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Promoting innovative work behavior through innovative work environment

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A B S T R A C T

This study explores the impact of an innovative work environment on employees' innovative work behavior. To provide a comprehensive understanding of the topic, relevant literature was reviewed. The research design employed for this study was descriptive and correlational, with the target population being employees from various colleges. Data was collected using research questionnaires, and inferential statistics were utilized to analyze the data. The findings indicate that both the innovative work environment and innovative work behavior were rated as high, although not exceptionally high. The results of the ANOVA suggest a significant correlation between an innovative work environment and employees' innovative work behavior. Consequently, the study recommends fostering an innovative workplace to cultivate innovative work behavior. However, it is important to acknowledge the limitations of the study and encourage further investigation into different dimensions of innovative work environments and their impact on work performance.

Introduction

The current era is dominated by information technology, where advancements are the result of continuous invention and innovation. Evidently, the quality of life has significantly improved due to innovations. The history of innovation cycles leads to six distinct waves as outlined by Neufeld and Ma (2021). The first wave, which occurred around 1845 or 1873, encompassed innovations related to water, power, textiles, and iron. The second wave, characterized by innovations in steam, rail, and steel, took approximately 55 years to emerge. This was followed by the third wave, which emerged after 50 years and involved innovations in electricity, chemicals, and internal-combustion engines. The fourth wave, occurring after 40 years, brought about innovations in petrochemicals, electronics, and aviation. The fifth wave, after 30 years, involved the innovation of digital networks, software, and new media. Currently, we are entering the sixth wave, which centers around digitization, including AI, robots, drones, and cleantech, with an estimated duration of 25 years. Looking ahead, it is

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expected that the speed of innovation will continue to accelerate in the years to come.

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The rate of innovation has been closely linked to economic transformation and growth, as highlighted by Schumpeter (1942) and his concept of creative destruction, which emphasizes the role of continuous product and process innovation in driving macroeconomic performance. The pace of innovation within a country reflects its level of economic development. In fact, Schumpeter (1942) implies that the absence of innovation leads to a lack of economic transformation and development. Thus, innovation is considered a key driver of economic progress. However, despite the widespread presence of innovations of varying scales and rates, studies suggest a contrary trend indicating a decline in the rate of innovation. Huebner (2005) noted that the rate of innovation reached its peak in 1873 and has been steadily declining since then, with no signs of reversing this trend. The same study estimated that we were at approximately 85% of the economic limit of technology, projected to reach 90% in 2018 and 95% in 2038. Bloom et al. (2020) also documented a declining trend in innovation since 1965. While these findings may hold true for the West, particularly the United States, as noted by Cowen (2011), who argued that the era of extensive entrepreneurial and innovative advancements in America has passed due to slower business dynamics, a different perspective emerges when we examine Asian countries in comparison to Latin America. Qureshi et al. (2016) identified an encouraging trend of innovation, particularly in East Asia and Southeast Asia, indicating a rising trajectory in these regions despite the declining trend in the West.

Innovation is not limited to specific industries but spans all sectors, including education. As the environment rapidly evolves in terms of market dynamics and technology, educational institutions are compelled to adapt to these changes. The skills demanded by future jobs are continuously evolving, which means that what we teach and how we teach today and tomorrow will be different. Approaches that work effectively today may become obsolete in the future. The ongoing digitization across industries necessitates a swift shift in educational focus (Marr, 2022). Serdyukov (2017) emphasized that educational innovations should primarily concentrate on teaching and learning practices, as well as learner engagement, involving parents, communities, societies, and cultures. This poses a challenge in establishing a foundation for large-scale innovations and effectively implementing them, especially in the context of online learning. OECD (2016) highlighted the critical problems faced by educational institutions today, the neglect of which could have severe implications not only for education but also for economic growth, social progress, and well-being. Areas requiring significant attention in educational innovations, according to OECD (2016), include digitalization, digital practices, and digital skills, which necessitate the integration of information and communication technology (ICT) in teaching and learning processes and the development of digital literacy among both teachers and students.

The current trend of innovation and the increasing demand for educational innovation necessitate a review of educational policies and practices, which, in turn, demand changes in leadership and management approaches within educational institutions. Educational leaders must reevaluate their management and leadership strategies to foster an innovative environment. Wang (2021) conducted a study on the impact of the work environment on employees' innovative work performance and found that the dynamics of the work environment significantly influence individual innovative work performance. Similarly, Shah et al. (2022) investigated the influence of the workplace on employees' innovative work behavior and confirmed that the workplace is a strong predictor of innovative work behavior.

The purpose of the current study is to examine the presence of an innovative work environment at Divine Word College of Laoag and its effect on employees' innovative work behavior. The findings of this study will assist the management in revising policies, as well as management and leadership practices, to foster an environment conducive to innovation. To address the existing research gap, the current study aims to provide insights specific to this context. The study is divided into several sections, beginning with an introduction that outlines the rationale and objectives of the study. The literature review follows, which presents relevant studies and theories to enhance the understanding of the concepts involved. The research methodology section explains the study's design, population, locale, data administration, research instruments, and statistical treatment of data.

Literature review

The purpose of the literature review is to deepen the understanding of the main concepts or theories of the current topic

related to innovation, work environment, innovative work environment, and innovative work behavior

The concept of innovation and its contribution to development and quality

The concept of innovation has been misunderstood by many, including researchers. The word has been wrongly associated with other related terms such as creativity and invention. To understand the concept of innovation, the definition of different terms must be presented. As a common reference, the dictionary can help us to differentiate the difference between the words to help us understand the whole concept of this paper. Merriam-Webster (n.d) defines creativity as "the ability to create" which means producing something new into existence that previously has not existed. The definition is like the definition of the invention. The invention is the ability to produce something new or to "produce for the first time through the use of the imagination or ingenious thinking and experience". While innovation refers to "a change made to an existing product, idea, or field" (Merriam-Webster, n.d). Thus, innovation is not the creation or invention of something new that has not been in existence. Based on the definition given by the dictionary, it is obvious that creativity and innovation are interrelated because innovation can only happen if there is creation or invention in the first place (Amabile (1988). It is just a different way of doing something better (Redding, et al. 2013). In terms of the scope of innovation, it is not limited to tangible products (cellphones, computers, etc) but it encompasses all kinds of services and procedures or methods of carrying out the task as indicated by the definition of West and Farr (1990, p. 9) who define innovation as "the intentional introduction and application within a role, group or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society". This definition suggests that innovation is the function of individual employees and the organization. Therefore, the challenge is to change the organizational environment where individual employees or groups can generate ideas and turn those ideas into innovation.

As pointed out earlier in the introduction, the relationship between innovation and economic development and quality of service or products. Innovation has been the main driver behind the economic growth and the success of any business organization (Tohidi & Jabbari, 2012) and can help the business gain its competitive advantage (Cocco & Quttainah, 2015). This is emphasized by Acar, et al (2018) that creativity and innovation are the foundation of an organization's competitive advantage. Innovation is also behind quality service and products (Gobeli & Brown, 1993).

This is also true in the education sector which requires continuous innovation to deliver a quality output of education (Rubalcaba, 2022). However, innovation is not something isolated from other factors of the organization, particularly a conducive organizational environment that promotes creativity and innovation. This has been pointed out by Acar, et al. (2018) that there are factors that constrain innovativeness such as rules and regulations, deadlines, and scarce resources. Thus, it is important for management to eliminate the constraints that hinder the development of creativity and innovation (Amabile, 1996; Amabile & Pratt, 2016; Damanpour, 1991). It is a reality that constraints are always present in every organization, therefore the duty of management is to reduce or eliminate those constraints to allow creativity and innovation to flourish (Acar, et al. (2018).

