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LEADERSHIP BEHAVIOURS AND EMPLOYEE INNOVATIVE BEHAVIOUR OF STAFF OF DISTANCE EDUCATION AT THE UNIVERSITY OF CAPE COAST: THE MODERATING ROLE OF ORGANISATIONAL CLIMATE

ERNEST EDWIN ANTI

2024

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LEADERSHIP BEHAVIOURS AND EMPLOYEE INNOVATIVE BEHAVIOUR OF STAFF OF DISTANCE EDUCATION AT THE UNIVERSITY OF CAPE COAST: THE MODERATING ROLE OF ORGANISATIONAL CLIMATE

ERNEST EDWIN ANTI

Thesis submitted to the Department of Management of the School of Business, College of Humanities and Legal Studies, University of Cape Coast, in partial fulfilment of the requirements for the award of Master of Commerce degree in Management

JANUARY 2024

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DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's signature: …… Date……..……

Name: Ernest Edwin Anti

Supervisor's Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on the supervision of dissertation laid down by the University.

Supervisor's signature: …… Date……..

Name: Prof. N. Osei Owusu

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ABSTRACT

The main purpose of the study is to examine leadership behaviours' (transformational, transactional, altruistic and network governance leadership) influence on innovative work behaviour of staff at the distance education at the University of Cape Coast and the role of organisational climate in moderating such a nexus. The specific objectives were to examine the relationship between; leadership behaviours and innovative work behaviour, organisational climate and innovative work behaviour, and finally, the moderating role of organisational climate on the relationship between leadership behaviours and innovative work behaviour. The philosophy of the study is post-positivism. The study employed the quantitative approach and explanatory research design. Out of a population of 486, the sample size of 214 was used. However, out of 214, the response rate was 198 (92.52%). The results showed that only transformational leadership behaviour had a positive significant influence on employees' innovative behaviour among staff. Also, it was found that organisational climate had a positive significant influence on employees' innovative behaviour. Finally, the study found organisational climate to be significantly moderating the relationship between leadership behaviours and employees' innovative behaviour. Based on the outcome of the study, in order to sustain innovative behaviours, management should focus on developing transformational leadership skills so as to sustain the innovative behaviours of the staff.

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KEYWORDS

Altruistic leadership

Employee innovative behaviour

Network governance leadership

Organisational climate

Transactional leadership

Transformational leadership

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DEDICATION

To my family for the tremendous support over the years especially to my wife, Naomi Neequaye for her unflinching support and encouragement throughout this period

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CHAPTER ONE

INTRODUCTION

Innovation is not a talent or aptitude that can be switched on and off at whim, it has to be cultivated in order to be called upon when required. As a result, organisations in the educational sector must be prepared for innovation. This means encouraging the teaching staff within the educational sector to think outside the box and come up with new ideas, new approaches, and new ways of providing quality tuition. It follows that leadership is thought to be crucial for innovativeness. Realizing the significance of innovation, the role of workers leading towards innovation cannot be disregarded. It is the goal of this research to determine how leadership behavior effects the ability of staff of the distance education to be creative and achieve high performance within the organisation and student as whole.

Background to the Study

Innovation has internationally been seen as a significant motivator for growth (Akhmetshin, Morozov, Pavlyuk, Yumashev, Yumasheva & Gubarkov, 2018). Issues posed by globalisation and demographic changes, innovation within the educational sector is currently recognised as a crucial factor at sustaining a high level of educational services delivery (Lee, Hwang & Choi, 2012; Agolla, 2015; Korinek & Stiglitz, 2021; Mohamed, Disli, Al-Sada & Koç, 2022). As suggested by Nureev, Volchik and Strielkowski, (2020), lack of creativity or novel ideas impairs the functioning of the educational service and other sectors of the economy owing to inefficient utilisation of resources. Due to the absence of innovation, prices, time and quality criteria are most times not attained. Although innovation is positioned at the core of service delivery

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(Gupta, Mejia & Kajikawa, 2019; Sjödin, Parida, Jovanovic & Visnjic, 2020), no business can accomplish it without inventive conduct of its people (Clohessy & Acton, 2019). Daglio, Gerson and Kitchen (2015) concluded that people are crucial to educational sector innovation at every level of its process.

