

# Entrepreneurial leadership and entrepreneurial orientation: A framework for entrepreneurially oriented higher education institutions

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## Structured abstract

**Background:** The role of entrepreneurial leadership (EL) and entrepreneurial orientation (EO) in organizations is becoming critical in this dynamic environment; however, there are still limited studies on the relationship between EL and EO and their relevance in the academic context.

**Purpose:** This study aims to determine the relationship between EL and EO within the context of Catholic higher education, specifically, the Philippine North Society of the Divine Word (PHN-SVD) schools.

**Participants:** The participants were 156 faculty members and non-teaching personnel of the three PHN-SVD schools in the second semester of school year 2021–2022.

**Research design:** Grounded on the positivist philosophy, this study used a descriptive-correlational research design.

**Data collection and analysis:** Data was gathered using a questionnaire for EL and EO. The EL questionnaire is an 18-item survey and the EO survey covers the five EO dimensions: autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness. The data was treated quantitatively using descriptive and inferential statistics. Weighted means and Pearson *r* values at a .05 level of significance were used. To substantiate the analysis and discussion, observations and informal interviews were included.


**Findings:** The extent of EL and of EO of PHN-SVD schools were high. EL and EO had a strong positive and significant relationship. EL was strongly correlated with EO along autonomy, innovativeness, risk-taking, and competitive aggressiveness; along proactiveness, it was moderately correlated. EL was also positively and significantly correlated with each EO dimension. A framework for entrepreneurially oriented higher education institutions, specifically the PHN-SVD schools, was conceptualized as the output of the study. EL directly influences the entrepreneurial behaviors of the organization toward entrepreneurial outcomes.

**Recommendations:** School leaders are challenged to behave and think entrepreneurially while embracing EL and EO in PHN-SVD schools as social institutions for them to survive and serve society through their mission of educational apostolate.

## Keywords

entrepreneurial leadership, entrepreneurial behavior, entrepreneurial outcomes, competitive advantage, sustainability

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## Introduction

Research shows that entrepreneurial leadership (EL) fosters an entrepreneurial environment where ideas may grow and competitive benefits can be gained (Farrukh et al., 2019; Gross, 2020; Malik et al., 2020; Naumann, 2017), and motivates people to accomplish their company goals (Bagheri & Lope Pihie, 2013). As such, entrepreneurial leaders find better ways to use resources and abundant opportunities by reducing complexity, cap-

italizing on uncertainties, embracing learning, and recognizing opportunities (McGrath & MacMillan, 2000; Naumann, 2017). However, EL and entrepreneurial orientation (EO) have not been taken into so much account in the context of the academe (Selvaraja & Lope Pihie, 2017; Thornberry, 2006).

In this dynamic environment with growing uncertainty and competitive pressure, EL, introduced by McGrath and MacMillan in 2000, is a type of leadership required.

As explained by Kovačević et al. (2020) and P. Miller et al. (2019), EL addresses complex, social, and environmental concerns. Leaders are committed to action and value creation in the organization as creative innovators (Roundy et al., 2017; Stolze, 2020; Suyudi et al., 2020; Urban & Govender, 2017). He et al. (2017) perceived these leaders as visionaries in the ever-changing world who motivate employees toward the achievement of specific outcomes. Stolze (2020) also claimed that leaders with an entrepreneurial attitude are better able to spot opportunities, define a vision, and mobilize key resource holders. Entrepreneurial leaders are motivated and encouraged to influence and guide followers and pursue entrepreneurial opportunity-oriented behavior, face uncertainty, take risks (Mokhber et al., 2016) and show a willingness to take responsibility for the future (Renko et al., 2015). Saad et al. (2020) found that entrepreneurial leaders in the academic context have the potential for innovation, as workplace innovation and creativity are becoming increasingly important in research between the university and its external environment. Empirical studies in EL have increased at the macro-level because the characteristics of entrepreneurship are often considered a more suited purview of business administration (Ariyani et al., 2021; Ghazali et al., 2020; Roundy et al., 2017; Yemini et al., 2015).

Despite much research in this area, the role of EL in the academic context has yet to be examined. School administrators are left at the forefront of finding ways to survival and sustainability and are also expected to act and behave entrepreneurially in a turbulent environment (Chandra & Mathur, 2021; Cleverley-Thompson, 2016; Douglass, 2018; Fantauzzi et al., 2019; Jackson, 2015; Mamabolo, 2020). The determinants of an organization's efficiency, success, and long-term survival have shown that EL can inform others about its benefits. Against this backdrop, there have been studies focusing on EL alongside skills training and firm performance, but few have focused on its impact and application in the organization (Chandra & Mathur, 2021; Douglass, 2018; Fantauzzi et al., 2019; Ghafar, 2020) and EL has not been taken so much in the context of the academe (Selvaraja & Lope Pihie, 2017; Thornberry, 2006).

The significance of EL in addressing crises and challenges in organizational settings has a few studies (Ariyani et al., 2021; Bagheri & Lope Pihie, 2013; Esmer & Dayi, 2017; Newman et al., 2018; Saad et al., 2020; Virglerova et al., 2020) and there is still limited research on its impact on school practices (Fantauzzi et al., 2019; Kovačević et al., 2020; P. Miller et al., 2019; Nadelson et al., 2018; Winarno, 2016; Yemini et al., 2015). Institutional leaders are greatly challenged to design and implement programs that can contribute to school sustainability. Successful organizations stem from effective leadership skills and ways to adapt to the challenges

they face (Ghafar, 2020; Ratten & Usmanij, 2021). As mentioned by Chandra and Mathur (2021), having skills and knowledge in higher educational institutions is an advantage in this competitive society. Similarly, EO is increasingly recognized as a crucial factor in the success of organizations, yet its application in academic settings remains underexplored. While substantial research has focused on EO in business contexts, its influence on educational institutions, particularly in terms of leadership and organizational effectiveness, has not been adequately addressed. The limited literature on EL and EO in the academic sphere highlights a significant gap, especially within Catholic educational institutions. This study aims to explore this gap by examining the relationship between EL and EO in the Society of the Divine Word (SVD) colleges, seeking to understand how these concepts can enhance academic leadership, sustainability, and institutional success.