As pointed out by the definition of West and Farr (1990), the scope of innovation is not limited to tangible products but includes new ideas about processes or methods. Therefore, the application of innovation is not limited to manufacturing industries but applies to all kinds of services like education or banking industries. In education, innovation comes in many forms a new pedagogic theory, methodological approach teaching techniques, instructional tools, and learning processes, services that enhance the better output of student learning (Serdyukov, 2017). Educational innovation can include instructional strategy or delivery systems such as the use of new learning technology. Beyond technology, educational innovation includes introducing new ideas and simply solving old problems to promote equity and improve learning as pointed out by Unicef (n.d). The purpose of educational innovation is to produce a quality output of learning in the form of quality graduates. Halasz (2021) pointed out that innovations that are created by teachers or schools play an important role in improving the quality and effectiveness of education. Teachers must find ways to improve their teaching strategy to deliver their content to the students and therefore creativity and innovativeness are important skills to be acquired by all teachers (Halasz, 2021). However, as we have pointed out earlier that innovation is a dependent variable that depends on the organizational environment (Osborne, 2016). Thus, educational institutions must provide an environment in which the teachers are allowed to introduce their way of doing things/deliver their instructions.

The concept of innovation often tends to be misunderstood, as it is frequently associated with terms like creativity and invention. To gain a comprehensive understanding of innovation, it is important to differentiate these terms. Merriam-Webster (n.d) defines creativity as "the ability to create," referring to the production of something new that did not previously exist. This definition aligns with the concept of invention, which involves producing something new for the first time through imaginative thinking and experience. On the other hand, innovation refers to "a change made to an existing product, idea, or field" (Merriam-Webster, n.d). Therefore, innovation is not solely the creation or invention of something entirely new; rather, it involves introducing changes or improvements to existing entities. Creativity and innovation are interconnected, as innovation can only occur when there is an initial creation or invention (Amabile, 1988). In essence, innovation represents a different approach to accomplishing a task or objective more effectively (Redding et al., 2013). Moreover, the scope of innovation extends beyond tangible products, encompassing services, procedures, and methods of task execution (West & Farr, 1990). They define innovation as "the intentional introduction and application within a role, group, or organization of ideas, processes, products, or procedures new to the relevant unit of adoption, designed to significantly benefit the individual, the group, the organization, or wider society." This definition highlights that innovation is a function of both individual employees and the organization. Consequently, the challenge lies in creating an organizational environment that fosters idea generation and transforms those ideas into innovative outcomes.

As mentioned earlier, innovation is strongly linked to economic development and the success of business organizations (Tohidi & Jabbari, 2012). It serves as a driving force behind economic growth and enables businesses to gain a competitive advantage (Cocco & Quttainah, 2015; Acar et al., 2018). The importance of innovation in delivering quality services and products is also evident (Gobeli & Brown, 1993). Similarly, the education sector requires continuous innovation to ensure the delivery of high-quality education (Rubalcaba, 2022). However, innovation does not exist in isolation from other organizational factors, particularly the presence of a conducive environment that promotes creativity and innovation. Constraints that hinder innovativeness, such as rules, regulations, deadlines, and scarce resources, must be addressed by management (Acar et al., 2018). Although constraints are a reality in every organization, it is the responsibility of management to reduce or eliminate these constraints to facilitate the flourishing of creativity and innovation (Amabile, 1996; Amabile & Pratt, 2016; Damanpour, 1991).

The scope of innovation, as defined by West and Farr (1990), extends beyond tangible products and encompasses new ideas, processes, or methods. Therefore, the application of innovation is not limited to manufacturing industries; it applies to various service sectors, including education and banking. In the field of education, innovation takes on various forms, such as new pedagogic theories, methodological approaches, teaching techniques, instructional tools, and learning processes aimed at enhancing student learning outcomes (Serdyukov, 2017). Educational innovation can involve the integration of new learning technologies, as well as the introduction of new ideas to address existing challenges and promote equity in education (Unicef, n.d). The purpose of educational innovation is to produce high- quality learning outcomes, ultimately yielding well-prepared graduates (Halasz, 2021). Teachers play a crucial role in driving educational innovation, as their creativity and innovativeness significantly contribute to enhancing the quality and effectiveness of education (Halasz, 2021). However, it is important to recognize that innovation is a dependent variable that relies on the organizational environment (Osborne, 2016). Therefore, educational institutions must create an environment that empowers teachers to introduce their own teaching approaches and methods.

The concept of work environment

The issue of work environment and productivity has been the concern of management and researchers since the 1900s. It was recognized that the work environment is a significant predictor of productivity. However, the concept of the work environment was not too clear at the beginning. In the beginning, the work environment was referred to as a physical work environment which led to the improvement of office setups including lighting. However, improvements in the physical environment and task structure were not affecting much productivity which led to a shift of attention toward task performance and human relations. The work environment was seen as a composition of task and human relations or social relations within the workplace. The study of Elton Mayo (1930) at the Western Electric Company plant in Hawthorne, Illinois, on the effects of the physical work environment on workers' performance, as cited by Smith (1987) led to a further shift in the work environment concept toward human psychological needs. The study suggested that employees'

satisfaction and productivity increased by just the improvement of the physical environment and the salary but by the mere fact that employees are given attention. When the employees perceived that they are being observed and attended to by their employers, their performance increases. Then this result led to a broader investigation into workplace relationships. In the 1950s and 1960s, the concept of work environment extended to include communications and conflict within the workplace, and then the concern was to improve cooperation among organizational members (Walden, 2004). Based on this historical development, the definition of work environment varies from one researcher to another researcher. Raziq and Maulabakhsh (2015) defined work environment as the "interrelationship of employees in their workplace". This definition refers to only one aspect of the environment which is human relations. Salunke (2015) defines it as "the physical aspect of a workplace". Again, this definition refers to the physical aspects of the work environment which affect job satisfaction, health, concentration, and productivity. While Kohun (1992) defined it as "the bridge between the employees and the workplace" which refers to the setting, situation, condition, or circumstances where employees perform their job.

As pointed out above, the work environment has been given serious attention by the management and the researchers because of its contribution to the organization's success. In recent years, many studies have been conducted concerning the effect of the work environment on job performance and those studies have found positive correlations. Demus, et al (2015), Jayaweera (2015), Al-Omari and Okasheh (2017), and Rachman (2021) found a positive correlation between the work environment and job performance. Raziq and Maulabakhsh (2015), and Agbozo, et al. (2015), Taheri, et al (2020), also found a positive effect of the work environment on job satisfaction. While Pandey (2017) found a significant correlation between work environment and employees' productivity, Kamanja (2019) found a positive effect on work engagement. There are still many more studies related to the influence of a good work environment on employees' performance, satisfaction, and productivity pointing out similar findings. These findings suggest that the work environment can affect employees' work behavior. Therefore, the management needs to give serious attention to improving the work environment. A negative work environment may hinder employees' job performance and result in the organization's failure to achieve its objective.

The concept of innovation often tends to be misunderstood, as it is frequently associated with terms like creativity and invention. To gain a comprehensive understanding of innovation, it is important to differentiate these terms. Merriam-Webster (n.d) defines creativity as "the ability to create," referring to the production of something new that did not previously exist. This definition aligns with the concept of invention, which involves producing something new for the first time through imaginative thinking and experience.

On the other hand, innovation refers to "a change made to an existing product, idea, or field" (Merriam-Webster, n.d). Therefore, innovation is not solely the creation or invention of something entirely new; rather, it involves introducing changes or improvements to existing entities. Creativity and innovation are interconnected, as innovation can only occur when there is an initial creation or invention (Amabile, 1988).

