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Examining the effect of transformational and transactional leadership styles on the innovative work behavior: Educational context

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A B S T R A C T

The study examined the effect of transformational and transactional leadership on the innovative work behavior of employees. Literature was reviewed to broaden the concept and understanding of the study. Assessment and correlational research design were used, while weighted mean assessed the level of transformational and transactional leadership styles. The correlation between leadership styles and the innovative work behavior of the employees was measured utilizing Analysis of Variance (ANOVA). The respondents were the administrators and employees of the Divine Word College of Laoag. Data of questionnaires were gathered from them. It was found that the transformational and transactional leadership styles of administrators are rated not very high, further it showed a significant correlation between transformational and transactional leadership styles and the innovative work behavior of the employees. Both leadership styles greatly affect the innovative work behavior of the employees. Therefore, the hypothesis of the study is accepted.

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Introduction

Managing an organization requires looking into the details of achieving organizational objectives. The other elements that management needs to focus on are the work environment and leadership styles. A work environment that favors the employees' welfare and leadership styles that motivate employees are important factors of high work engagement (Amegayibor, 2021, Hafeez, et al. 2019). A work environment that is very bureaucratic and authoritarian may reduce the possibility of the attainment of organizational goals (Olukorede & Olawiyola, 2008, Anjum, et al., 2018).

The study by Cirera and Maloney (2017) commissioned by the World Bank indicated that developing and poor

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countries are left behind in terms of innovations. The same study has indicated the correlation between economic development and innovation. 2021 Global Innovation Index has listed the top ten innovative countries which include Switzerland, Sweden, the USA, the United Kingdom, the Republic of Korea, the Netherlands, Finland, Singapore, Denmark, and Germany (WIPO, 2021). This report indicates that the speed of innovation is a significant predictor of economic development and countries' advancement. Therefore, innovation pertains to all kinds of endeavors including education.

Vincent-Lancrin, et al. (2017) reported that there is a fair level of educational innovation related to knowledge and method, however, in terms of pace, it is slower. A study indicated that school performance can be affected by the level of innovation of one's institution. Adelowotan (2021), for instance, concluded that educational creativity and innovation significantly improved the universities' performance in South Africa as it enhanced the efficiency of the employees. Moreover, the COVID-19 pandemic led to the essence of curriculum innovation as one major solution in addressing challenges posed by the crisis (Li, et al., 2021).

Divine Word College is not exempted from the call for innovation to stay competitive with other colleges and universities around the country. There are limited studies related to school innovations. Therefore, this study examined the college's innovation and the factors that affect it, particularly the effect of leadership styles on the employees' innovative work behavior. Some studies have been done related to organizational culture and innovative behavior like that of Büschgens', et al. (2013) and Aboramadan, et al. (2020). However, there have been limited studies on the effect of leadership styles on innovative work behavior in the educational context. According to Serdyukov (2017), innovation in education should focus on teaching, learning, and practice.

The study is divided into several sections. The first section is about the introduction that explains the background and the objective of the study. The second covers the literature review which investigates the existing theories in leadership style and innovation. The third section is the research methodology which presents the research design, population, locale of the study, data gathering procedures, research instruments, ethical procedures, and statistical treatment of data. The fourth one is about data presentation, while the final section discusses the results of the study and its contribution to the current discussion on the topic and its implication.

Literature review

The literature review examines the theories on leadership, leadership styles, innovation, and innovative work behavior. The theories are presented thematically.

Theoretical and conceptual frameworks the dynamic concept of leadership

The concept of leadership is dynamic because it is contextual. Leadership is a response to a particular situation or problem (University of Cambridge Institute for Sustainability Leadership (CISL), 2017). Within this concept, leadership is not isolated from solving external concerns. Leaders of today face many identified global problems which need to be answered by the political, corporate, or civil society leaders. Some of these are failure of climate-change mitigation, adaptation, weapons of mass destruction, water crises, large-scale involuntary migration, and severe energy price shocks (World Economic Forum's (WEF, 2016) on the Global Risks Report. On top of these is the COVID-19 pandemic which caused poverty and food crises that affect the survival of human life, hence, these concerns need urgent solutions. The challenge of leaders then is to transform these into opportunities that may avert the risks (University of Cambridge Institute for Sustainability Leadership (CISL), 2017).

Based on those identified problems that are confronting countries around the globe, one might wonder what leadership definition fits and what competencies a leader needs to acquire. There are several definitions of leadership, for example, Rost (1991) defined leadership as "an influence relationship among leaders and collaborators who intend significant changes that reflect their mutual purposes" (102). Kouzes and Posner (1991), on one hand, define it as "the art of mobilizing others to want to struggle for shared aspirations" (30). On the other hand, Senge et al (1999) referred to it as "the capacity of a human community to share its future, and specifically to sustain the significant

processes of change required to do so" (16). These definitions, emanate several common elements namely influence, change, and leader-follower collaboration. In other words, leadership is the capacity to influence the followers to go for a change. In this definition, the essence of leadership is for change done with the collaboration of followers. Therefore, the success of leadership does not only rest on the leader but also on the followers. Collaboration requires a leader to know the followers, establish a relationship with them, and adjust the leadership style based on the situation. Fiedler, (1967); House and Mitchell, (1974); Barbour, (2008) presented the idea of contingency leadership which indicated that the success of a leader depends on the interaction of two factors: the leader's task or relations motivation and aspects of the situation. Thus, these definitions match with the different theories of leadership like trait theories (Stodgill, 1948; Tannenbaum and Schmidt, 1973; Harter, 2008), behavioral theories (Lewin et al., 1939; Blake and Mouton, 1964, 1985; Kouzes and Posner, 1995), situational (Hersey and Blanchard, 1969, 1974; Vroom and Yetton, 1973; Graeff, 1983), contingency (Fiedler, 1967; House and Mitchell, 1974; Barbour, 2008), transactional and transformational theories (Bass, 1974; Burns, 1978; Price, 2003).