The argument for innovative behaviour studies is hinged on the fact that innovation today in all its entirety and forms is viewed as to a greater extent a product of the human behavior and capacity (Gorzelany, Gorzelany–Dziadkowiec, Luty, Firlej, Gaisch, Dudziak & Scott, 2021) than belonging to the realms of research and development labs where knowledge was discovered (Kheng & Mahmood, 2016). As proposed by Lu, Bartol, Venkataramani, Zheng and Liu (2019), the notion of creative work behaviour covers not only the invention of new ideas but also the organisation's proactive actions such as the execution of excellent ideas towards the intended purpose.

Lu et. al., (2019) also add that innovative work behaviour is a three-stage process, firstly, individual employee generates creative ideas and solution based on an identified problem; employee then mobilises support for the innovative idea and finally the idea is transformed into a model or a useful application for the individual's work role, group or the organisation. Innovative work behaviour in the educational setting is significant because innovation impacts the organisations' numerous policy issues, its need for quality education and emphasis on effectiveness (Afsar & Umrani, 2019). Innovative employee behaviour is a requirement for a company to actualize innovation on an organisational level (Jaskovia, 2017). Workers' creative behaviour may increase organisational performance by deviating from organisational stagnation as employees attempt to discover and use new ideas to execute their

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jobs (Mutonyi, 2021). Although studies have established that innovation is crucial for organisational success (Damanpour, Walker, & Avellaneda, 2009; Waheed, Abbas & Malik, 2018; Kremer, Villamor, Aguinis, 2019), innovation is typically perceived as low in the educational sector (Suseno, Standing, Gengatharen & Nguyen, 2019).

Educational sector innovation study suggests that the sector is confronted with a broad list of challenges that restrict the innovative ability of employees which can be attributed to the rigid and systematic nature of the teaching and learning curriculum. These include; fear for losing ones job, lack of feedback on ideas, a relatively high degree of formalisation and bureaucratisation, and political opposition exposure within the educational system (Damanpour & Schneider, 2009; Fernandez & Moldogaziev, 2012; Agolla, 2015). Even in the face of these obstacles, educational institutions, and notably, distance tertiary institutions are under tremendous pressure to enhance and maintain innovation as a method of delivering value for quality education for students (Ricard, Klijn, Lewis & Ysa, 2017).

However, the issue that remains unresolved is how such creativity may be encouraged. Even while research in educational sector is improving (Lewis, Ricard & klijin, 2018), much is focussed on the rationale for reforms and what changes should be undertaken (Aziabah, 2018). In the educational sector, there is little study on how to encourage creative behavior (Bos-Nehles, Bondarouk & Nijenhuis, 2017). Rather than focusing on the leadership style and work environment of staff at various institutions, studies on innovation in the educational sector have tended to focus on the decisions made by management

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(Keller & Block, 2013) and the ministry of education in which they operate (Fishenden & Thompson, 2013; Patanakul & Pinto, 2014).

According to several studies, an organization's climate for innovation is directly linked to the leadership's behavior (Qi, Liu, Wei, & Hu, 2019), and employees' innovative behavior is directly linked to the leadership's behavior (Somech & Drach-Zahavy 2013). According to Kaletnik and Lutkovska (2020), a lack of leadership that supports the correct organisational environment would make systemic innovation impossible. The educational sector's innovative ability can be utilized at all levels, hence leadership at all levels is critical. Studies have shown that the leadership skills of team managers and supervisors are critical to promoting individual creative behavior in the educational sector (Somech & Drach-Zahavy 2013; Dorsman, Tummers & Thaens, 2015; Bos-Nehles et.al 2017; Duan, Liu & Che, 2018; Meinel, Wagner, Baccarella & Voigt, 2019).