Given the strong influence of innovation and globalization, the plight of Catholic schools including SVD schools in their primary purpose on evangelization, the Catholic identity and mission of education of these schools may have been affected, if not altered, in the present-day context (Bual & Madrigal, 2018). Also, heightened by the COVID-19 pandemic, a number of private schools have been into closure, school programs were frozen if not closed, the decline in enrolment was felt due to unemployment of parents and government free tuition fees in public schools including state universities and colleges, and migration of teachers to government schools have been evident considering alluring government benefits and salaries which private Catholic schools cannot compete with. These are just some of the realities that Philippine North Society of the Divine Word (PHN-SVD) schools struggle with which may be attributed to a lack of entrepreneurial behaviors and orientation as these schools by nature are missionary schools that primarily focus on evangelization. In spite of these, SVD schools desire to continue and remain committed to their educational apostolate in providing quality education. Such a challenging situation prompts schools to be more adaptive, resilient, and innovative to survive and thrive in the dynamic environment yet keeping the core of Catholic education. This context of Catholic schools calls for a distinct kind of leadership that appropriately responds to the challenges and copes with the demands of the fast-changing environment.

Driven by all these creative disruptions and in the age of uncertainty, to be on board, institutions should be forward-thinking—be entrepreneurial (Steenkamp, 2020). Social institutions like higher education institutions face business challenges like any other industry in the economy. According to Farrukh et al. (2019), to survive, universities need to be more entrepreneurial and adaptive to cope with the increasing competition and the adop-

tion of an entrepreneurial strategy requires EL. To fill in this gap, school management and administration should lead, prepare, and orient the teachers as front liners of the system with an entrepreneurial mindset and eventually have EL embedded in the school community (Ariyani et al., 2021; Mustofa & Muafi, 2021; Newman et al., 2018). The EL model of Thornberry (2006) is believed to be the most suited model in the educational setting (Selvaraja & Lope Pihie, 2017). The concept of entrepreneurship in the academic context had been taken by various scholars focusing on developing school leaders' skills to direct organizational changes and collaborative agreements with their stakeholders (Ghazali et al., 2020). Similarly, Etzkowitz and Zhou (2017) and Guerrero et al. (2020) supported entrepreneurship as a framework for colleges and universities to help create entrepreneurial pathways in competitive and fluctuating environments leading to the creation of entrepreneurial universities.

Likewise, Jackson (2015) mentioned that school leaders must find avenues and opportunities for creative solutions to address educational issues. Organizations like schools look forward to their success and sustainability in the future. The practice of EL facilitates school effectiveness and the ability to project strong entrepreneurial activity in the educational landscape helps attain sustainability. This confirms the findings of van Jaarsveld (2020) that combining strong leadership with an EL style promotes successful school management and the survival of schools.

Truly, the tight competition in the market today has affected the academic landscape. This greatly challenges the leaders or administrators of higher education institutions to acquire entrepreneurial skills, think and behave entrepreneurially, and encourage entrepreneurial behaviors and orientation in coping with the needs of the dynamic and competitive environment to sustain and survive. It is the objective of this paper to determine the extent of this new kind of leadership through entrepreneurial behaviors of leaders towards embracing and promoting EO of educational institutions. EO views entrepreneurial behaviors and manifestation in the organization from a managerial and organizational perspective and the concept of EO can be traced from Mintzberg (1973) and D. Miller's (1983) theory on strategic decision-making which explicates that managers must be in active pursuit for new opportunities even in uncertainties. Researchers have argued that EO has three dimensions that are important to managers and leaders: innovativeness, proactiveness, and risk-taking (Covin & Slevin, 1991). However, from these theories came dominant models by Covin and Slevin (1991), Lumpkin and Dess (1996), and D. Miller (1983) such as autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness.

The study of EO in the academic setting has piqued

the curiosity of school leaders and policymakers. There is diversified empirical literature on EO grounded in Mintzberg (1973) and D. Miller (1983). Although it is clear that strategic action in the academic context differs from that in firms and other organizations, as Lumpkin and Dess (1996) argue, the basic elements that make up the concept, such as autonomy, proactiveness, innovativeness, risk-taking, and competitive aggressiveness continue to characterize as a strategic action in the academic context. To foster and encourage entrepreneurial behavior and activities in the organization, the support of managers or leaders is needed by providing the necessary tangible and intangible resources to employees, thus, leadership behavior can be considered an essential factor in increasing the EO of employees, which will improve creativity and provide crucial economic input to the organizations (Karaca et al., 2021). Moustaghfir et al. (2020) confirm that corporate entrepreneurialism translated into value activities contributes to shaping organizational attitudes, behaviors, and cultural determinants that are, in turn, conducive to better innovativeness, risk propensity, and initiative-taking. Akbari et al. (2021) and Renko et al. (2015) also show that EL has a significant and positive impact on the innovative behaviors of the organization. Thus, a manager's leadership style can play a vital role in nurturing EO in the organization (Farukh et al., 2019). Entrepreneurially oriented organizations are characterized by autonomy, creativity, and innovativeness in the organizations that contribute to school management and survival (van Jaarsveld, 2020). Studies also have explored the association between EL and EO as an opportunity to collaborate with schools' stakeholders (Ghazali et al., 2020) and as an important factor for entrepreneurial activities in non-profit contexts adjusted to the social mission of organizations in different contexts (Salahuddin, 2016).

EL is linked with innovative behavior (Akbari et al., 2021; Bagheri & Lope Pihie, 2013; Lope Pihie, Asimiran, & Bagheri, 2014; Newman et al., 2018), opportunity recognition and exploitation (McGrath & MacMillan, 2000; Renko et al., 2015), organizational performance (Crocchi, 2016; van Jaarsveld, 2020), survival (Malik et al., 2020; van Jaarsveld, 2020), and sustainability (Alghamdi, 2020; Diehl, 2016; Esmer & Dayi, 2017; Ghafar, 2020; Lope Pihie, Asimiran, & Bagheri, 2014). EL has a significant and positive impact on innovative behaviors of the organization (Renko et al., 2015; Sarwoko, 2020) which promotes autonomy, proactiveness, innovative ideas and initiatives, risk-taking, and competitive aggressiveness.