Looking at the definition of leadership presented above, they are influenced by the trait theory of leadership. Stogdill (1974) as cited in the University of Cambridge Institute for Sustainability Leadership (CISL), (2017) identified several trait characteristics which are intelligence, alertness, verbal facility, originality, judgement, scholarship, knowledge, athletic accomplishment, dependability, initiative, persistence, aggressiveness, self-confidence, desire to excel, activity, sociability, co-operation, adaptability, humor, skills, needs, interests of followers, and objectives to be achieved. Pew Research Center (2015) identified seven traits' characteristics namely honesty, intelligence, decisiveness, organization, compassion, innovation, and ambition. These are leadership traits that matter to its success. In terms of the competencies corresponding to the current challenges, Visser and Courtice, (2011) as cited in the University of Cambridge Institute for Sustainability Leadership (CISL), (2017), identified some namely systemic thinker, open-minded, inclusive, navigates complexity, think long term, globally conscious, and interdisciplinary. Subsequently, leadership can be defined as "individuals who are compelled to make a difference by deepening their awareness of the world around them. In doing so, they adopt new ways of seeing, thinking, and interacting that result in innovative and sustainable solutions" (Sustainability Leadership Institute, 2016).

Leadership styles

The way how one leads a group of people is different from the others. One can use different approaches to influence followers to achieve stated organizational objectives. This paper limited the discussion to these styles: transformational, transactional, and bureaucratic leadership styles.

Transformational leadership style

The transformational leadership style (Bass, 1985) was introduced by James MacGregor Burns (1978). He conducted a study on political leaders regarding their leadership styles and based on his investigation, he conceptualized the transforming leadership style (Burns, 1978). According to him, this is a process in which "leaders and followers help each other to advance to a higher level of morale and motivation" (Burn, 1978). There is a mutual benefit to exercising such a style. It implies that the end goal of transformational leadership is to develop followers into better persons and at the same time help the leader to become better. Leaders transform their followers through several mechanisms such as role models for followers, challenging followers to take greater ownership of their work, and understanding the strength and weaknesses of followers. The strength of a transforming leader is the leader's personality, traits, and ability to influence to make a change through the leader's example, articulation of vision, and challenging goals.

Bass (1985) develop the concept of transforming leadership of Burns with the new name "transformational leadership". Concerning how transformational leadership is measured, Bass (1985) proposed four dimensions namely individualized consideration, intellectual stimulation, inspirational motivation, and idealized influence. Individualized consideration indicates that the leader does not treat the employees the same, but considers individual differences in terms of capability and needs. Therefore, one listens to the employees related to their concerns and needs and provides support. Intellectual stimulation suggests that the leader does not make decisions alone but involves the followers in

the discussion of problems. The leader encourages critical thinking, and independence, and encourages new solutions. While inspirational recommends that a leader should provide an appealing and inspiring vision to the followers. It is argued that followers are motivated to act through an inspiring vision that serves as the basis for the direction and meaning of their works. It is believed that a sense of purpose and meaning serve as sources of motivation for the followers. Lastly, the idealized influence. It refers to the leader's function as a role model for the followers in terms of moral behavior to gain respect, trust and instill pride and followers' identification with the leader. Bass and Avolio (1994) provided Multifactor Leadership Questionnaires (MLQ) to measure each component of leadership.

Transactional leadership

Originally transactional leadership style was first introduced by Max Weber (1947) in socio-economic considerations of the organization and after twenty-seven years of his death, the academic community accepted his definition of leadership. His concept of leadership influenced other researchers like Downton (1973) who formulated transformational and transactional leadership which was worked out by Burn (1979) on the concept of transformational and transactional leadership. Burns' study inspired Bass (1981) who developed further the concept of transactional leadership. Using the concept of transactional leadership of Burns, and Bass (1981) identified the characteristics of the behavior of transactional leadership which is based on the exchange between leader and follower. The leader defines pre-defined standards of performance and then the leader motivates the followers to achieve them. After the standard of performance is achieved by the followers, then a reward is given to the achievers (Nikezic, et al. (2012). In achieving performance standards, the leader's job is not only limited to motivating followers through rewards but the leader provides rules, and regulations to control the behavior of followers. Consequently, punishment is provided for those who violated the rules.