According to Newman, Herman, Schwarz and Nielsen (2018), a supervisor's encouragement of creative work practices is essential for their success. Innovative behavior and an innovative atmosphere are fostered through leadership at the team level (Odoardi, Battistelli, Montani & Peiró, 2019). Because of the complexity of the educational sector, educational leadership has been considered a separate and specialized field of study (Ricard et.al, 2017). Because of this, educational sector leadership must be examined from a behavioral standpoint (Cerami, 2013). Which leadership traits are necessary in the educational sector to encourage staff innovation must be a question that has to be answered? Five educational leadership behaviors that enhance innovation in the educational sector were found by Ricard et al. (2017). Transactional

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leadership, transformational leadership, entrepreneurial leadership, altruistic leadership, and network governance leadership are just a few examples of different types of leadership behavior you could see. The attributes mentioned in literature and theory as necessary for innovation are reflected in these leadership behaviors (Ricard et al., 2017; Lewis et al., 2018).

When it comes to motivating subordinates to work for their own as well as the company's objectives, the path-goal theory proposed by House and Mitchell (1974) is a good place to start. For example, a modern version of the leadership theory states that leaders should employ a supporting approach to guarantee that objectives are met. The five theoretical leadership behaviors that Ricard et al. (2017) suggest as supporting educational sector innovation represent these behaviors. This research, which is based on the path-goal theory, claims that certain leadership behaviors might guarantee that workers acquire the requisite inventive ability to engage in new ideas, new techniques, and new ways of functioning and supplying. It has been shown in the research that organisational atmosphere has a significant impact on creativity and leadership (Arif & Akram, 2018).

According to Kim and Yoon (2015), an organization's climate can be summed up as the perception employees have of the organisation's environment, which includes a general feeling of adaptability to change, the ability to recognize creativity, and the availability of the necessary resources for innovation. In order to foster an environment conducive to innovation, leaders must provide the necessary resources, including people, money, and time (Schulze & Pinkow, 2020; Lui, 2011; Lopez & Esteves, 2011), as well as foster an environment in which workers are free to bring ideas and new systems of

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communicating knowledge (Diefenbach, 2011). An innovation-friendly setting has been shown to moderate the association between leadership and inventive behavior in several studies (Naami & Asadi, 2011; Da Costa et al., 2014; Conteras, Domberger & Acosta, 2017; Cao & Zhang, 2020; Sarwoko, 2020).

These studies, on the other hand, were undertaken in developed economies and the private sector. As outlined in the Social Exchange Theory (SET), the research suggests that workers participate in creative behavior in response to an organisational environment that encourages innovation fostered by their leaders (Xerri & Brunetto, 2012; Kheng et al., 2013). Based on the SET and the Path-goal theory, this research hypothesizes that leaders adopt particular leadership behaviors and create an organisational environment that in turn encourages workers to engage in creative behaviors (Gouldner, 1960). Leaders foster an atmosphere of creativity by offering resources in advance rather than as a direct reward for staff accomplishment (Karatepe, Ozturen, A., Karatepe, Uner, & Kim, 2022).

As a result, a variety of leadership behaviors affect creative work behavior via the organization's atmosphere, and especially within the distance educational level. The staff of the distance education at the University of Cape Coast was the study area. Due to the nature of the curriculum for the distance education within the tertiary institution, it has the tendency to face numerous challenges which may tend to render the whole system ineffective and could be attributed to the nature of students who enrol during such era within the University of Cape Coast. Thence, diverse innovation of the staff should be encouraged to meet the diverse nature of students enrolled into such educational system.

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According to this study's rationale, staff of distance education of the University of Cape Coast are a good place to look for new ways of delivering better services since they tend to inform students who double as workers, thence, the usual curriculum system may not necessarily be effective in their course (Lewis et al., 2018). It is against this background that the study sought to assess leadership behaviours and employee innovative behaviour of staff of distance education; the moderating role of organisational climate.

Statement of the Problem

Leadership plays a crucial role in influencing employee behaviors and organizational outcomes. An important employee behavior relevant in today's knowledge-based economy is innovation. Several studies have found that transformational leadership is particularly effective in promoting innovative behaviors among employees (Gumusluoglu & Ilsev, 2009; Jaiswal & Dhar, 2015). Transformational leaders inspire and motivate employees by considering their unique needs and ideas. They challenge assumptions and encourage innovative thinking.