In essence, innovation represents a different approach to accomplishing a task or objective more effectively (Redding et al., 2013). Moreover, the scope of innovation extends beyond tangible products, encompassing services, procedures, and methods of task execution (West & Farr, 1990). They define innovation as "the intentional introduction and application within a role, group, or organization of ideas, processes, products, or procedures new to the relevant unit of adoption, designed to significantly benefit the individual, the group, the organization, or wider society." This definition highlights that innovation is a function of both individual employees and the organization. Consequently, the challenge lies in creating an organizational environment that fosters idea generation and transforms those ideas into innovative outcomes.

The management and researchers have devoted significant attention to the work environment due to its crucial contribution to organizational success. Recent years have witnessed numerous studies investigating the impact of the work environment on job performance, and these studies consistently demonstrate positive correlations. Notable research by Demus et al. (2015), Jayaweera (2015), Al-Omari and Okasheh (2017), and Rachman (2021) has revealed a positive relationship between the work environment and job performance. Similarly, Raziq and Maulabakhsh (2015), Agbozo et al. (2015), and Taheri et al. (2020) have found a positive effect of the work environment on job satisfaction. Additionally, Pandey (2017) discovered a significant correlation between the work environment and employees' productivity, while Kamanja (2019) established a

positive impact on work engagement. Numerous other studies also support the influence of a favorable work environment on employees' performance, satisfaction, and productivity, consistently reporting similar findings. These collective findings underscore the significance of the work environment in shaping employees' work behavior.

Consequently, it is imperative for management to prioritize the improvement of the work environment. A negative work environment can hinder employees' job performance, ultimately impeding the organization from achieving its objectives. By creating a positive and supportive work environment, management can foster a conducive atmosphere that promotes employee productivity, satisfaction, and engagement. This, in turn, contributes to the overall success and effectiveness of the organization.

As mentioned earlier, innovation is strongly linked to economic development and the success of business organizations (Tohidi & Jabbari, 2012). It serves as a driving force behind economic growth and enables businesses to gain a competitive advantage (Cocco & Quttainah, 2015; Acar et al., 2018). The importance of innovation in delivering quality services and products is also evident (Gobeli & Brown, 1993). Similarly, the education sector requires continuous innovation to ensure the delivery of high-quality education (Rubalcaba, 2022).

However, innovation does not exist in isolation from other organizational factors, particularly the presence of a conducive environment that promotes creativity and innovation. Constraints that hinder innovativeness, such as rules, regulations, deadlines, and scarce resources, must be addressed by management (Acar et al., 2018). Although constraints are a reality in every organization, it is the responsibility of management to reduce or eliminate these constraints to facilitate the flourishing of creativity and innovation (Amabile, 1996; Amabile & Pratt, 2016; Damanpour, 1991).

The scope of innovation, as defined by West and Farr (1990), extends beyond tangible products and encompasses new ideas, processes, or methods. Therefore, the application of innovation is not limited to manufacturing industries; it applies to various service sectors, including education and banking. In the field of education, innovation takes on various forms, such as new pedagogic theories, methodological approaches, teaching techniques, instructional tools, and learning processes aimed at enhancing student learning outcomes (Serdyukov, 2017).

Educational innovation can involve the integration of new learning technologies, as well as the introduction of new ideas to address existing challenges and promote equity in education (Unicef, n.d). The purpose of educational innovation is to produce high-quality learning outcomes, ultimately yielding well-prepared graduates (Halasz, 2021). Teachers play a crucial role in driving educational innovation, as their creativity and innovativeness significantly contribute to enhancing the quality and effectiveness of education (Halasz, 2021). However, it is important to recognize that innovation is a dependent variable that relies on the organizational environment (Osborne, 2016). Therefore, educational institutions must create an environment that empowers teachers to introduce their own teaching approaches and methods.

The concept of innovative work environment

As we have defined and explained the work environment, we need to define and explain the concept of an innovative work environment. Both work environment and innovative work environment are two concepts that need to be differentiated. Work environment refers to the physical and psychological work environment as we have discussed earlier in this paper. An innovative work environment refers to a specific environment that allows innovative ideas and behaviors to operate. To understand the concept, we need to review some studies related to the innovative work environment. There are several studies conducted by different researchers concerning the effect of an innovative work environment on job satisfaction like that of Mckinnon et al. (2003) and Zhou et al. (2005), Berson, Oreg, and Dvir (2008) which found to be significantly correlated, but unfortunately, these studies have not defined what innovative work environment means. The concept must be defined to identify its special characteristics and differentiate it from the concept of the work environment because both are different in terms of their characteristics. We can adopt some definitions offered by different experts on the subject matter of an innovative work environment. Rogovskiy (2021) defines an innovative work environment as “the kind of work environment that encourages its employees to embrace unorthodox thinking rather than discouraging them from it”. He then argues that nurturing an innovation-friendly culture means putting the status quo aside and challenging typicality to create something new. Definition of Rogovskiy (2021) refers innovative work environment as an organizational climate that

is innovation oriented. Organizational climate is something that every member of the organization feels or perceives and experiences in the organization (Litwin (1968). It is an organizational climate that is oriented toward innovation. Innovation orientation means that knowledge workers believe that their innovative ideas are appreciated or encouraged (Xu, et al. 2022). According to Johannessen and Olsen (2011) only within a friendly organizational climate, do organizational members trust each other and it makes it easy to cooperate among members and make it easier to share knowledge and consequently generate new ideas. As Khan (1990) pointed out further that trusting relationship enables knowledge workers to dare and try new ideas and new affairs. An innovation-orientated organization that is supported by trust relationships allows knowledge workers to apply their innovative ideas and behaviors to achieve organizational objectives.

Research has found that within a friendly organizational climate, stress is reduced and improves the satisfaction and work commitment of knowledge workers (Farr & West, 1991). Within such as environment, innovative work behavior is encouraged, and it allows knowledge workers to innovate because they believe that innovative ideas and innovative behaviors are encouraged or supported. As Farr and West (1991) pointed out that innovation-oriented organizations have a significant impact on knowledge workers' psychological state. Hennessey and Amabile (1998) found that when facing psychological threats and pressure, the tendency is to be defensive and not to show innovative behaviors. It is along such finding Hennessey and Amabile (1998) pointed out that intrinsic motivation is very crucial for individuals to generate creativity and innovation.

The influence of innovative organizational culture on performance has been one of the interests of the researchers. Studies have been conducted measuring the effect of innovative organizations on organizational performance or employees' performance. Ur Rehman, et al. (2019) conducted a study on the effect of innovative organizational culture and organizational learning on organizational performance and the study found that innovative culture and organizational learning are significantly correlated which suggests that changing the bureaucratic environment into an innovative environment is important to increase organizational performance. A similar study was conducted by Aboramadan, et al. (2020) on the effect of organizational and marketing innovation on business performance and the study found that organization and marketing innovation affect significantly business performance. In terms of the effect of organizational culture, and innovation on the employees' performance, Naranjo-Valencia, et al (2016) also found a significant influence of innovation culture on the employees' performance.

The distinction between the work environment and the innovative work environment is essential for a comprehensive understanding of both concepts. While the work environment encompasses the physical and psychological aspects of the workplace, the innovative work environment refers to a specific setting that fosters innovative ideas and behaviors. To gain a holistic understanding, it is necessary to review relevant studies on the innovative work environment. Several researchers have investigated the impact of the innovative work environment on job satisfaction, such as the studies conducted by McKinnon et al. (2003), Zhou et al. (2005), and Berson, Oreg, and Dvir (2008), which revealed significant correlations. However, these studies did not provide a clear definition of the innovative work environment, which is crucial for identifying its unique characteristics and differentiating it from the general concept of the work environment.