Transactional leadership is bureaucratic and thus it is often called "bureaucratic -transactional leadership". The strength of transactional leadership is relying on formal authority and on implementing strict rules, regulations and discipline to achieve organizational objectives and obedience is required based on the established values, rules and agreements. The focus of leadership is supervision, organization and performance and the use of rewards and punishment to motivate followers. The followers need to obey and follow the rules in executing their duties and responsibilities. Besides rules and regulations, the bureaucratic -transactional leadership provides fixed salaries following a rank in the hierarchy (Nikezic, et al., 2012). Based on its nature, transactional leadership consists of four components of exchanges namely first: contingent rewards. In the first place, the job of a leader is to set SMART objectives to be achieved by their subordinates. The second place is providing rewards for those who achieve the objectives. The third place is providing resources necessary for the subordinates to execute their duties and responsibilities. The second component of transactional leadership is active-management by exception. It is contrary to passive management by exception. Active-management by exception refers to leaders who actively monitor the work of their subordinates and immediately intervene when something goes wrong. The third component is passive-management by exception. It is contrary to active management by exception in which the leader actively monitors the work of their subordinates, determines the deviations and makes interventions to correct and prevent the mistakes. The fourth component is laissez-faire in which the leader practices "hands-off" management. The leaders give a free hand to the subordinates to make decisions and direct their work, which consequently lacks common directions for the organization (Juneja, 2015, Nikezic, et al. 2012).

Leadership vs management

The terms alone indicate the differences between leadership and management. Although leadership is one of the management functions (planning, organizing, leading, and controlling), however, it has unique characteristics that differentiate it from management. Both have unique activities or functions which cannot be overlapped (Yukl, 2010) and the activities are not synonymous (Bass, 2010). It is true when someone says that not all leaders are managers and vice versa (Lunenburg, 2011). This statement indicates that both have different functions or activities which contribute to the attainment of organizational objectives and their contributions are different.

The first person to present and defend the differences is Zaleznik (1997) who argued that both leaders and managers make a valuable and unique contribution to the organization. On one hand, leaders challenge the status quo and propose changes and new approaches and on the other hand, managers maintain the stability and the status quo. Beyond that, leaders are concerned with understanding people's beliefs, and gaining their commitment, while managers are concerned with exercising authority and how things can be done. The second person who defended the differences between leadership and management is Kotter (1990) who held that leadership and management are two distinct, yet complementary systems of action in an organization. He pointed out that leadership is about change, while management is about coping with complexities (Kotter, 1987).

In summary Lunenburg (2011) presents several key elements of differences between leadership and management. In terms of a thinking process, a leader focuses on people and looks outward, while a manager focuses on things and looks inward. Concerning goal-setting, a leader articulates a vision and creates the future, while the manager executes the plans and improves the present. Concerning employee relations, a leader empowers, trusts, and develops subordinates, while manager controls and directs them. In terms of operation, a leader does the right things, creates changes, and serves subordinates, while a manager does things right, manages changes, and serves super-ordinates (superior). In governance, a leader uses influence, uses conflicts and acts decisively, while a manager uses authority, avoids conflicts, and acts responsibly. Looking at these differences, Bennis (1989) contended that "to survive in the twenty-first century, a new generation of leaders is needed, and not managers". Leadership is the response to the changing times marked by the volatile, turbulent, and ambiguous environment. Moreover, strong leadership is required to navigate the dynamic environment to a safe destination in the future.

Innovation and innovative work behavior

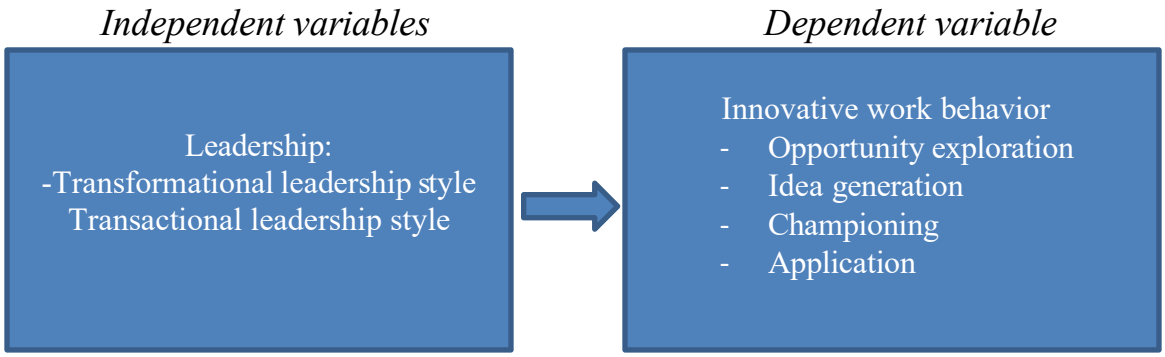
The meaning of innovation has been used interchangeably with invention. It is important to understand the meaning of the word before explaining the meaning of innovative work behavior. Innovation is different from creativity. Based on Merriam – Webster Dictionary (n.d) innovation refers to "something new or to a change made to an existing product, idea, or field". This concept is new and explains that innovation is based on existing products or services. While invention refers to "a type of musical composition, a falsehood, a discovery, or any product of the imagination" or a "process originated after study and experiment, usually something which has not previously been in existence.". Innovation is based on existing products or services, while invention is creating something new after research or experiment. The root word of innovation is from the Latin word "innovate" which means "into something new". Thus, the simple definition of innovation is doing something different from the e xisting idea, product, service, or device (Stenberg, 2017). In the context of management, it can be referred to as a new process, strategy, and management technique (Kuczmarksi, 2003). Baregheh, Rowley & Sambrook (2009) define innovation as "the multi-stage process whereby organizations transform ideas into new/improved products, services or processes, to advance, compete and differentiate themselves successfully in their marketplace". This definition refers to a new method and technology for production or services to compete in a new market. This is the only way how the companies solve problems by combining knowledge (Fri, Pehrsson, & Søilen, 2013).

