. Surveys are education-based with topics such as school culture and climate, leadership styles, and curriculum-based questionnaires. An introduction explaining the nature of an Industrial/Organizational Psychology study would prove helpful in assisting administrators with the different terminology, as well as, the different purpose.

In context of the hypothesis, organizational learning predicted organizational innovation in Catholic elementary and high schools. This finding can lead to several

positive implications. First, Catholic schools traditionally serve many impoverished immigrant children living in urban areas. Therefore, the findings could create positive social change by allowing faltering Catholic schools to return to their primary mission and roots through the application of new knowledge and practices. Secondly, this would allow the Catholic schools to remain competitive. However, it is critical to note that the financial situation of many urban schools is plagued by debt and low enrollment. This can hinder innovation. If this study were repeated on a larger scale, the findings may prove beneficial to struggling urban schools. Therefore, additional studies could result in changing Catholic school systems, thereby, giving them greater innovation and sustainability. This would greatly impact individuals, families, and communities.

In context of the hypothesis, life cycle significantly predicted organizational innovation. However, this finding had implications regarding the life cycle stage. The data revealed that 40% of innovation is related to life cycle stages. The most notable of these stages were exist and decline, which were positively related. Schools in these two stages are more likely to show signs of innovation. This has positive implications for social change because failing urban schools seek innovation to rebound. If sustainable, these schools provide the quality, private education for children from low-income families, thereby enhancing their chances for upward economic and social mobility.

Another implication is a plan for improvement. Through exploring the options for innovation, Catholic schools at any life cycle stage could seek new ways to enhance their educational product. Innovation, as an outcome variable, could result from administrators critically assessing their schools to determine areas of change. This

process could provide input from all stakeholders, thus creating an atmosphere of transparency and openness. If such a process were to occur, there could be increased ownership in the school and more commitment. Both factors would enhance innovation and sustainability.

Conclusions

This study was critical because Catholic schools play a pivotal role in United States education. They serve as the largest private school system (Przygocki, 2013) and save local and federal governments considerable amounts of money (Walsh, 2012). For over two centuries, Catholic schools have served families seeking an alternative to public schools. The demise of Catholic education in America is well-documented with approximately 47% of the schools having closed within the last 50 years (Nuzzi, Frabutt, & Holter, 2012). Results from this study indicated that, despite the longevity of Catholic education in America, there is an array of ages of schools. Of the 150 participants, 102 schools have been in existence between 11 and 40 years. This is interesting to note as these schools were opened post Vatican Council II (mid-1960s) which was indicative of when schools began closing.

Findings from this study indicated a correlation between organizational learning and innovation, as well as, life cycle and innovation. This knowledge can assist Catholic school administrators in creating a viable vision for the future of their schools. Additionally, such findings draw attention to the stage that a school operates within which can determine future measures to take in order to increase competitiveness and sustainability, thus paving the way for a viable Catholic school.

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Appendix A: Permission to Use OLS and OIS

Permission from Developer to Use Instruments – Organizational Learning Scale and Organizational Innovation Scale

Susan Diverio

Good Afternoon Dr. Garcia-Morales:

My name is Susan Diverio and I am a graduate student at Walden University in the United States. I am seeking permission to use the two surveys - Organizational Learning Scale and Organizational Innovation Scale. My dissertation is on the relationship between organizational life cycle and organizational learning on organizational innovation.

I would greatly appreciate your permission so that I can move forward with my study.

Many thanks,

Sue

•

Víctor Jesus García-Morales to you

Dear Susan, it is a pleasure. You can use without problem the Scales. It is an honour.

Best Regards,

Victor García-Morales

Appendix B: Permission to use LCS-5 Scale

Permission from Developer to Use Instrument - Life Cycle Scale-5

Good Afternoon Dr. Parnell:

My name is Susan Diverio and I am a graduate student at Walden University in the United States. I am seeking permission to use the Life Cycle Scale-5. My dissertation is on the relationship between organizational life cycle and organizational learning on organizational innovation.

I would greatly appreciate your permission so that I can move forward with my study.

Many thanks,

Sue

Permission to use survey



JP

Dear Susan,

Thank you for your email. I have no concerns with your proposal. I wish you the best with your research.

Best,
John Parnell

John A. Parnell, Ph.D.