To address this gap, various experts have offered definitions of the innovative work environment. Rogovskiy (2021) defines it as an environment that encourages employees to embrace unorthodox thinking rather than discouraging it. He argues that fostering an innovation-friendly culture requires challenging the status quo and defying typicality to create something new. Rogovskiy's definition characterizes the innovative work environment as an organizational climate that prioritizes innovation. Organizational climate refers to the collective perceptions and experiences of all members within the organization (Litwin, 1968). An innovation-oriented climate means that knowledge workers feel their innovative ideas are valued and encouraged (Xu et al., 2022). Within a supportive organizational climate, trust among members is fostered, promoting cooperation, knowledge sharing, and the generation of new ideas (Johannessen & Olsen, 2011). As Khan (1990) further suggests, trust enables knowledge workers to take risks and pursue new ideas and initiatives. By providing an innovation-oriented environment supported by trust relationships, organizations empower knowledge workers to apply their innovative ideas and behaviors to achieve organizational objectives.

Research has also demonstrated that within a favorable organizational climate, stress is reduced, and the satisfaction and

work commitment of knowledge workers improve (Farr & West, 1991). In such an environment, innovative work behavior is encouraged, as knowledge workers believe their innovative ideas and behaviors are supported. Farr and West (1991) highlight that an innovation-oriented organization significantly impacts the psychological state of knowledge workers. Additionally, Hennessey and Amabile (1998) found that when individuals face psychological threats and pressure, they tend to become defensive and less likely to exhibit innovative behaviors. Intrinsic motivation, as emphasized by Hennessey and Amabile (1998), is crucial for individuals to generate creativity and innovation.

The influence of an innovative organizational culture on performance has garnered significant research interest. Studies have explored the impact of innovative organizations on organizational performance or employee performance. Ur Rehman et al. (2019) investigated the effect of an innovative organizational culture and organizational learning on organizational performance, revealing a significant correlation. This suggests that transforming a bureaucratic environment into an innovative one is crucial for enhancing organizational performance. Similarly, Aboramadan et al. (2020) examined the effect of organizational and marketing innovation on business performance and found a significant impact. Regarding the influence of organizational culture and innovation on employee performance, Naranjo-Valencia et al. (2016) also discovered a significant relationship between innovation culture and employee performance.

These studies collectively underscore the importance of the innovative work environment and its impact on various aspects of organizational and employee performance. By cultivating an innovation-oriented climate and providing the necessary support and resources, organizations can foster creativity, and innovation, and ultimately enhance their overall effectiveness and performance.

Work behavior and innovative work behavior

Work behavior is one of the key dimensions of performance management. The organization can achieve its organizational objectives when the work behaviors of employees are congruent with the task and the objective of the organization. Therefore, the management needs to manage work behavior and define what kind of work behaviors are required to accomplish the task and achieve organizational objectives. A clear concept of work behavior is then necessary. Concerning the concept of work behavior, researchers have not come up with a common concept. However, reading some available research, shows that, there is always common ground to understand work behavior Campbell (1990) classified work behavior according to its influence on organizational performance and then we have productive and counterproductive work behavior One on hand, productive work behavior is related to work behaviors that are task-related and contribute to performance. On the other hand, counterproductive work behavior is concerning work behaviors that are not task-related and harm the individuals, organization, and organizational objectives as a whole (Motowidlo, 2003, 48). In a similar vein, Murphy (2004) classified work behavior according to its impact on the organization and so we have behaviors that are closely related to a task, human relations, and destructive behavior Based on those concepts that we have presented, then it is understood that work behaviors are behaviors that are related to tasks which are categorized as productive and counterproductive behavior Work behaviors are not isolated from personality and work environmental issues. Landis (2015) pointed out that personality has a strong influence on work behavior and career success as he argued that a person can perform well if there is a fit between personality and the job, the team, and the overall organization. This is also emphasized by Barrick, et al (2013) that traits and job characteristics explain work behaviors and work outcomes. Concerning the influence of the work environment on innovative work behavior, Wang (2021) found that the dynamics of the work environment affect innovative work behavior and performance.

After we have understood the concept of work behavior, then now we understand what innovative work behavior means. De Spiegelaere, et al. (2014) define innovative work behavior as “the behaviors that are aimed at the generation, introduction and the application of ideas, processes, products, procedures, new and intended to benefit the relevant unit of adoption”. In this regard, it is understood that innovative work behavior is not just innovative work behavior without any purpose but it is work behavior that serves the purpose of the organization. de Jong and Den Hartog (2008) identified four dimensions of innovative work behavior namely opportunity exploration (paying attention to issues that are not part of daily work and wondering how things can be improved), idea generation (searching out new working methods, techniques or instruments, generate original solutions for problems, find new approaches to execute tasks), championing (make important organizational members enthusiastic for innovative ideas, attempt to convince people to support an innovative

idea) and application (systematically introduce innovative ideas into work practices, contribute to the implementation of new ideas, and put the effort in the development of new things).

Just like work behavior is not isolated from the organizational environment, it is the same with innovative work behavior It is the effect of other factors of the organization such as leadership and work environment. Zhang, et al. (2021) studied the effect of transformational leadership styles and innovative work behavior of employees and their study found that there is a positive correlation between the two variables. Earlier, Sharifirad (2013), Tangrukwaraskul, and Kulchanarat (2018) conducted a similar study and found that transformational leadership is not only affecting innovative work behavior but is also affecting employees' well-being. In terms of the influence of the work environment on innovative work behavior, Shah, et al (2022) studied the effect of workplace learning on innovative work behavior and their study concluded that workplace learning is significantly correlated to innovative work behavior.

Work behavior is a crucial aspect of performance management, as organizational objectives can be achieved when employees' behavior aligns with the tasks and objectives of the organization. To effectively manage work behavior, it is important for the management to define the required behaviors for task accomplishment and goal achievement. Although researchers have not reached a consensus on a common concept of work behavior, there are common grounds for understanding it.

Campbell (1990) classified work behavior based on its impact on organizational performance, distinguishing between productive and counterproductive work behavior. Productive work behavior refers to task-related behaviors that contribute to performance, while counterproductive work behavior encompasses behaviors that are not task-related and harm individuals, the organization, and its objectives (Motowidlo, 2003, p.48). Similarly, Murphy (2004) classified work behavior based on its impact on the organization, distinguishing between task-related behaviors, human relations behaviors, and destructive behaviors. These concepts highlight that work behaviors are task-related behaviors that can be categorized as productive or counterproductive. Work behaviors are not isolated from personality and the work environment.

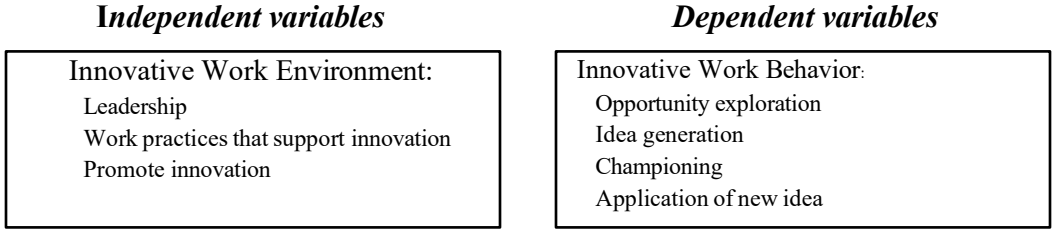
Personality strongly influences work behavior and career success, as noted by Landis (2015) who argued that a person performs well when there is a fit between their personality and the job, the team, and the overall organization. This is further emphasized by Barrick et al. (2013) who state that traits and job characteristics explain work behaviors and outcomes.

Turning to the influence of the work environment on innovative work behavior, Wang (2021) found that the dynamics of the work environment have an impact on innovative work behavior and performance.