From the studies presented, EL is indirectly and directly linked with EO which leads to the performance of organizations. It is believed that when leaders are entrepreneurial, they influence organizations to become entrepreneurially oriented, which makes schools more capable of responding to the needs of society, and more

responsive as vehicles in radiating their mission in society. As schools, like the SVD schools, are considered social institutions, they play a great role in economic development and in society. The social dimension of the school shows that it can exist only within the social environment and is indeed an organ of society (Drucker & Maciariello, 2008). With its social position, schools are prompted to be accountable to society and expected to be managed well by leaders to serve the “best-balanced interests” of all the stakeholders. However, running an organization in an era of change and uncertainty, beset by constant changes and challenges brought by the disruptive environment, critically requires the right kind of leadership that lead the organizations to be proactive in embracing and exploring these technological breakthroughs for competitive advantage.

The idea of EL and EO may sound odd in the context of Catholic schools. As Taylor (2016) and Metaprofiling (2013) explicate, missionaries are great entrepreneurs, and they are more passionate and strategic, making business that makes sense. This was affirmed by John Dorr expounding that missionaries are driven by passion, think strategically, go for the marathon, focus on their customers and value statement, are mentors or coaches of teams, are obsessed with making a contribution while recognizing the importance of money, and are fundamentally driven by the desire to make meaning.

Various scholars identified the concept of entrepreneurship in the academic context to focus on developing school leaders’ skills to direct organizational changes and collaborative agreements with their stakeholders (Ghazali et al., 2020), leading beyond a classroom lesson, and performing merchandising strategies (Cleverley-Thompson, 2016; Douglass, 2018; Fantauzzi et al., 2019; Saad et al., 2020; Stolze, 2020). Furthermore, school leaders are prompt to contribute to school sustainability, and to portray significant entrepreneurial activity in the educational environment supports effective school performance, management, and survival (van Jaarsveld, 2020). Due to globalization, rivalry among organizations and enterprises rises, prompting organizations to instill an entrepreneurial attitude, which can also be seen in institutions, to improve performance and productivity (Shah & Ahmad, 2019). Like EL, an individual’s EO is equally important as a critical element in business advantage, growth, and success (Isichei et al., 2020; Moustaghfir et al., 2020; Sabahi & Parast, 2020). Being entrepreneurially oriented substantially impacts an organization’s success in discovering and executing new ideas and improving performance (Linton & Kask, 2017; Virglerova et al., 2020).

While significant empirical studies on EL and EO have focused on business and organizational settings (Ariyani et al., 2021; Bagheri & Lope Pihie, 2013; Esmer & Dayi, 2017; Ghafar, 2020; Newman et al., 2018; Thornberry,

2006), there is a noticeable gap in the literature regarding their application in the academic environment. Specifically, the interplay between EL and EO in universities, and its influence on academic activities, remains underexplored (Bergmann et al., 2018; Bual & Madrigal, 2018; Elayyan, 2021; Guerrero et al., 2020; Iyer, 2016). Despite the growing interest in these concepts within business organizations (Cai et al., 2019; He et al., 2017; Jeffers-Sample et al., 2018; Mokhber et al., 2016), few studies have examined how EO can shape academic leadership and organizational effectiveness. Furthermore, direct relationships between EL and EO constructs remain largely unexplored (Cleverley-Thompson, 2016; Douglass, 2018; Fantauzzi et al., 2019; Farrukh et al., 2019; Gross, 2020).

With the literature’s limitations on EL and EO in the academic context, this research aims to address these gaps by investigating the relationship between EL and EO within the context of Catholic higher education, specifically within the SVD institutions. By bridging this gap, the study underscores the role of EO in enhancing academic leadership, operational sustainability, and educational effectiveness in SVD colleges. Grounded in St. Arnold Janssen’s vision for education as integral to missionary work, this study highlights the importance of compassionate, proactive, and service-oriented leadership. As the sustainability of a Catholic school must be ensured (Pope Benedict XVI), it is crucial to ensure operational vitality, sustainability, and continuous improvement; it effectively and efficiently directs its resources in the spirit of stewardship (Catholic Educational Association of the Philippines and PPH Educational Foundation, 2016). Ultimately, this study contributes to understanding how EL and EO can be integrated into academic settings to foster overall school effectiveness and organizational success towards survival and sustainability.

### Statement of the problem

Considering the research gap, the study aimed to explore the relationship between EL and EO in the context of PHN-SVD schools. In response, the following research questions were addressed:

1. What is the extent of EL in PHN-SVD schools?
2. What is the extent of EO in PHN-SVD schools?
3. Is there a significant relationship between EL and EO in PHN-SVD schools?
4. Is there a significant relationship between EL and each EO dimension in PHN-SVD schools?

### Theoretical framework

EL exists at the heart of entrepreneurial leaders. This study is based on the Thornberry (2006) framework of EL in the academic context. Covin and Slevin (1991) and Gupta et al. (2004) support entrepreneurial skills and EL style which embraces communicating a vision that identifies opportunities while taking a risk, innovating, seizing

opportunities, and managing change. This study also considers autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness (Covin & Slevin, 1991; Lumpkin & Dess, 1996; D. Miller, 1983; Thornberry, 2006).

EL is a type of leadership required to survive in the face of turbulence and uncertainties. With the adoption and encouragement of entrepreneurial behaviors, educational institutions can pursue value creation, respond to changing environmental opportunities and challenges, and achieve organizational performance within the context of the institution. As social institutions, schools are better able to remain, if not be more, responsive to serve such a purpose in society if they embrace EL and EO.

Furthermore, this study is based on the functionalist theory of education. As envisioned by Durkheim, society as an organism is composed of social institutions designed to serve its purpose. Functionalism is a theoretical perspective that social structures like schools fulfill the social system (Gómez-Diago, 2020). Connected to Weber's social and economic theory, the social organization is the functioning view of the social institutions. Entrepreneurial leaders take the role of shaping social and economic opportunities (Greenberg et al., 2011).

### Conceptual framework

Aiming for the survival and sustainability of PHN-SVD schools, a distinct kind of leadership is imperative to ensure that these schools as social institutions continue to serve society and continue their missions as they remain steadfast as instruments of evangelization and as witnesses to the Word. To this end, EL, in particular, can play a crucial role in determining the organization's success. Leading entrepreneurially can potentially contribute to providing an entrepreneurially oriented institution.