Innovative work behavior can generate, introduce, and apply new ideas to new products or services (Alessa & Durugbo, 2021). A similar definition is also given by Janssen (2000) as he defined innovative work behavior as "the intentional creation, introduction, and application of new ideas within a work role, group, or organization, to benefit role performance, the group, or the organization" (p. 228). It was pointed out by Lee, et al. (2020) that innovative work behavior is not just employees' initiative but it depends also on the work environment factor, resources and leadership. Employees are motivated to be innovative when the work environment and resources are supportive of innovative behavior by inspiring the employees to perform their job their way.

In dealing with a changing work environment like COVID-19, a leader must not see it as a problem but see it as an opportunity to respond to it innovatively by changing the way how services are performed. Such innovative response is not coming from the leader alone but from empowering employees. The leader must take the opportunity to encourage employees to raise ideas to find solutions (Ahearne et al., 2005). Beyond leadership issues, the work

environment must be supportive of innovative work behavior by allowing employees' the autonomy to exercise their duties and responsibilities in the best way without much intervention from the leadership and provide the resources that employees need to perform their jobs (Lee A. et al., 2020). Therefore, it is important for management to reduce the control on decision-making and allow the employees to decide on the things related to their work (Pearce & Sims, 2002, Stoker et al., 2019). Somech, (2005), and Stoker et al., (2019) emphasized that directive leadership is not effective to respond to crises because it can be detrimental to innovative work behavior. It was found by the study by Maqbool et al., (2018) that innovative work behavior is highest when the employees enjoy their work and are intrinsically motivated. The study by Coun, et al. (2021) found that empowering leadership is positively correlated to innovative work behavior. Consequently, de Jong and Den Hartog (2008) identified four dimensions of innovative work behavior which consists of opportunity exploration (the ability to see how things can be improved), idea generation (search out new working method or techniques, generating new solutions to existing problems, new approaches to execute a task), championing (convincing other people to support new ideas), and application (know how to introduce new ideas into practice and exert effort to develop new things).

Conceptual Framework



Source: Liden, Wayne, Zhao, and Henderson (2008), Avolio, et.al (1995), de Jong & Den Hartog. (2008).

Figure 1: The conceptual framework explains the influence of leadership particularly transformational and transactional leadership styles on the innovative work behavior of the employees.

Statement of the Problems

The study ascertained the effect of transformational and transactional leadership styles on the innovative work behavior of employees. It specifically answered the following questions:

1. *What is the transformational leadership style of administrators of the Divine Word College of Laoag in terms of:*
    - ***a.*** *Idealized influence*
    - ***b.*** *Inspirational motivation*
    - ***c.*** *Intellectual stimulation*
    - ***d.*** *Individualized consideration*
2. *What is the transactional leadership style of administrators of the Divine Word College of Laoag?*
3. *What is the innovative work behavior of the employees of the Divine Word College of Laoag?*
4. *Is there a relationship between transformational leadership style and innovative work behavior of employees?*
5. *Is there a relationship between transactional leadership style and innovative work behavior of employees?*

Assumption

The study assumes that leadership styles can influence the innovative work behavior of the employees and that they

can be measured.

Hypothesis

Alheet, et al. (2020) studied the effect of leadership on the work behavior of employees and the study found that there is a positive correlation between leadership styles and the work behavior of employees. The study hypothesizes that transformational and transactional leadership affect the innovative work behavior of employees.

Scope and delimitation of the study

The scope of the study is the employees and administrators of the Divine Word College of Laoag, Ilocos Norte and it delimits its investigation on the effect of transformational and transactional leadership styles on innovative work behavior.

Research methodology

Scientific research requires that research needs to follow the prescribed procedures or research methodology. Following such requirements, the study followed a specific method of investigation. Wilkinson, (2000), and Leedy, (1974) opined that research methodology is an established process for conducting the inquiry. It applies certain methods to determine, select, and analyze the data related to the concerned topic, Therefore, the current study applies certain methods of investigation such as research design, data gathering instruments method, the population of the study, the locale of the study, data gathering procedures, and the statistical treatment of data.

Research design of the study

The research design of the study is descriptive assessment and descriptive correlational. Ariola (2006) clarified that a descriptive correlation study describes the relationship among variables without seeking to establish a causal connection. While descriptive research is simply to describe a population, a situation, or a phenomenon. It is also used to describe profiles, frequency distribution, characteristics of people, situations, or phenomena (McCombes, 2020).

The locale of the study

The locale of the study was Divine Word College of Laoag. This college is located in Laoag City, the capital of Ilocos Norte.