Having understood the concept of work behavior, we can now define innovative work behavior. De Spiegelaere et al. (2014) define it as "behaviors aimed at the generation, introduction, and application of ideas, processes, products, and procedures, which are new and intended to benefit the relevant unit of adoption." Innovative work behavior is not simply engaging in innovative behavior without purpose, but rather encompasses behaviors that serve the organization's goals. De Jong and Den Hartog (2008) identified four dimensions of innovative work behavior: opportunity exploration (paying attention to issues outside of daily work and considering ways for improvement), idea generation (seeking new working methods, techniques, or solutions to problems), championing (inspiring important organizational members to support innovative ideas), and application (systematically implementing innovative ideas, contributing to their development).

Just as work behavior is influenced by the organizational environment, the same applies to innovative work behavior. Factors such as leadership and the work environment play a significant role. Zhang et al. (2021) studied the effect of transformational leadership styles on employees' innovative work behavior and found a positive correlation between the two variables. Similarly, Sharifirad (2013) and Tangrukwaraskul and Kulchanarat (2018) conducted studies demonstrating that transformational leadership not only affects innovative work behavior but also impacts employees' well-being. In terms of the influence of the work environment on innovative work behavior, Shah et al. (2022) examined the effect of workplace learning on innovative work behavior and concluded that there is a significant correlation between workplace learning and innovative work behavior.

Conceptual frameworks



Source: Australian Government (2022) de Jong & Den Hartog. (2008).

Figure 1: The conceptual frameworks explain the purpose and the content of the study. It aims to determine the correlation between the Innovative work environment and the innovative work behavior of employees.

Statement of the problems

The study examined the effect of an innovative work environment on the innovative work behavior of employees. It specifically seeks to answer the following questions:

1. **What is the innovative work environment of the Divine Word College of Laoag in terms of :**
   - ***1.1 leadership;***
   - ***1.2 work practices that support innovation;***
   - ***1.3 promoting innovation;***
   - ***1.4 physical environment, and***
   - ***1.5 providing learning opportunities?***

2. **What is the innovative work behavior of employees in terms of:**
   - ***2.1 opportunity exploration;***
   - ***2.2 idea generation;***
   - ***2.3 championing, and***
   - ***2.4 application of ideas?***

3. **Is there a relationship between an innovative work environment and innovative work behavior?**

Assumption

The study assumes that an innovative work environment influences the innovative work behaviors of employees, and they can be measured.

Hypothesis

In addition to the studies, Shah et al. (2022) [23] conducted research on the impact of workplace learning on innovative work behavior and identified a correlation between these two variables. Similarly, Rosdaniati and Muafi (2021) [24] investigated the effect of workplace happiness on innovative work behavior and found that workplace happiness is a significant predictor of innovative work behavior. These findings highlight the importance of various factors, such as workplace learning and happiness, in fostering innovative work behavior.

Building upon this existing research, the current study hypothesizes that an innovative work environment significantly influences the innovative work behavior of employees. By creating an environment that supports and encourages innovation, organizations can enhance the likelihood of employees engaging in innovative behaviors that contribute to organizational success.

Scope and delimitation of the study

The scope of this study focuses on examining the impact of an innovative work environment on innovative work behavior within the context of Divine Word College of Laoag. Specifically, the study investigates the effect of an innovative work environment across five dimensions: leadership, work practices that support innovation, promoting innovation, physical environment, and learning opportunities.

Furthermore, the study examines innovative work behavior in terms of four dimensions: opportunity exploration, idea generation, championing, and application of ideas. By exploring these specific dimensions, the study aims to provide a comprehensive understanding of how an innovative work environment influences the various facets of innovative work behavior.

It is important to note that the population under investigation in this study is limited to all employees of Divine Word College of Laoag. By focusing on this specific population, the study aims to gain insights into the relationship between an innovative work environment and innovative work behavior within the context of this organization. The findings of this study can potentially inform the organization's strategies for fostering a more innovative work environment and promoting innovative work behavior among its employees.

Research methodology

This study adheres to prescribed research procedures and methodology. It follows a specific method of investigation, as suggested by Wilkinson (2000) and Leedy (1974), who highlight research methodology as an established process for inquiry. The study employs methods such as research design, data gathering instruments, study population, research locale, data gathering procedures, and statistical treatment of data to determine, select, and analyze relevant data.

Research design of the study

The research design of the study is the descriptive assessment and descriptive correlational research design. Ariola (2006) argued that a descriptive correlation study is intended to describe 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, describe characteristics of people, situations, or phenomena. In short, it answers the question of what, when, how, where, and not why question (McCombes, 2020).

The locale of the study

The study was conducted at Divine Word College of Laoag and Divine Word College of Vigan, both situated in Laoag City, the capital of Ilocos Norte, and Vigan City, Ilocos Sur, respectively.

Population

The study included all employees of the colleges as respondents, utilizing a total enumeration sampling method. This approach involved considering the entire faculty and staff population of the colleges for the study.

Data gathering instruments

The study adopted validated questionnaires by the Australian Government (2022) on the innovative environment, and de Jong and Den Hartog (2008) on innovative work behavior (IWB).

Data gathering procedures

To maintain the scientific integrity of the research, data collection was carried out with the approval of the college presidents. The researcher obtained approval by sending a letter to the presidents, following which questionnaires were distributed by a designated representative. The data was collected by the representative and subsequently submitted to the researcher for tabulation.

Ethical procedures

The study was conducted after obtaining approval from the research ethics committee, ensuring that the content of the paper adhered to ethical standards and did not pose any harm to human life or the environment.

Statistical treatment of data

Data analysis employed descriptive and inferential statistics. The weighted mean was utilized to assess the levels of innovative leadership style, innovative knowledge and skills, and innovative work behavior among employees. Additionally, the Analysis of Variance (ANOVA) was employed to examine the correlation between the innovative work environment and innovative work behavior. The study utilized predefined ranges of values accompanied by descriptive interpretations:

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 data that were gathered through research questionnaires. The data are presented according to the statement of the problems.

Problem 1: What is the innovative work environment of the Divine Word College of Laoag in terms of

- ***1.1 leadership;***
- ***1.2 work practices that support innovation;***
- ***1.3 promoting innovation;***
- ***1.4 physical environment, and***
- ***1.5 providing learning opportunities?***

Table 1: Innovative work environment in terms of leadership

	Innovative Work Environment	**Mean**	**DI**
Indicators	**Leadership**		
1	Makes Innovation an integral part of leadership and management activities.	4.02	A/H
2	Demonstrate positive reception of ideas from others and provide constructive advice	4.04	A/H
3	Establish and maintain a relationship based on mutual respect and trust	4.08	A/H
4	Take considerate risks to open up opportunities for innovation	4.04	A/H
5	Regularly evaluate own approaches for consistency with the wider organizational context	3.98	A/H
	Composite Mean	**4.03**	**A/H**

Source: Australian Government (2022)

Legend:

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

Based on the data presented in the table, the innovative work environment received an overall composite mean rating of 4.03, indicating an interpretation of "agree/high." This mean rating suggests that the innovative work environment falls within a high range, neither very low nor moderate. Individually, all indicators fall within the same level mean range. Specifically, employees agree that innovation is integral to leadership (4.02), positively receive ideas from others (4.04), foster mutual relationships based on respect and trust (4.08), allow for risk-taking in innovation (4.04), and regularly evaluate approaches for consistency (3.98).

The significance of leadership in shaping organizational culture is underscored by Helbig (2022), who emphasizes that effective leaders prioritize a strong workplace culture daily. This perspective is further supported by Arnett et al. (2017), who discusses the role of leadership in establishing a positive work environment. These scholars assert that leaders must create an environment that fosters employee innovation, starting with their own exemplary behavior for employees to observe and emulate.