The concepts, theories, and studies of EL and EO are essential in schools, serving as vehicles for transmitting knowledge and creating economic and social value. They need to be responsive, relevant, and innovative to meet the ever-changing needs of their stakeholders in society (Tolosa & Ibarra, 2018). Hence, an analysis of EL and EO for the PHN-SVD schools was done to emerge a framework for the entrepreneurially oriented higher education institutions, specifically the PHN-SVD schools, which was conceptualized as the output of the study. The application of EL and EO was not within the scope of the study, but it paved the way for its application in the future.

## Method

This study used quantitative research methods, specifically, descriptive-correlational research to determine the relationship between EL and EO of PHN-SVD schools and the relationship between EL and each EO construct.

As defined by Creswell (2012), quantitative research as a work enables researchers to identify attributes and study relationships between two or more variables. The descriptive approach is the design suitable for the study since it describes the EL and the EO of the PHN-SVD schools. Descriptive research describes conditions in the organization (Gall et al., 2007) or explains a particular phenomenon (Babbie, 2010).

The respondents were the faculty members and non-teaching personnel of the three PHN-SVD schools (referred to here as schools X, Y, and Z) who have served these schools for at least three years. This was to make sure they had enough experience and understanding of the school's culture, leadership, and operations, which are important for studying the relationship between EL and EO. Total enumeration was attempted in the study; the PHN-SVD schools had 108 faculty members and 65 non-teaching staff, resulting in 173 employees as intended respondents.

A two-part questionnaire was the primary tool for gathering the data. Its items used a 4-point Likert extent scale. The first part consists of EL scale items based on the model developed by Thornberry (2006). It includes an 18-item survey adopted from the work of Lope Pihie, Bagheri, and Asimiran (2014) which was analyzed using the structural equation modeling software IBM SPSS Amos 20. The goodness-of-fit indices were higher than 0.90, with the composite reliability indices greater than the 0.7 threshold, which confirmed the reliability of the constructs; the average variance extracted was higher than the 0.5 thresholds, indicating a high convergent validity of the study constructs (Selvaraja & Lope Pihie, 2017).

The second part consists of items about the five dimensions of EO: autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness. The five-dimensional EO construct (Lumpkin & Dess, 1996; Lumpkin et al., 2009) was adopted from Zhang et al. (2014) and consists of 18 items that were slightly modified to capture the context of the academic setting. The reliability and validity analysis of the instrument indicated that it exhibited good psychometric properties. The discriminant validity was evidenced by the value of factor loadings (all .05), the average variances extracted were all above 0.5, Cronbach's  $\alpha$  measured the reliability above 0.7, composite reliabilities were all above 0.8, and the overall Cronbach's  $\alpha$  was 0.713.

The study was carried out following the recommendations and ethical standards of the Saint Louis University-Research Ethics Committee with protocol number SLU-REC-SS 2022-011. Ethical issues such as the dignity and well-being of the respondents, their consent, and data confidentiality such as assigning pseudonyms to the names of schools to protect the identity of the respondents and schools were considered.

**Table 1.** Extent of EL of PHN-SVD schools

EL behaviors		Over-all	DE
1	Motivates us to think of innovative ways to beat the competition	3.09	HE
2	Effectively proposes new educational ideas to upper management	3.14	HE
3	Tells us where we stand vis-à-vis the competition	3.00	HE
4	Makes sure that we have the right team of people to capture these new opportunities successfully	3.10	HE
5	Displays enthusiasm for learning new skills	3.19	HE
6	Quickly takes a different direction when results aren't being achieved	3.04	HE
7	Motivates school staff to think about doing their work in new and interesting ways	3.11	HE
8	Allots time to helping school staff find ways to improve our school performance like conducting conferences, coaching and mentoring sessions, etc.	3.07	HE
9	Quickly utilizes different approaches to overcoming obstacles when the initial one doesn't work	2.95	HE
10	Demonstrates an entrepreneurial orientation at work	2.99	HE
11	Analyzes workflow, resources, processes, and procedures to see how we can do our work better, faster, and with a better impact on students' achievements	3.08	HE
12	Expects us to identify and solve cross-school problems and issues constructively	3.06	HE
13	Willingly listens to suggestions from others about how to do things differently	3.01	HE
14	Supports us in fighting for changes that will improve how the school works	2.99	HE
15	Keeps the school informed and updated on new educational trends and methods to improve students' learning and achievement	3.15	HE
16	Actively encourages school improvement suggestions throughout the school	3.07	HE
17	Takes action to implement many of these suggestions	3.03	HE
18	Keeps the school focused on its core strategy and supports new educational initiatives	3.15	HE
Mean		3.07	HE

For the face-to-face conduct of the study (whenever possible), the researcher personally delivered and asked permission from the college presidents to float the questionnaires at a scheduled time and day, observing health protocols. The online administration of the study was done through Google Forms. A default setting in the Google Form was changed to safeguard the anonymity of the respondents. Forty-eight respondents answered the printed forms while 108 respondents completed the questionnaires through Google Forms. However, 17 respondents failed to respond after exhausting all efforts to follow up their participation, hence only the actual respondents were included in the final analysis.

The researcher, being part of the administration, avoided influencing the conduct of the study. The informed consent form was explained to the respondents before the survey to ensure the confidentiality of their responses. To safeguard anonymity, the respondents were not required to write their names and were allowed to use pseudonyms.

Data analysis was done quantitatively using descriptive and inferential statistics. Weighted means and Pearson *r* values at a .05 level of significance were used. To substantiate the analysis and discussion, qualitative feedback (observations and informal interviews) were included.

## Results and discussions

The descriptive equivalents (DE) used for data analysis and interpretation were 3.25–4.00 very high extent (VHE), 2.50–3.24 high extent (HE), 1.75–2.49 low extent (LE), and 1.00–1.74 very low extent (VLE).

### Extent of EL in PHN-SVD schools

The EL of PHN-SVD schools was found to be of a high extent as shown in Table 1.

The PHN-SVD school leaders demonstrated EL behaviors to a high extent as highlighted in their enthusiasm for learning new skills, keeping the school on track with educational demands and trends, and keeping the school focused on core strategies and supporting educational initiatives. The results show that PHN-SVD school leaders practice EL, a type of leadership that is imperative in an environment challenged by change and innovation (Steenkamp, 2020), and competition and uncertainties (McGrath & MacMillan, 2000).