Population

The respondents of the study were the employees of the college. Since the number was limited, total enumeration was used.

Data gathering instruments

The study adopted Multifactor Leadership Questionnaires (MLQ) by Avolio, et al (1995) on transformational leadership style, Liden, Wayne, Zhao, and Henderson's (2008), on transactional leadership and de Jong and Den Hartog (2008) on innovative work behavior (IWB).

Data gathering procedures

To preserve the integrity of scientific research, the data were gathered after the approval of the president of the college. The researcher sent a letter to the president; the questionnaires were distributed after its approval. Then the researcher's representative from the college collected the data and submitted it for tabulation.

Ethical procedures

The study was carried out after the research ethics committee examined and approved the content of the paper which neither violated ethical standards nor caused harm to human life and the environment.

Statistical treatment of data

To analyze the data, descriptive and inferential statistics were used. The weighted mean determined the level of transformational, and transactional leadership styles, and innovative work behavior of employees. Furthermore, ANOVA was used to measure the correlation among transformational, transactional leadership styles and innovative work behavior. The following ranges of values with their descriptive interpretation were used:

Statistical Range	***Descriptive Interpretation***
4.21-5.00	*Strongly agree/ Very high*
3.41-4.20	*Agree / High*
2.61-3.40	*somewhat agree/ Moderate*
1.81-2.60	*Disagree/Low*
1.00-1.80	*Strongly disagree/Very low*

Data presentation and analysis

This part presents the presentation and analysis of data gathered The presentation followed the arrangement of the statement of the problems.

1. *What is the transformational leadership style of administrators of the Divine Word College of Laoag in terms of:*

a. idealized influence;
b. inspirational motivation;
c. intellectual stimulation, and
d. individualized consideration?

Table 1: Idealized influence

Idealized influence	**Mean**	**Descriptive Interpretation**
1. Display conviction in the vision and mission of the College.	3.69	A/H
2. Act in ways that build the respect of employees/subordinates	3.68	A/H
3. Emphasize the importance of purpose, commitment, and ethical consequences of decisions.	3.60	A/H
4. Display the most important values such as honesty, integrity, justice, transparency, and consistency.	3.62	A/H
5. Go beyond self-interest for the good of the college.	3.67	A/H
Composite Mean	**3.66**	**A/H**

Source: Avolio, et al (1995)

***Legend*:**

Range of Mean Values	***Descriptive Interpretation***
4.21 - 5.00	*Strongly Agree/ Very High*
3.41 - 4.20	*Agree/High*
2.61 - 3.40	*Somewhat Agree/Moderate*
1.81 - 2.60	*Disagree/Low*
1.00 - 1.80	*Strongly Disagree/Very Low*

Based on the data presented in the table, the transformational leadership style of administrators in terms of idealized influence obtained a composite mean of 3.66 which is interpreted as “agree or high”. Employees totally agree that the administrators have demonstrated a transformational leadership style in terms of idealized influence. They consider their administrators as role models. Specifically, they agree that their administrators have displayed conviction toward the vision and mission, respect toward their subordinates, commitment toward the vision and mission, and ethical decision making which always considered the effect of their decisions on the life of employees, honesty, integrity, transparency, consistency, self-sacrifice and a sense of purpose.

Table 2: Inspirational motivation

Inspirational motivation	**Mean**	**Descriptive Interpretation**
1. Articulate a compelling vision/goals for the future	3.64	A/H
2. Challenge employees/subordinates with a high standard of performance	3.65	A/H
3. Provide encouragement and moral support for the employees/subordinates.	3.63	A/H
4. Inspire the employees/subordinates through their passion and determination to achieve the goals.	3.62	A/H
5. Inspire employees/subordinates to see the priorities in carrying out their duties and responsibilities.	3.59	A/H
Composite Mean	**3.62**	**A/H**

Source: Avolio, et al (1995)

Apparently, the transformational leadership style of administrators along with inspirational motivation gained a composite mean of 3.62 which is translated as "agree or high". The employees confirm that the administrators can articulate a compelling vision, challenge their employees with a high standard of performance, provide encouragement and moral support for their employees, and inspire their employees through their passion and determination to achieve their goals and show the employees the priorities to be prioritized in carrying out their duties and responsibilities.

Table 3: Intellectual stimulation

Intellectual stimulation	**Mean**	**Descriptive Interpretation**
1. Question old assumptions, traditions, and beliefs	3.54	A
2. Instill new perspectives and ways of doing things	3.62	A
3. Encourage the free expression of ideas and reasons	3.63	A
4. See different perspectives when solving problems.	3.59	A
5. Encourage problem-solving using reasoning and evidence, rather than unsupported opinion.	3.60	A
Composite mean	**3.60**	**A**

Source: Avolio, et al (1995)

Evidently, the transformational leadership style of administrators regarding intellectual stimulation received a composite mean of 3.60 which is still considered "agree or high". This marks that the employees approved that their administrators have shown their capability to question old assumptions, traditions and beliefs, instill new perspectives and new ways of doing things, encourage employees to express their ideas, see the different perspectives when solving problems, and encourage problem-solving using reasoning and evidence rather than unsupported opinion.