Table 2: Innovative work environment along with work practices that support innovation

Indicators	**Innovative work environment**	**Mean**	**DI**
	Work practices that support innovations		
1	Consult and establish working conditions that reflect and encourage innovative practice.	3.97	A/H
2	Introduce and maintain workplace procedures that foster innovation and allow for rigorous evaluation of innovative ideas	3.97	A/H
3	Facilitate and participate in collaborative work arrangements to foster innovation	3.97	A/H
4	Build and lead teams to work in ways that maximize opportunities for innovation	3.99	A/H
	Composite Mean	**3.98**	**A/H**

Source: Australian Government (2022)

The data presents the composite mean rating for the innovative work environment and workplace practices at Divine Word College of Laoag and Vigan as 3.98, indicating an interpretation of "agree or high." This mean rating suggests that the innovative work environment, in terms of work practices, is considered high, neither very low nor moderate. Individually, all indicators received the same level of mean rating. Specifically, employees agree that working conditions encourage innovative practices (3.97), rigorous evaluation of innovative ideas (3.97), collaborative work arrangements to foster innovation (3.97), and maximizing opportunities for innovation (3.98).

Creating an innovative workplace culture is crucial for organizational performance, as evidenced by previous studies (Oeij & Vass, 2016; Stoffers et al., 2021; Taneseb & Park, 2020). These studies emphasize the importance of establishing a work environment that fosters creativity and innovation to achieve organizational objectives. Serrat (2009) further highlights the role of leadership in harnessing creativity and innovation in the workplace. Leaders must create conditions that encourage innovative practices and ideas. Serrat (2009) emphasizes that creativity is essential for progress and human endeavor.

Table 3: Innovative work environment in terms of promoting innovation

	Innovative work environment	**Mean**	**DI**
Indicators	**Promoting innovation**		
1	Acknowledge suggestions, improvements and innovations from all colleagues	4.08	A/H
2	Find appropriate ways of celebrating and promoting innovation	4.05	A/H
3	Promote and reinforce the value of innovation according to the vision and objectives of the	4.05	A/H

	organization		
4	Promote and support the evaluation of innovative ideas within the wider organizational context	4.07	A/H
	Composite Mean	**4.06**	**A/H**

Source: Australian Government (2022)

Based on the data presented, the composite mean rating for the innovative work environment in terms of promoting workplace innovation is 4.06, indicating an interpretation of "agree/high." This mean rating suggests that the innovative work environment for promoting innovation is considered high, neither very low nor moderate. Individually, all indicators received the same level of mean rating and interpretation, signifying agreement among employees. Specifically, employees agree that there is openness to suggestions from colleagues (4.08), appreciation for promoting innovation (4.05), reinforcement of values for innovation (4.05), and evaluation of innovative ideas within the wider organizational context (4.07).

Several studies by different researchers have examined the impact of promoting workplace innovation on organizational competitiveness. These studies consistently conclude that promoting innovation in the workplace is crucial for gaining a competitive advantage (Quaye & Mensah, 2019; Dogan, 2016; Clark & Guy, 1998). In the context of promoting innovation, Clark, and Guy (1998) recommend that management introduce policies that encourage advancements in science and technology. These findings emphasize the significance of fostering an environment that supports and values innovation for organizational success.

Table 4: Innovative work environment concerning the physical environment

	Innovative work environment	**Mean**	**DI**
Indicators	**Physical environment**		
1	Evaluate the impact of the physical environment concerning innovation	3.96	A/H
2	Collaborate with colleagues about ideas for enhancing the physical work environment before taking actions	4.03	A/H
3	Consider the potential for supporting innovation when selecting physical resources and equipment	4.00	A/H
4	Design, fit-out and decorate workspaces to encourage creative mindsets, collaborative working and the development of positive workplace relationship	3.98	A/H
	Composite mean	**4.00**	**A/H**

Source**:** Australian Government (2022)

The innovative work environment encompasses not only leadership and work practices but also the physical environment. Based on the data, the composite mean rating for the innovative work environment, including the physical environment, is 4.00, indicating an interpretation of "agree/high." This mean rating suggests that the innovative work environment in terms of the physical environment is considered high, neither very low nor moderate. Individually, all items received the same level of mean rating and interpretation, indicating agreement among employees. Specifically, employees agree that the physical environment supports innovation (3.96), there is a process for selecting physical resources and equipment that support innovation (4.00), and workspaces are designed and decorated to encourage creativity, collaboration, and positive workplace relationships (3.98).

Several researchers have highlighted the importance of the physical environment in fostering innovation. For instance, Moultrie et al. (2007) emphasized that the physical setup should align with the organization's strategic intent for innovation and reflect desired modes of working. Similarly, Oksanen and Stahle (2013) recommended that the physical environment should facilitate collaborative learning and reflect a value orientation directed toward innovation. These findings underscore the significance of creating a physical environment that supports and enhances innovative practices in the workplace.

Table 5: Innovative work environment related to providing learning opportunities

	Innovative work environment	**Mean**	**DI**
Indicators	**Providing learning opportunities**		
1	Pro-actively share relevant information, knowledge and skills with colleagues	3.93	A/H
2	Provide or encourage formal and informal learning opportunities to help develop the skills needed for innovation	3.99	A/H
3	Create opportunities in which individuals can learn from the experience of others	3.98	A/H
	Composite mean	**3.96**	**A/H**
Overall Mean	***Leadership (4.03), work practices (3.98), promoting innovation (4.06), physical environment (4.00), and providing learning opportunities (3.96).***	**4.00**	**A/H**

Source: Australian Government (2022)

An innovative work environment also provides learning opportunities. As gleaned from the data, it reveals that, an innovative work environment along with providing learning opportunities gained a composite mean of 3.96 which is translated as "agree/high". The mean rating suggests that as a whole innovative work environment in terms of providing learning opportunities is not very high and it is also not very low, low or moderate, but it is high. Even when they are taken separately, they all are rated within the same level of mean rating with the interpretation of "agree/high". The employees agree that the environment is proactively sharing relevant information (3.93), providing formal and informal learning opportunities (3.99), and creating opportunities in which employees can learn from the experience of others (3.98).

An organization that provides learning opportunities for its employees can help employees advance their knowledge and skills related to their job which consequently improves performance (Tenney, 2020). According to Tenney (2020) one of the key features of the learning environment is an alignment between business strategies and professional development through training. A study by Lehtonen et al., (2022) on the effect of workplace learning opportunities on job satisfaction and turnover intention suggested that the two variables are significantly correlated. The study recommends that people can leave the organization when they are not growing and satisfied.

The overall mean rating for the innovative work environment is 4.00 which is interpreted as "agree/high". This is supported by a sub-variable mean rating along with leadership (4.03), work practices (3.98), promoting innovation (4.06), physical environment (4.00), and providing learning opportunities (3.6). The 4.00 mean rating suggests that the innovative work environment of the school or institution is not very high and it is not also very low, low or moderate but it is high.

Problem 2: What is the innovative work behavior of employees in terms of

- ***2.1 opportunity exploration***
- ***2.2 idea generation***
- ***2.3 championing***
- ***2.4 application of ideas***

Table 6: Innovative work behavior in terms of opportunity exploration

	Innovative work behavior	**Mean**	**DI**
Indicators	**Opportunity exploration**		
1	I pay attention to issues that are not part of my daily work	3.69	**A/H**
2	I wonder how things can be improved	4.08	**A/H**
	Composite mean	**3.88**	**A/H**

Source**:** de Jong and Den Hartog (2008)

The physical environment plays a crucial role in fostering innovation within the workplace. According to the data, the composite mean rating for the innovative work environment, specifically regarding the physical environment, is 4.00, indicating a level of agreement and high satisfaction. This mean rating suggests that, overall, the physical environment's contribution to the innovative work environment is considered high, without being excessively high or moderate. When considering each item individually, they all receive the same mean rating and interpretation, reinforcing the consensus among employees. Employees agree that the physical environment supports innovation (3.96), entails a process for selecting resources and equipment that foster innovation (4.00), and encompasses well- designed and decorated workspaces that promote creativity, collaboration, and positive relationships (3.98).