Considering the dynamic environment in which the schools operate, leading schools nowadays require new perspectives, insights, and more innovative and creative strategies. With this desire to learn, the PHN-SVD school leaders themselves serve as models of professional competence and affirm that they need to be equipped with professional expertise and with newer expectations

of the creative and innovative skills to cope with the demands of the present time. At present, school leaders need to embrace technological transformations and digital culture, which enable them to create, invent, and manage a learning environment that provides opportunities (Congregation for Catholic Education, 2022). In the light of the findings of the study, the school leaders are encouraged to participate in learning opportunities to upgrade their expertise through graduate studies, training, seminars/webinars, benchmarking, research engagements, linkages, and partnerships. They attend board and corporation meetings and interschool strategic planning, where they are guided and informed about the SVD thrusts and strategic direction. These are manifestations that the school leaders possess a growth mindset. This further implies that in their quest for learning, they have the drive to bring change and impact to the organization, which eventually contributes to the economic development of the society, as emphasized in the idea that school leaders as entrepreneurial leaders embrace learning and recognize opportunities (Kuratko, 2007; McGrath & MacMillan, 2000) and productive possibilities (Naumann, 2017). If school leaders are competent, they can manage and run the schools effectively. Thus, they are in a better position to serve the society.

Of the three schools, School Y was found to have the highest extent of EL (high extent). The leadership behaviors of school leaders in this school, which were rated to be of very high extent, are exhibited in keeping the school informed and updated, keeping the school focused on its core strategy and supporting educational initiatives, and motivating school staff to think about doing their work in new and exciting ways. School Y is the most entrepreneurial among the three schools, as revealed in the results. Former and incumbent school leaders in School Y have been assigned as directors, presidents, and provincial superiors of SVD Northern Province. Their leadership and management abilities were honed with a wide range of exposure and experience in certain positions. They participate in SVD corporation and board meetings of schools, thus allowing them to see the situation and are given ideas on how to better run, manage, and sustain school operations. Thus, their behavior impacts the entire organization.

Other factors that make School Y entrepreneurial are their passion for keeping the school on track through its educational initiatives like conducting research convergence among the PHN-SVD schools. The school also assists other SVD schools in the north in putting up technology-related facilities. School Y observes a centralized system of operation and set up in terms of its governance, contributing to a more focused and directed core strategy and initiatives like ensuring vertical articulation. School leaders do not micromanage; instead, they provide a system where staff are motivated to think

**Table 2.** Extent of EO in PHN-SVD schools

EO dimension	Over-all	DE
Autonomy	3.00	HE
Innovativeness	2.90	HE
Proactiveness	2.86	HE
Risk-taking	2.82	HE
Competitive aggressiveness	2.89	HE

about doing their work in new and exciting ways by trusting and respecting their area of expertise. Having entrepreneurial school leaders can invest in the right people, technology and facilities, prioritize, strategize and envision the direction of the school towards the attainment of school goals. The result suggests that for the schools to survive amidst the rapid changes and complexities, PHN-SVD school leaders have to be more entrepreneurial and embed EL, which brings significant changes to the school community. They have to be better equipped with entrepreneurial skills and thinking, thinking and behaving entrepreneurially to manage and lead schools in the dynamic and competitive environment and thus serve society better inherent in the SVD vision-mission. As school leaders, they are expected to take significant roles in the entrepreneurial ecosystems hence, they are challenged to be more innovative and resilient amidst the changes in the educational landscape. The findings also confirm the study of Spesia (2016), explaining that one fundamental role of a private Catholic college is to act as an entrepreneur, which is central to building ideas to bring the institution into a competitive college or institution and allows flexibility by creating an innovative and entrepreneurial atmosphere where ideas can flourish and create competitive advantages (Farrukh et al., 2019; Gross, 2020; Naumann, 2017).

#### Extent of EO in PHN-SVD schools

The PHN-SVD schools are entrepreneurially oriented along autonomy, innovativeness, pro-activeness, risk-taking, and competitive aggressiveness as presented in Table 2.

#### Autonomy

In terms of autonomy, the result depicts that PHN-SVD schools have the freedom and flexibility to develop and enact entrepreneurial initiatives. These schools can work independently and decide what organizational opportunities to pursue. Supporting the efforts of individuals or teams to work autonomously was found to be of a high extent in PHN-SVD schools. These schools conduct their institutional or strategic plans based on their context, provide opportunities for employees' professional and career growth, decide on schools' strategic directions and priorities, delegate tasks, have flexibility in instructional design and promote academic freedom.

The schools are free to do their tasks as exemplified in their organizational structure. Each unit is given authority and discretion to decide matters within their level and control.

It further denotes that PHN-SVD schools do not subscribe to micromanagement but instead promote organizational functions, thus contributing to workplace creativity and innovativeness. Since PHN-SVD schools are small organizations, autonomy is evident. It affirms the belief of Gore's "the power of small teams" designed to create environments where autonomous behavior stimulates entrepreneurial outcomes (Lumpkin et al., 2009). The result also affirms that autonomous individuals, operating outside their usual work routines and practices to stimulate entrepreneurial development and growth, represent an essential source of creativity and initiative in many organizational settings (Burgelman & Sayles, 1986, as cited in Lumpkin et al., 2009). A manifestation of entrepreneurially oriented organizations characterized by autonomy is equally essential, contributing to school management and survival (van Jaarsveld, 2020).

#### **Innovativeness**

The school's innovativeness also reflects the capacity of the PHN-SVD schools to explore new educational opportunities, the tendency to take action and exploit the opportunity, and the changes that implemented innovations in the school performances. The innovativeness of PHN-SVD schools is evident in decision making; maximizing educational opportunities; building linkages for collaboration and partnerships; embracing technology-related concerns and applications; promoting innovative initiatives, programs, and activities; integrating innovative instructional strategies; and introducing innovative systems and processes as reflected in the results. Without innovation, PHN-SVD schools will be outdated and left behind in various aspects. These schools will no longer be relevant and responsive to the needs of society. As cited in Mokher et al. (2016) and Fernandez and Shaw (2020), innovation is inevitable for organizational development in a competitive world. This finding corroborates the work of Cleverley-Thompson (2016) on the role of academic deans as entrepreneurial leaders in schools contribute to school innovativeness. Of the three schools, School X was found to have the lowest extent of EO along innovativeness. This implies that school leaders of School X need to courageously explore and discover more innovative ideas and possibilities for improved school performance.