However, the relationship between leadership and innovation may not be straightforward, as the organizational context also shapes employee attitudes and performance. Research suggests that the prevailing organizational climate moderates how leadership impacts innovation (Naguib & Naem, 2014). A supportive climate with features like trust, autonomy, recognition and risk-taking enhances the ability of transformational leaders to stimulate innovative behaviors from employees (Caniëls, Semeijn & Renders, 2018). An oppressive climate with limited autonomy and trust will weaken this relationship even under transformational leadership.

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For organizations delivering distance education like the University of Cape Coast, cultivating a culture of innovation is important to remain relevant and competitive in today's rapidly changing environment. However, the exact mechanisms through which leadership and climate interact to drive innovation among distance education staff remain unclear. Understanding these dynamics could provide guidance to managers on leveraging leadership approaches and climate features optimally to realize the full innovative capacity of employees.

While studies have examined leadership, climate and innovation relationships in traditional universities and private organizations, the Distance Education context presents a gap. Distance Education operations face unique challenges due to their remote mode of delivery, requiring innovative solutions from staff. Yet, no prior research explores how leadership is enacted and climate understood specifically for Distance Education employees at the University of Cape Coast.

Given these considerations, this study addresses an important problem of practical and theoretical significance. At a practical level, it aims to provide Distance Education managers insights into cultivating an innovative work culture. Theoretically, it extends understanding of leadership, climate and innovation linkages to the hitherto unexamined context of university Distance Education departments. Specifically, it seeks to examine the direct and interactive effects of perceived leadership behaviours and organizational climate on the innovative behaviour of Distance Education staff.

Both quantitative and qualitative data will be collected from Distance Education staff through surveys and interviews. Quantitative analysis using multiple regression will test the moderation hypotheses regarding relationships

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between leadership, climate and innovation. Qualitative analyses of interviews will offer a deeper understanding of how leadership approaches are operationalized and climate is experienced in this setting to either enable or constrain innovation.

The expected findings could validate mechanisms through which transformational leadership and supportive climate synergize to release the innovative potential of Distance Education employees. It may also reveal contextual nuances shaping leadership and climate dynamics uniquely for this workforce. Overall, the study aims to make pragmatic and theoretical contributions through an enhanced comprehension of predictors of innovation amongst university Distance Education personnel.

Purpose of the Study

The purpose of the study is to determine leadership behaviours' influence on innovative work behaviour of staff at the distance education at the University of Cape Coast and the role of organisational climate in moderating such a nexus.

Research Objectives

1. Assess the influence of dimensions of leadership behaviour on innovative work behaviour of staff of distance education at the University of Cape Coast.
2. Assess the effect of organisational climate on innovative work behaviour of staff of distance education at the University of Cape Coast.
3. Examine the moderating role of organisational climate on leadership behaviour and innovative work behaviour nexus among staff of distance education at the University of Cape Coast.

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Research Hypotheses

Based on objective one, the following hypotheses were tested;

H1a: Altruistic leadership has a positive effect on innovative work behaviour

H1b: Transactional leadership has a positive effect on innovative work behaviour

H1c: Transformational leadership has a positive effect on innovative work behaviour

H1d: Network governance leadership has a positive effect on innovative work behaviour

Based on objective two, the following hypothesis was tested;

H2: Organisational climate has a positive effect on innovative work behaviour

Based on objective three, the following hypotheses were tested;

H3a: Organisational climate moderates the nexus of Altruistic leadership and innovative work behaviour

H3b: Organisational climate moderates the nexus of Transactional and innovative work behaviour

H3c: Organisational climate moderates the nexus of Transformational leadership and innovative work behaviour

H3d: Organisational climate moderates the nexus of Network governance leadership and innovative work behaviour

Significance of the Study

Investigating leadership behaviours and innovativeness of staff of distance education at the University of Cape Coast can be of principal interest to the ministry of education.