Multiple researchers have examined the significance of the physical environment in driving innovation. Moultrie et al. (2007) emphasize the importance of aligning the physical setup with an organization's strategic intentions for innovation, serving as a tangible representation of desired work approaches. Similarly, Oksanen and Stahle (2013) advocate for a physical environment that facilitates collaborative learning and reflects a value orientation geared towards innovation. These studies underscore the necessity of cultivating a physical environment that actively supports and nurtures innovative practices within the workplace.

Table 7: Innovative work behavior along with idea generation

	Innovative work behavior	**Mean**	**DI**
	Idea generation		
1	I search out new working methods, techniques or instruments	4.16	**A/H**
2	I generate original solutions for problems	4.08	**A/H**
3	I find new approaches to executing tasks	4.14	**A/H**
	Composite mean	**4.12**	**A/H**

Source**:** de Jong and Den Hartog (2008)

Innovative work behavior always originated from innovative ideas; therefore, idea generation is one of the dimensions of innovative work behavior Creativity and innovation cannot be separated from idea generation (Mmehta, et al, 2014). Without idea generation, there will be no innovative work behavior (Effendy & Sukmarani, 2021). Based on the data, it shows that as a whole, the innovative work behavior of the employees along with idea generation received a composite mean rating of 4.12 which is understood as 'agree/high". This implies that employees' innovative work behavior concerning idea generation is not very high and it is not also very low, low or moderate but it is still high. Even when they are taken singly, they all are rated within the same level of mean rating with the same interpretation as "agree/high". The employees agree that they search out new working methods (4.16), generate new solutions to problems (4.08), and find new approaches to execute the task (4.14).

Idea generation leads to creativity and innovation and it is an assurance for growth and development (Mehta, et al, 2014). Cerne, et al., (2022) pointed out that a typical innovation process in an organization always begins with idea generation, individual creativity and useful ideas.

Table 8: Innovative work behavior concerning championing

	Innovative work behavior	**Mean**	**DI**
	Championing		
1	I make important organizational members enthusiastic about innovative ideas	4.03	**A/H**
2	I attempt to convince people to support an innovative idea	4.03	**A/H**
	Composite mean	**4.03**.	**A/H**

Source**:** de Jong and Den Hartog (2008)

Championing innovative ideas and supporting innovative ideas is one of the key elements of organizational success. Concerning this concept, the data reveals that innovative work behavior employees concerning idea championing obtained a composite mean of 4.03 which is interpreted as "agree/high". This suggests that as a whole innovative work behavior of

employees concerning championing is not very high and it is not also very low, low or moderate, but it is high. Even if the indicators are taken separately, all are rated within the same level of mean rating with the same interpretation. The employees agree that they make important organizational members enthusiastic about innovative ideas (4.03) and convince people to support innovative ideas.

The role of a leader in creating an environment that supports innovative work behavior is important. Amabile and Khaire (2008) pointed out that in today's economy which is driven by innovation, it is important to have managers who understand the importance of innovative ideas and how to generate great ideas. Anderson, et al. (2014) argued that creativity and innovation are vital for organizational success. Creating an environment that enhances creative innovative ideas is an integral part of the leadership role (Kaziol-Nadolna, 2020).

Table 9: Innovative work behavior related to the application

	Innovative work behavior	**Mean**	**DI**
Indicators	**Application**		
1	I systematically introduce innovative ideas into work practices	4.03	**A/H**
2	I contribute to the implementation of new ideas	4.03	**A/H**
3	I put the effort into the development of new things	4.08	**A/H**
	Composite mean	**4.06**	**A/H**
Overall Mean	***Opportunity exploration (3.88), Idea generation (4.12), Championing (4.03), Application of ideas (4.06)***	**4.00**	**A/H**

Source**:** de Jong and Den Hartog (2008)

Championing and supporting innovative ideas are critical elements for organizational success. Based on the data, the composite mean rating for employees' innovative work behavior regarding idea championing is 4.03, indicating a high level of agreement. This mean rating suggests that, overall, employees' innovative work behavior in terms of championing ideas is considered high, without being excessively high or moderate. When considering each indicator individually, they all receive the same mean rating and interpretation, reinforcing the consensus among employees. Employees agree that they play a role in enthusing important organizational members about innovative ideas (4.03) and persuading others to support innovative ideas.

Leadership plays a crucial role in fostering an environment that supports innovative work behavior. Amabile and Khaire (2008) highlight the importance of managers who understand the value of innovative ideas and possess the ability to generate exceptional ideas in today's innovation-driven economy. Anderson et al. (2014) argue that creativity and innovation are vital for organizational success. Kaziol-Nadolna (2020) emphasizes that creating an environment that fosters creative and innovative ideas is an integral part of leadership. These studies underscore the significance of leadership in cultivating an atmosphere that encourages and supports innovative work behavior among employees.

Championing innovative ideas is important, however, the application of ideas is equivalently important because application translates innovative ideas into a tangible product or service. Related to this element, the data shows that innovative work behavior concerning the application of innovative ideas gained a composite mean rating of 4.00 which is understood as "agree/high". Such mean rating indicates that as a whole employees' innovative work behavior in terms of the application of ideas is not very high and it is not also very low, low, or moderate but it is high. Even when the items are taken singly, they all are rated within the same level of mean rating. The employees agree that they systematically introduce innovative ideas into work practices (4.03), contribute to the implementation of new ideas (4.03), and exert effort to develop new ideas (4.08).

Innovation is so crucial for an organization's competitiveness and development (Amabile and Khaire, 2008, Anderson et al., 2014; Kaziol-Nadolna, 2020). Since it is so important for organizational development, thus, the organizational environment must allow employees' autonomy to apply their innovative ideas.

The overall mean rating for innovative work behavior is 4.00 which is the same as an innovative work environment. This is supported by its sub-variable mean ratings along with opportunity exploration (3.88), idea generation (4.12), championing (4.03), and application of ideas (4.06). This concludes that the innovative work behavior of the employees of the school is not very high and it is not also very low, low or moderate but it is high.

Problem 3: Is there a relationship between an innovative work environment and innovative work behavior?

Table 10: Innovative work environment & opportunity exploration

The innovative work environment of DWCL in terms of leadership, work practices that support innovation, promoting innovation, physical environment, and providing learning opportunities when taken together could significantly predict the employees' innovative work behavior along opportunity exploration, F (5, 180) = 41.940 p <.01 with .739 overlap between these predictor variables and opportunity exploration.

Specifically, leadership B = .307 p <.05, promoting innovation B = -.380 p <.01, and physical environment B = -.392 p < .01, .924 quantified the Y-intercept of the regression equation.

Therefore, the innovative work environment factors of leadership, work practices that support innovation, promoting innovation, physical environment, and providing learning opportunities could significantly predict the opportunity exploration of the DWCL employees.

However, when the innovative work environment factors were considered singly, only leadership, promoting innovation, and physical environment could significantly predict the employees' innovative work behavior in terms of opportunity exploration.

Therefore, the variations in the DWCL employees' innovative work behavior as regards opportunity exploration are attributed to the innovative work environment of leadership, promoting innovation, and the physical environment.