Table 4: Individualized consideration

Individualized consideration	**Mean**	**Descriptive Interpretation**
1. Deal with employees/subordinates as individual persons.	3.62	A
2. Help individual employees/subordinates to develop their capabilities.	3.62	A
3. Provide training and development activities or seminars according to the needs of different employees/subordinates.	3.66	A
4. Treat employees/subordinates as individuals with different needs, abilities, and aspirations rather than just a member of the group.	3.60	A
Composite mean	**3.62**	**A**

Source: Avolio, et al (1995)

Looking at the data on the table, it appears that the transformational leadership of administrators along with individualized consideration gained a composite mean of 3.62 which means "agree or high". This implies that the administrators are treating employees individually, help individual employees to develop their capabilities by providing training and development according to their needs, and treating subordinates as individuals with different needs, abilities, and aspirations rather than just a member of a group.

Summary Table 5: Summary table

Transformational leadership	**Mean**	**Descriptive Interpretation**
1. Idealized Influence	3.66	A
2. Inspirational motivation	3.62	A
3. Intellectual stimulation	3.60	A
4. Individualized consideration	3.62.	A
Overall mean	**3.62**	**A**

Range of Mean Values	***Descriptive Interpretation***
4.21 - 5.00	*Strongly agree*
3.41 - 4.20	*Agree*
2.61 - 3.40	*Somewhat agree*
1.81 - 2.60	*Disagree*
1.00 - 1.80	*Strongly disagree*

The transformational leadership of administrators along the four dimensions obtained an overall mean rating of 3.62 which means "agree or high". It indicates that there is room for improvement along with idealized influence, inspirational motivation, intellectual motivation, and individual consideration.

2. What is the transactional leadership style of administrators of the Divine Word College of Laoag?

Table 6: Transactional leadership

Transactional Leadership	**Mean**	**Descriptive Interpretation**
1. He/she tells subordinates what to do if they want to be rewarded for their work	3.53	A
2. He/she provides recognition/rewards when others reach their goals	3.56	A
3. He/she is satisfied when employees/subordinates meet the agreed-upon goals.	3.58	A
4. He/she tells employees/subordinates the standards that they have to know to carry out their work.	3.64	A
Composite mean	**3.57**	**A**

Source: Wayne, Zhao, and Henderson (2008).

As illustrated, the transactional leadership of administrators gained a composite mean of 3.53 which is interpreted as "agree or high". This evidently shows a give-and-take practice by the management such as administrators tell their subordinates what to do if they want to be rewarded and providing standards of performance and rewards when the employees achieve their goals and are satisfied when the employees achieve their goals.

3. What is the innovative work behavior of the Divine Word College of Laoag employees in terms of:

a. Opportunity exploration;
b. Idea generation;
c. Championing; and
d. Application?

Table 7: Opportunity exploration

Opportunity exploration	Mean	Descriptive Interpretation
1. I pay attention to issues that are not part of my daily work	3.62	A/H
2. I wonder how things can be improved	3.66	A/H
Composite Mean	**3.64**	**A/H**

Source: Den Hartog (2008)

Looking at the data in the table, it manifests that the innovative work behavior of employees in terms of opportunity exploration got a composite mean of 3.64 which is understood as "agree or high". This result specifies that the innovative work behavior of the employees along with opportunity exploration is high. The employees agree that they pay attention to issues that are not part of their daily work and think about how things can be improved.

Table 8: Idea generation

Idea generation	Mean	Descriptive Interpretation
1. I search out new working methods, techniques or instruments	3.68	A/H
2. I generate original solutions for problems	3.68	A/H
3. I find new approaches to executing tasks	3.76	A/H
Composite Mean	**3.70**	**A/H**

Source: Den Hartog (2008)

The innovative work behavior of employees attained a composite mean rating of 3.70 which is translated as "agree or high". This means that employees always try to search for new working methods or techniques to improve their work, generate solutions for work-related problems and find new ways to execute their task.

Table 9: Championing

Championing	Mean	Descriptive Interpretation
1. I make important organizational members enthusiastic about innovative ideas	3.73	A/H
2. I attempt to convince people to support an innovative idea	3.70	A/H
Composite Mean	**3.72**	**A/H**

Source: Den Hartog (2008)

In terms of the innovative work behavior of employees concerning championing, this got a composite mean of 3.72 which is considered "agree or high". The employees agree that they try to make important organizational members enthusiastic about innovative ideas and convince other employees to support them.

Table 10: Application

Application	Mean	Descriptive Interpretation
1. I systematically introduce innovative ideas into work practices	3.66	A/H

2. I contribute to the implementation of new ideas	3.66	A/H
3. I put the effort into the development of new things	3.72	A/H
Composite Mean	**3.68**	**A/H**

Source: Den Hartog (2008)

The data indicates that the innovative work behavior of employees along with the application of ideas gained a composite mean rating of 3.68 which is understood as "agree or high". The employees confirm that they introduce innovative ideas into work practices, help in the implementation of new ideas, and put effort into the development of new things.