The findings of this study also suggest that PHN-SVD school leaders have to be more entrepreneurial by considering creative and innovative ideas that lead to enormous possibilities in the organization. With the openness to innovative and creative ideas, PHN-SVD schools are more capable in playing their role in the transmission of knowledge ensuring that the needs and demands

of the clientele at this present time are addressed responsibly and appropriately. As pointed out in the UN 2030 Global Goals for Sustainable Development, higher education institutions need to become more innovative, flexible, and adaptive to cope with the challenges and opportunities facing school managers and educational institutions (SDG Knowledge Hub, 2016). In addition, with the disruptions in the increasingly competitive school environment, schools as a catalyst for changes need to be more technologically literate and savvy and, at the same time, innovative to hurdle significant challenges (Alghamdi, 2020; Ariyani et al., 2021; Bandaranaike et al., 2020; Cai et al., 2019).

#### **Proactiveness**

The EO of PHN-SVD schools along proactiveness is also rated of high extent, which shows that these schools have a forward-looking perspective. It depicts that these schools can seek out and capture new opportunities that may or may not be relevant to current school operations. This finding also implies that schools can deal with challenges and opportunities, both internal and external, leading to organizational effectiveness. The finding further shows that these schools use proactive measures and approaches, such as learning to handle and control situations instead of waiting for the problem to arise. They have foresight and anticipate problems that will happen in the future.

#### **Risk-taking**

The results revealed that the PHN-SVD schools are entrepreneurially oriented to a high extent in terms of risk-taking. These schools are more likely to engage in entrepreneurial activities, which are uncertain as these schools observe EL as revealed in the earlier findings. In an entrepreneurial environment, one better way to use resources and abundant opportunities is by capitalizing on uncertainties (McGrath & MacMillan, 2000; Naumann, 2017). Risk-taking is one of the sustainable behavioral patterns (Covin & Lumpkin, 2011, as cited in Bartkoski and Shahzad, 2017) and one of the defining attributes of entrepreneurial organizations like schools (Covin & Slevin, 1991). PHN-SVD schools embark on risk-taking behaviors by allotting valuable resources into projects or potentially worthwhile ventures and embarking on unknown opportunities. This EO dimension was highlighted in these schools, particularly in hiring, investing in technology and facilities, and intense professional development despite schools' limited resources and without any assurance that people in the organization will stay.

The finding is consistent with the earlier result involving autonomy since autonomy is allowed in the organization, thus making them risk takers in exploiting potential yet uncertain opportunities. People are given avenues where they generate new ideas and are challenged to think outside of the box in their respective units. This



also denotes that schools provide spaces where employees explore possibilities of creating new successful strategies and are encouraged to explore new ideas that work in the organization to help improve school management and governance, financial capability, instruction, student engagement in the classroom, and employee performance. Furthermore, this shows that these schools are willing to take risks, absorb uncertainty, and take responsibility for the future.

For PHN-SVD schools to move forward and see improvements, learning or trying new things is a bold decision to observe consistently. Organizations like PHN-SVD schools have to reinvest in themselves and change in perspective to thrive in the global environment. Moreover, the findings suggest that to thrive in this era, it is necessary for organizations like PHN-SVD schools to be dynamic, aggressive, creative, innovative, and risk-taking to exploit every opportunity that comes along the way. However, school leaders should have perceptual acuity and discernment in decision making, particularly for risky undertakings. The findings also affirm and challenge the fundamental role leaders in these schools play in the effective management of schools to achieve quality Catholic education and ensure operational vitality in responding to their evangelical mission (Bual & Madrigal, 2018). Given today's climate of rapidly shifting economic forces, prolific technology, demographic fluctuation, and social change, as Rusk and Forbes-Simpson (2016) pointed out, leaders must be entrepreneurial to identify and solve complex, multi-faceted problems. Taking into account the dynamic profile of Catholic schools, risk-taking cannot be avoided as this entrepreneurially oriented behavior is a must in this environment at the present time for survival and sustainability.

### **Competitive aggressiveness**

The EO of PHN-SVD schools along competitive aggressiveness is of a high extent. To remain responsive and relevant to their mission in bringing Christ to its stakeholders vis-à-vis embracing and adopting a more "entrepreneurial" approach in the context of Catholic schools, the schools play a significant role in preparing students for a lifetime career, enabling and transforming every learner to become productive members of the society to find meaningful work (Iyer, 2016). Furthermore, Catholic universities and institutions train and equip students to address more significant societal problems like poverty and social injustices. In this study, the three schools continue to foster competitive aggressiveness in their ability to innovate in their activities in line with school operations, local needs, and expectations by exerting efforts to improve their position to thrive in a competitive environment. The schools' investment and initiativeness in technology to meet the demands of the digital age and prioritize the development of the human resources contribute to the delivery of quality Catholic

education and the brand identity of Catholic schools. Other factors that contribute to the unique identity make these schools position themselves competitively even in this contemporary time.

From the results, these schools continue to seek improvement in their position to define or overcome a threat in a competitive environment and use unconventional or creative and innovative strategies to challenge competitors. To be at par with the standards of other schools, these schools subject themselves to external accreditation, engage in international benchmarking and membership to local and international professional organizations, and build linkages to exploit opportunities, capitalizing on the delivery of quality services, and strengthening community extension programs. Committed to the mission of educational apostolate to provide quality education, PHN-SVD schools as Catholic learning institutions continue to embrace new and creative ideas to improve services particularly in the delivery of instruction by adapting innovative pedagogical strategies and approaches, conducting classroom-based and in-campus research as bases to improving teaching and student services, and conducting assessment and evaluation of performance, activities and services. Also, these schools invest in technological development to cope with the demand in the digital environment. The proliferation of technology as one of the greatest achievements of the human mind and its application to life challenge schools to position themselves better to remain competitive. Through these avenues, PHN-SVD schools have a better edge in positioning themselves in this competitive environment and contribute to the knowledge economy by producing quality graduates.

The findings suggest that the respondents appreciate the schools' effort on the significance of a solid response to competition. The global market affects social institutions like schools, private universities, and Catholic schools in organizations where the sky is no longer the limit. Considering other schools in the locality implies that the school must continuously improve its position and relevance to the community. Because of the competitive nature of organizations, many scholars have advocated for a competitive, aggressive attitude in academic settings if they are to survive and thrive in the sector (Iyer, 2016). Similarly, the school's aggressiveness, which reflects leaders' EL behaviors, is needed to overcome the competition in the academic context (Farukh et al., 2019; Gross, 2020; Malik et al., 2020; Naumann, 2017).