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.739[a]	.547	.533	.48274

a. Predictors: (Constant), Providing learning opportunities, leadership, physical environment, promoting innovation, work practices that support innovation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	48.867	5	9.773	41.940	.000[b]
	Residual	40.548	174	.233		
	Total	89.415	179			

a. Dependent Variable: Opportunity exploration

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.924	.234		3.952	.000
leadership	.307	.132	.287	2.320	.021

Work practices that support innovation	.228	.140	.221	1.637	.103
1 promoting innovation	-.380	.112	-.376	-3.394	.001
physical environment	.392	.095	.428	4.111	.000
providing learning opportunities	.200	.103	.194	1.953	.052

a.Dependent variable: Opportunity exploration

b. Predictors: (Constant), providing learning opportunities, leadership, physical environment, promoting innovation, work practices that support innovation

Table 11: Innovative work environment & idea generation

The results of the multiple linear regression analysis indicate that when the innovative work environment factors of leadership, work practices that support innovation, promoting innovation, physical environment, and providing learning opportunities when taken jointly could significantly predict the DWCL employees' innovative work behavior in terms of idea generation, F (5,180) = 34.304 $p < .01$ with .705 overlap between these predictor variables and idea generation.

However, when these different innovative work environment factors were considered singly only leadership $B = .309$ $p < .01$, and providing learning opportunities $B = .478$ p < .01, 1.499 quantified the Y-intercept of the regression equation.

The study reveals that when considering leadership, work practices that support innovation, promote innovation, physical environment, and provide learning opportunities together, they have a significant impact on the innovative work behavior of DWCL employees in terms of idea generation.

However, when examining these innovative work environment factors individually, only leadership and providing learning opportunities were found to predict employees' idea generation.

Therefore, the variations observed in employees' innovative work behavior regarding idea generation can be attributed to the differences observed in the innovative work environment, specifically in terms of leadership and providing learning opportunities.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.705[a]	.496	.482	.42992

a. Predictors: (Constant), providing learning opportunities, leadership, physical environment, promoting innovation, work practices that support innovation

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.703	5	6.341	34.304	.000[b]
	Residual	32.161	174	.185		
	Total	63.864	179			

a. Dependent variable: Idea generation

b. Predictors: (Constant), Providing learning opportunities, leadership, physical environment, promoting

innovation, work practices

c.

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.499	.208		7.202	.000
leadership	.309	.118	.342	2.627	.009
Work practices that support innovation	-.142	.124	-.163	-1.147	.253
promoting innovation	.026	.100	.031	.263	.793
physical environment	-.014	.085	-.018	-.163	.871
providing learning opportunities	.478	.091	.547	5.236	.000

a. Dependent Variable: Idea generation

Table 12: Innovative work environment & championing

When the different innovative work environment factors such as leadership, work practices that support innovation, promoting innovation, physical environment, and providing learning opportunities are taken together, they could significantly predict the employees' innovative work behavior in terms of championing, F (5,180) = 42.151 p<.01 with .740 overlap between these predictor variables and championing.

Particularly, work practices that support innovation B = .320 p < .01 and providing learning opportunities B= .401 p < .01, 1.469 quantified the Y-intercept of the regression equation.

When considering leadership, work practices that support innovation, promote innovation, physical environment, and provide learning opportunities together, they have a significant impact on the employees' innovative work behavior in terms of championing.

However, when examining these predictor variables individually, only work practices that support innovation and provide learning opportunities were found to significantly predict the employees' innovative work behavior of championing at DWCL.

Therefore, the variations observed in employees' innovative work behavior in terms of championing can be attributed to the differences experienced in work practices that support innovation and provide learning opportunities.

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.740[a]	.548	.535	.39517

a. Predictors: (Constant), Providing learning opportunities, leadership, physical environment, promoting innovation, work practices that support innovation

ANOVA[a]

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	32.911	5	6.582	42.151	.000[b]

1	Residual	27.171	174	.156		
	Total	60.082	179			

a. Dependent Variable: Championing

b. Predictors: (Constant), Providing learning opportunities, leadership, physical environment, promoting innovation, work practices

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.469	.191		7.679	.000
leadership	-.107	.108	-.123	-.992	.323
work practices that support innovation 1	.320	.114	.377	2.801	.006
promoting innovation	.047	.092	.057	.516	.606
physical environment	-.015	.078	-.020	-.196	.845
providing learning opportunities	.401	.084	.473	4.775	.000

a. Dependent Variable: Championing

Table 13: Innovative work environment & application

The innovative work environment factors such as leadership, work practices that support innovation, promoting innovation, physical environment, and providing learning opportunities when taken together could significantly predict the DWCL employees' innovative work behavior of an application, F (5,180) = 39.393 p <.01 with .729 overlap between the predictor variables and application. However, when the predictor variables were taken singly, only the innovative work environment of providing learning opportunities B = .481 p <.01, 1.493 quantified the Y-intercept of the regression equation.

The employees' innovative work behavior in terms of application can be significantly predicted by leadership, work practices that support innovation, promoting innovation, the physical environment, and providing learning opportunities when considered together. However, when examining each predictor variable individually, only providing learning opportunities emerged as a significant predictor of employees' innovative work behavior in terms of application.

Thus, the variations observed in employees' innovative work behavior in terms of application can be attributed to the differences they experience in the innovative work environment, specifically in terms of providing learning opportunities.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.729[a]	.531	.517	.41088

a. Predictors: (Constant), Providing learning opportunities, leadership, physical environment, promoting innovation, work practices

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.253	5	6.651	39.393	.000[b]
	Residual	29.376	174	.169		

Total	62.629	179			

a. Dependent Variable: Application

b. Predictors: (Constant), Providing learning opportunities, leadership, physical environment, promoting innovation, work practices that support innovation

Coefficients[a]

Model		Unstandardized Coefficients	Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.493	.199		7.505	.000
	leadership	-.160	.113	-.178	-1.419	.158
	work practices that support innovation	.224	.119	.259	1.886	.061
	promoting innovation	.153	.095	.180	1.600	.111
	physical environment	-.053	.081	-.069	-.654	.514
	providing learning opportunities	.481	.087	.556	5.512	.000

a. Dependent Variable: Application

Results and discussion

The study aimed to examine the impact of an innovative work environment on employees' innovative work behavior. The findings revealed a significant relationship between innovative work environments and employees' innovative work behavior. This suggests that management should focus on improving the work environment by implementing policies that foster employee creativity and innovation.

Innovative work behavior refers to the individual or collective efforts of employees to introduce new ideas, products, services, or tasks that contribute to overall innovation and desirable outcomes (Farrukh et al., 2021; Farrukh et al., 2023). It is influenced by the work environment, as highlighted by Shah et al. (2022), who emphasized the importance of nurturing workplace learning to facilitate innovative work behavior. Employees need a supportive environment where they are encouraged to explore innovative ideas and apply them to enhance products or services (Coun et al., 2021).

The impact of innovative work behavior on organizational performance is widely acknowledged. Several studies have demonstrated its positive contribution to business performance (Jankelova et al., 2021; Lyndon et al., 2018; Shanker et al., 2017; Leong & Rasli, 2013). Therefore, management should adopt policies that promote and reward innovative work behavior, as suggested by Soleas (2020), who emphasized the importance of addressing factors that stimulate curiosity and interest among employees.

The study then, underscores the importance of an innovative work environment in shaping employees' innovative work behavior. By fostering a conducive work environment that encourages learning and supports innovation, organizations can enhance employee engagement and drive positive outcomes.

Conclusion

Based on the study's objectives and problem statement, it is concluded that the innovative work environment and innovative work behavior of employees are rated as high, but not very high. The findings from the analysis of variance indicate that an innovative work environment significantly predicts employees' innovative work behavior. Hence, it is essential for

management to implement policies that encourage employees to express their innovative ideas and behaviors, emphasizing autonomy and empowerment.

The study acknowledges its limitations, primarily focusing on a limited population from only two colleges. Future research should consider including a broader range of colleges to provide a more comprehensive understanding of the innovative work environment and innovative work behavior within Divine Word Colleges.

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