Summary Table: 11: Innovative behavior

Innovative behavior	Mean	Descriptive Interpretation
1. Opportunity Exploration	3.64	A/H
2. Idea generation	3.70	A/H
3. Championing	3.72	A/H
4. Application	3.68	A/H
Overall Mean	**3.68**	**A/H**

Source: Den Hartog (2008)

The data on the summary table reveals that overall, the innovative work behavior of employees along with four dimensions namely opportunity exploration, idea generation, championing, and application obtained an overall mean rating of 3.69 which means "agree or high". This concludes that employees have contributed to the opportunity exploration, and idea generation and champion new ideas to the management and colleagues and apply those new ideas into practice. Though the result is considered high, however, there is still room for improvement in opportunity exploration, idea generation, championing, and application.

5. ***Is there a relationship between transformational leadership and innovative work behavior of employees in terms of opportunity exploration***

Table 12: Transformational leadership and innovative work behavior of employees-opportunity exploration

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.679[a]	.461	.448	.53927

a. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL MOTIVATION

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	40.331	4	10.083	34.670	.000[b]
	Residual	47.112	162	.291		
	Total	87.443	166			

a. Dependent Variable: OPPORTUNITY EXPLORATION

b. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL MOTIVATION

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.202	.217		5.532	.000
	IDEALIZED INFLUENCE	-.136	.172	-.140	-.792	.430
	INSPIRATIONAL MOTIVATION	.418	.193	.426	2.167	.032
	INTELLECTUAL STIMULATION	.097	.149	.096	.651	.516
	INDIVIDUAL CONSIDERATION	.296	.165	.308	1.794	.075

a. Dependent Variable: OPPORTUNITY EXPLORATION

Discussion:

The transformational leadership style of the DWCL administrators in terms of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration is taken together significantly predicted the innovative work behavior of the employees as to opportunity exploration, F (4,167) = 34.670, p <.05 with .679 overlap between the four predictor variables.

Specifically, inspirational motivation B =.418, p <.05, 1.202 quantified the Y-intercept for the regression equation. Therefore, the transformational leadership style of the DWCL administrators, such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration taken together could predict the employees' innovative work behavior along with opportunity exploration.

However, when the transformational leadership factors were considered singly, it was only inspirational motivation that could predict the innovative work behavior of the employees regarding opportunity exploration.

Table 13: Transformational leadership and innovative work behavior of employees-Idea generation

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.663[a]	.440	.426	.53402

a. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.346	.215		6.255	.000
	IDEALIZED INFLUENCE	.368	.170	.390	2.160	.032
	INSPIRATIONAL	.180	.191	.189	.942	.347
	INTELLECTUAL STIMULATION	.199	.147	.203	1.347	.180
	INDIVIDUAL CONSIDERATION	-.097	.163	-.104	-.593	.554

a. Dependent Variable: IDEA GENERATION

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	36.286	4	9.072	31.811	.000[b]
	Residual	46.198	162	.285		
	Total	82.484	166			

a. Dependent Variable: IDEA GENERATION
b. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL MOTIVATION

Discussion:

The DWCL administrators' transformational leadership style in terms of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration is taken together significantly predicted the innovative work behavior of the employees as to idea generation, F (4,167) = 31.811 p <.01 with .663 overlap between the four factors of transformational leadership style.

Particularly, idealized influence B =.368, p <.05, 1.346 quantified the Y-intercept of the regression equation.

Hence, when taken together, the DWCL administrators' transformational leadership style of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration could predict the employees' innovative work behavior along with idea generation.

However, when the transformational leadership factors were taken singly, it was only idealized influence that could predict the idea-generation work behavior of the employees.

Table 14: Transformational leadership and innovative work behavior of employees - championing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.624[a]	.390	.375	.55479

a. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.876	4	7.969	25.891	.000[b]
	Residual	49.863	162	.308		
	Total	81.740	166			

a. Dependent Variable: CHAMPIONING
b. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.488	.224		6.655	.000
	IDEALIZED INFLUENCE	.202	.177	.215	1.141	.256
	INSPIRATIONAL	.062	.198	.065	.312	.755
	INTELLECTUAL STIMULATION	.218	.153	.224	1.421	.157
	INDIVIDUAL CONSIDERATION	.133	.170	.143	.783	.435

a. Dependent Variable: CHAMPIONING

Discussion:
The transformational leadership style of the DWCL administrators such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration taken together significantly predicted the innovative work behavior of the employees as to championing, F (4, 167) = 25.891, p <.01 with .624 overlap between the four previously mentioned predictor variables.

However, when the transformational leadership style of the DWCL administrators was taken singly, none of them could predict the innovative work behavior of the employees as regards championing, 1.488 quantified the Y-intercept in the regression equation.

These results denote that the DWCL administrators' transformational leadership style of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration taken together could predict the employees' innovative work behavior in terms of championing.

However, when the transformational leadership style of the DWCL administrators was taken singly, none of them could predict the employees' innovative work behavior in terms of championing.