While it is true that these are mission schools, the idea of competitive aggressiveness may sound odd as this is in the purview of business, however, these schools need to behave entrepreneurially to survive and remain responsive and relevant to serve society better. As Taylor (2016) explicates, missionaries are great entrepreneurs;

**Table 3.** Correlation between extent of EL and extent of EO

Correlates	Correlation coefficient	<i>p</i> -value
EL, overall EO	0.77	.00*

\**p* < .05

as such, they are more passionate and strategic. The founder and CEO of Amazon, Jeff Bezos, also believes that missionaries making better products for missionaries is not all about business but a business that makes sense (Metaprofiling, 2013). Likewise, venture capitalist John Doerr expounded that missionaries are driven by passion, think strategically, focus on their customers and value statement, are mentors and coaches of teams, are obsessed with contributing while recognizing the importance of money, and are fundamentally driven by the desire to make meaning (Johnston, 2005).

The results further highlight the leadership characteristic of SVD leadership centered on the leader as animator, collaborator, and administrator where its threefold-characteristic caters to living the SVD mission of educational apostolate but also strengthening the management of its community to better function as pathfinders, problem solvers, or risk-takers.

#### Relationship between EL and EO in PHN-SVD schools

The correlation between the extent of EL and extent of EO is presented in Table 3.

The extent of EL and the extent of EO had a strong positive correlation ( $r = 0.77$ ). The two variables were significantly correlated ( $p < .05$ ). This signifies that the extent of EO depends on the extent of EL, and that the higher the extent of EL, the higher the extent of EO. This was reflected consistently in the earlier findings as the school with the highest extent of EL had the highest extent of EO across dimensions. This finding corroborates that of Moustaghfir et al. (2020), which confirms that organizational entrepreneurialism translated into value activities contributes to shaping organizational attitudes, behaviors, and cultural determinants that are conducive to better innovativeness risk propensity and initiative-taking. Likewise, Akbari et al. (2021) showed how leadership style significantly impacts an organization's innovation behaviors. Thus, a manager's leadership style can play a vital role in nurturing EO in the organization (Farrukh et al., 2019). Ghazali et al. (2020) and Salahuddin (2016) also explored the association between EL and EO and identified that one EL practice that school principals should possess is being unafraid to take risks to improve interconnectivity. Similarly, Renko et al.'s (2015) study shows that EL is positively related to creativity—promoting leadership and EO, and such a relationship is significant. These studies show that EL is indirectly and directly linked with EO.

**Table 4.** Correlation between extent of EL and extent of EO dimensions

Correlates of EO	Correlation coefficient	<i>p</i> -value
Autonomy	0.76	.00*
Innovativeness	0.71	.00*
Proactiveness	0.69	.00*
Risk-taking	0.70	.00*
Competitive aggressiveness	0.74	.00*
EL	0.77	.00*

\**p* < .05

The result further implies that EL is needed to provide an environment that encourages entrepreneurial behaviors for organizations. Entrepreneurial leaders influence schools to become entrepreneurially oriented, making these schools more capable of responding to the needs of society. This further suggests that for schools to survive in the dynamic and increasingly competitive environment, school leaders play a significant role in influencing and inspiring entrepreneurial behaviors in the organization. The result affirms the work of Sani et al. (2018), which emphasizes the role of EL in encouraging followers in organizations to engage in entrepreneurial, creative activities. Similarly, Erić Nielsen et al. (2019) show that when top management promotes the entrepreneur's strategic vision, employees will have more courage, guidance, and moral legitimacy to do business. Moreover, the advantages of EL in schools like the mobilization of employees towards value creation (Gupta et al., 2004), competitive benefits (Farrukh et al., 2019; Gross, 2020; Malik et al., 2020; Naumann, 2017), promotion of team members' attainment of organizational goals (Renko et al., 2015), organizational innovation (Akbari et al., 2021; Malik et al., 2020), improved performance and productivity (Linton & Kask, 2017; Shah & Ahmad, 2019; Tsetim et al., 2020; Virglerova et al., 2020), and creativity toward long-term survival and sustainability (Alghamdi, 2020; Diehl, 2016; Fernandez & Shaw, 2020; Ghafar, 2020; Lope Pihie, Asimiran, & Bagheri, 2014; Malik et al., 2020; van Jaarsveld, 2020) are imperative in this evolving and challenging environment.

#### Relationship between EL and each EO dimension in PHN-SVD schools

Table 4 shows the relationships between EL and each EO dimension—autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness.

The extent of EL was positively correlated with each EO dimension. The correlation was strong in these EO dimensions, as revealed in the computed correlation values, except for the dimension on proactiveness which was moderately correlated. The correlation between EL

and each EO dimension was significant ( $p < .05$ ). It means that if the extent of EL is high, it results in high EO behaviors, which were evident in the earlier findings. The results indicate that EL influences these entrepreneurially oriented behaviors in schools. Many studies show that EL is linked with these EO behaviors in organizations.

The finding on autonomy corroborates that of Bilal et al. (2021) that EL inculcates an organizational climate by providing autonomy that enhances autonomous motivation among employees and their involvement in opportunities exploration and utilization.

The result also shows that innovativeness as an EO dimension was positively associated with EL and the relationship was significant. Malik et al. (2020) reveals that EL encourages change and innovation, and Bagheri and Lope Pihie (2013) link EL with a strong and favorable association with inventive employee behavior. EL has a significant and positive relationship with the innovative behavior of employees (Newman et al., 2018; Renko et al., 2015; Sarwoko, 2020) and is positively linked with organizational innovation, which is greatly needed in a dynamic environment (Akbari et al., 2021; Kim & Lee, 2020). EL is a key predictor (Hughes et al., 2018; Rae, 2017) of organizational innovation. The result further implies that when school leaders are entrepreneurially oriented, schools are more innovative in their systems and processes; change and innovations are allowed in the school environment; novel ideas, programs, and projects are introduced; and opportunities are explored and recognized.

The EO dimension on proactiveness was positively linked with EL. This affirms that the EL behavior of managers is linked with employees' proactive behavior (Bilal et al., 2021). The result further signifies that organizational proactiveness depends on how the managers or school leaders display this entrepreneurial behavior in the workplace.