Table 15: Transformational leadership and innovative work behavior of employees-championing

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.636[a]	.405	.390	.53563

a. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.601	4	7.900	27.537	.000[b]
	Residual	46.477	162	.287		
	Total	78.079	166			

a. Dependent Variable: APPLICATION
b. Predictors: (Constant), INDIVIDUAL CONSIDERATION, INTELLECTUAL STIMULATION, IDEALIZED INFLUENCE, INSPIRATIONAL

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.459	.216		6.758	.000
	IDEALIZED INFLUENCE	.213	.171	.232	1.248	.214
	INSPIRATIONAL	.054	.191	.059	.284	.777
	INTELLECTUAL STIMULATION	.261	.148	.275	1.767	.079
	INDIVIDUAL CONSIDERATION	.084	.164	.093	.514	.608

a. Dependent Variable: APPLICATION

Discussion:
The transformational leadership style of the DWCL administrators in terms of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration is taken together significantly predicted the innovative work behavior of the employees as to application, F (4,167) = 27.537 p < .01 with .636 overlap between the four predictor variables.

However, when the predictor variables of idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration were considered singly none of them could predict the innovative work behavior of the

employees as to application, 1.459 quantified the Y-intercept in the regression equation.

Hence, the transformational leadership style of the DWCL administrators such as idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration taken together could predict the innovative work behavior of the employees as to application. However, when the four predictor variables were considered singly none of them could significantly predict the employees' innovative work behavior as to application.

6. Is there a relationship between transactional leadership style and employees' innovative work behavior?

Table 16: Correlation coefficients obtained on the test of relationships between the transactional leadership style of administrators of Divine Word College of Laoag and employees' innovative work behavior (n=167)

Innovative work behavior of employees		Transactional leadership style
Opportunity Exploration	r	**.621****
	(Sig. 2-tailed)	.000
Idea Generation	r	**.622****
	(Sig. 2-tailed)	.000
Championing	r	**.595****
	(Sig. 2-tailed)	.000
	r	**.604****
Application	(Sig. 2 -tailed)	.000

* Significant at .05 level of significance (2-tailed)
** Significant at a .01 level of significance (2-tailed)

Discussion:
The coefficients of correlation ranging from .595 to .621 obtained on the test of relationships between the transactional leadership style of the administrators of Divine Word College of Laoag and the innovative work behavior of employees indicate that the transactional leadership style of the administrators had a highly significant effect on the innovative work behaviors of the employees.

The positive relationships denote that a unit increase in the transactional leadership style of the administrators results in a unit increase in the employees' innovative work behavior in terms of opportunity exploration, idea generation, championing, and application.

Results and discussion

The study aims to examine the effect of leadership styles particularly transformational and transactional leadership styles on the innovative work behavior of the employees. The results indicate that the transformational and transactional leadership styles of administrators are considered high as indicated by their weighted mean. It suggests that the administrators of the Divine Word College of Laoag are practising transformational and transactional leadership styles at the same time and to the same degree. They lead their employees through examples and inspire their employees through a challenging vision of the future. Further, they also engaged the employees through intellectual discussion when making decisions and treating the employees individually. Besides the transformational leadership style, the administrators also practice transactional leadership to the same degree as the transformational leadership style. This concludes that the administrators still consider rewards and recognition to the high performers as important to maintain and inspire employees to perform excellently in their job. Leading employees through a transformational leadership style alone are not enough to inspire the employees to perform and achieve the goal of the organization without reward and recognition. This has been found in many studies concerning the effect of reward and recognition on employees' performance such as Kalsoom, et al. (2017), Baranek (1996), Kelley, et al (2000),

Shakir, et al (2013) and Baskar (2013). Silver et al (2021) pointed out that reward is enough to drive behavior and performance.

Applying multiple leadership styles can help the management drive employees' work behavior and performance. This is confirmed by the finding of the current study. The result of the study points out that transformational leadership and transactional leadership styles correlate significantly with innovative work behavior. The better the transformational and transactional leadership leaderships are, the higher the innovative work behavior of the employees becomes. In other words, promoting innovative work behavior in the workplace requires not only improving transformational leadership styles in which the management needs to lead by their examples, challenge the employees with challenging goals to achieve, engage the employees in intellectual discussion in solving problems and giving attention to individual needs but it also requires the improvement of transactional leadership styles in which the management needs to reward and recognize the employees for their performance. Failing to reward and recognize employees may hamper employees' performance. Ineffective transactional leadership always lead to a decrease in individual and organizational performance (Aboyasin & Abood, 2013). In this case, in a certain context, financial rewards, and other kinds of rewards and recognitions are still considered important to promote innovative work behavior in the workplace.

The result of the current study contributes to the wider discussion of leadership, particularly the effect of different leadership styles on the work behavior of the employees. Particular leadership styles always cause a significant difference in employees' work behavior. Applying one leadership style alone is not sufficient to promote innovative work behavior of the employees.

The limitation of the study is that the population of the study is limited to the administrators and employees of the Divine Word College of Laoag. Thus, the result may not be representative of all Divine Word Colleges in Region I. The next study needs to include all the Divine Word Colleges in Region I.

Conclusion

The finding of the study indicates that the transformational and transactional leadership styles of administrators of the Divine Word College of Laoag are considered high but not very high. The result indicates that they practice transformational and transactional leadership to a high degree and both leadership styles significantly affect the innovative work behavior of the employees. Therefore, administrators need to pay attention to their leadership style if they want to change the behavior of the employees in the workplace. The result of the study suggests that the hypothesis of the study is accepted.

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Data availability statement: the data presented in this study are available on request from the corresponding author. Data are not publicly available due to privacy.

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