Risk-taking was found to be positively and significantly correlated with EL. This affirms that its ownership and governance influence the organization's openness to risk (Alshut, 2014). This implies that leadership is crucial in making organizations embark and engage in risk-taking endeavors.

Competitive aggressiveness was also positively and significantly correlated with EL. This means that the aggressiveness of the school to beat the competition in the environment reflects the EL behaviors of leaders. Through EL, rivalry among organizations prompts organizations to instill an entrepreneurial attitude to improve performance and productivity (Shah & Ahmad, 2019). EL fosters an entrepreneurial environment where ideas may grow, and competitive benefits can be gained (Farrukh et al., 2019; Gross, 2020; Malik et al., 2020; Naumann, 2017).

The findings affirm that EL plays a vital role in nurturing EO in the organization (Farrukh et al., 2019). Entrepreneurially oriented organizations are characterized by autonomy, creativity and innovativeness, proactiveness, risk-taking, and competitive aggressiveness. These entrepreneurial behaviors contribute to organizational survival and sustainability, improved performance, and success, making schools more responsive to the needs of society. Embracing EL and EO in the academic context is an entrepreneurial decision that makes these schools survive and succeed as social institutions, thus making them capable of remaining, if not being more, relevant and responsive to serve society better through the mission-driven educational apostolate.

### Framework

In light of the findings of the study, it can be gleaned that EL in the academic context plays an essential role in providing an entrepreneurial environment characterized by autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness. There are two characteristics fundamental to SVD leadership.

First, it is anchored on the kind of leadership where members work and function to achieve the goals of the organization, making it both a religious community and a human community. As a human community, the leaders' task is to administer human duties centered on day-to-day affairs, managing the organization's money or finances, or coordinating different activities in the organization.

Second, SVD leadership is three-fold: an SVD leader is a spiritual animator, a coordinator, and an administrator. As a spiritual animator, the leader adheres to living the missionary commitment of the Society; as a coordinator, they function as a collaborator and communicator to fulfill the mission entrusted to them; and as an administrator, they exhibit the role of the leader ensuring the stakeholder's needs are attended to. In this sense, SVD leadership provides a vision towards a practice of coordinated and organized members for the achievement of the goals of the community exhibiting specific roles as pathfinders, implementers, or problem solvers.

Findings of the current study depicted the various characteristics fundamental not only to the SVD mission but also to SVD leadership in the community as it envisions its role to help society move forward with the vision of providing quality service to its stakeholders. Thus, the EL of school leaders directly influences the PHN-SVD schools to become entrepreneurial, characterized by autonomy, innovativeness, proactiveness, risk-taking, and competitive aggressiveness. Conversely, these schools' EO reflects the school leaders' EL behaviors. Moreover, organizations like schools operate in a competitive and technological environment, and responding to the challenges of today's environment requires EL. As organiza-



Figure 1. Framework for PHN-SVD schools

tions evolve with time, EL behaviors enable organizations to behave entrepreneurially to survive amidst the challenges and frontier missions—reaching out to all levels, sectors, and situations of society.

Hence, the framework in Figure 1, which serves as the output of the study, emphasizes the relationship between EL and EO and the significance of these concepts in the PHN-SVD context in terms of survival and sustainability and making the SVD continue its legacy and a living witness to the Word. The result is a point of continuity and enhancement of the SVD vision-mission of these schools characterized by the hallmarks of SVD to remain relevant in the educational apostolate at this contemporary time.

### Conclusions and recommendations

EL provides a vital avenue for influencing organizations to become entrepreneurially oriented which in turn leads to achieving entrepreneurial outcomes. PHN-SVD school leaders practice entrepreneurial behaviors in leading and managing these schools. As entrepreneurial leaders, they show enthusiasm for learning new skills as running and leading missionary schools at this contemporary time requires EL behaviors for them to continue their evangelical mission of educational apostolate. PHN-SVD schools are entrepreneurially oriented: autonomous, innovative, proactive, risk taking, and competitively aggressive. These EO dimensions are imperative for PHN-SVD schools to survive in these competitive and uncertain times. School Y provides the environment where EO is

evident across all dimensions. As risk-taking has the lowest extent of all EO dimensions particularly in School X, it is high time for PHN-SVD schools to embrace risks in every venture or undertaking for them to explore more enormous possibilities in leading and managing schools.

Providing entrepreneurially oriented PHN-SVD schools is strongly dependent on the EL of school leaders. EL is needed to provide an environment that encourages PHN-SVD schools to behave entrepreneurially in terms of autonomy, innovativeness, proactiveness, risk taking, and competitive aggressiveness. For the survival and sustainability of PHN-SVD schools and to cope with the challenges of the present time, the role of EL and EO in these schools which promotes entrepreneurial outcomes is significant.

Like other organizations, PHN-SVD schools need to be responsive and relevant in the society. School leaders are educational leaders who have a clear vision of the strategic direction of these mission schools serving the stakeholders in the entrepreneurial environment while keeping grounded on the Catholic identity and evangelical mission of SVD schools.

The study's findings have important managerial implications as a contribution to the entrepreneurial practice in terms of leadership and management. The study enriches the understanding of the relationship between EL and EO in the academic context of PHN-SVD schools as a novel contribution to the body of knowledge. It allows a greater understanding of the concept of EL that is becoming a global necessity, and a better understanding of the elements that comprise it. This also offers a point of reflection for PHN-SVD school leaders of the 21st century to understand that schools operate in the entrepreneurial ecosystem and need to evolve with time to remain relevant and responsive. Since EL is usually in the purview of business, it should be given greater emphasis and attention in other organizations like schools. The application of EL and EO may be unusual in the academic setting, particularly in Catholic schools. However, school leaders are more challenged to utilize these concepts and become more entrepreneurial to keep these schools survive. Ensuring the sustainability of PHN-SVD schools amidst all challenges and keeping the core and fundamentals of Catholic education evident and felt in society is an entrepreneurial action.

The study is limited to the PHN-SVD schools which may not adequately represent the full diversity of perspectives across similar higher education institutions. Future research could address this limitation by using a larger and more diverse sample to enhance the applicability and generalizability of the findings across different contexts and institutional settings. Other factors or variables like organizational performance linked to EL and EO that would enrich the understanding and application of these concepts in the academic context of Catholic

educational institutions need to be further explored and be considered as pointers for future research.

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