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The findings will provide actionable guidance for managers to develop behaviors and environments that boost innovation. They will understand which specific leadership actions (e.g. acknowledging good ideas, championing novel projects) and climate aspects (e.g autonomy, recognition) most inspire staff's creative efforts and solutions. This practical insight can help departments confront challenges like transitions to online learning, implement strategies to enhance educational quality, and better serve student needs through employee-generated initiatives. Customized recommendations will equip managers to cultivate innovative teams through training, coaching, and leading by exemplifying behaviors like inspiration and intellectual stimulation.

The study addresses gaps in applying existing theories linking enlightened leadership, supportive contexts, and workplace innovation to university distance education. Findings contribute to refining how constructs in these theories manifest and interrelate for knowledge professionals working remotely. For example, results may uncover nuances in how certain leadership styles (e.g. transformational vs. transactional) and climate features (e.g. levels of trust, risk-taking) uniquely facilitate or constrain innovative behavior in this specialized context. Expanding theoretical knowledge helps strengthen organizational behavior and leadership frameworks' explanatory power across diverse work settings and professions.

Insights guide policy by revealing specific leadership development and climate design strategies to nurture innovation as a strategic imperative. For example, training could build managers' competencies in inspirational motivation or risk advocacy seen as most impactful. Performance metrics and incentives may reward demonstrated initiatives. Reforms could empower

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departments by establishing innovation officer roles, flexible work arrangements, or seed funding for promising ideas. Informed system-wide frameworks promote the goal of modernizing university distance learning to solve pressing education issues through human capital investments.

Delimitations of the Study

The current study was confined within staff of the distance education of the University of Cape Coast. The study is confined to only distant students at the College of Distance Education, UCC, Ghana. Reference to other sectors was only to either buttress a fact or make a comparison. The main respondents for the study were staff of distance education of the University of Cape Coast. In terms of content, there is countless number of issues that could have been looked at in terms of leadership behaviours, employee innovativeness and organizational climate. With respect to variable measurements, the study relied only on generally accepted sources, though there were other equally reliable scales for measurements of the study's constructs.

Limitations of the Study

This study uses a single primary data source (staff of distance education of the University of Cape Coast). Data from single source can be affected with the potential presence of common method bias and this can affect the results of the study. This necessitated using statistical to test for bias. Since the study employed the use of questionnaire in collecting data and it was a cross-sectional, staff did not have the opportunity of indicating other contextual factors that could influence innovative work behaviour. This notwithstanding, studies of the same nature have been advanced in the literature where some dimensions are investigated and recommendations are made. Due to the use of questionnaire in

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collecting data, some respondents failed to answer in which case the study could not capture the response of the entire sample. However, since respondents were randomly sampled, this will not affect the results of the study.

Organisation of the Study

This study is organized into five chapters. Chapter one constitutes the introduction, which focuses mainly on the background, the problem statement, and objectives of the study in addition to organisation of the study. Following the introductory chapter, chapter two presents a review of the theoretical and empirical literature pertaining to the concerns of the thesis. Chapter three provides information on the methodology used in the research, population, sample and tools of analysis used in the study. In Chapter four, the results of the study are presented and discussed. Chapter five also contains a summary of the major findings, conclusions, implications, recommendations and suggestions for futher studies.

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CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter presents a review of the theoretical and the empirical framework on leadership behaviours, organisational climate and employee innovative behaviour. The review also illustrates how these frameworks connect in an educational sector. The goal of the study was to evaluate leadership conduct's impacts on employee's innovative behaviour and the function of organisational climate in moderating such a nexus. The write-up of the chapter will begin with discussion of theories behind the study, before addressing conceptual and empirical concerns of leadership conduct, organisational climate and employee's innovative behaviour.

Theoretical Review

Leadership behaviour takes most of its theoretical roots from many leadership philosophies. Corollary, the complex structure of the educational sector necessitates a leadership strategy that comes from numerous behavioural viewpoints as this will be optimal for producing employee innovativeness and high performance among tutors. Notable among these is the path-goal theory. In this study, the path-goal theory is utilized to establish the relationship that exists between leadership style and employee's innovative behaviour in the educational sector. Also, the social exchange theory will be employed to identify the link between leadership style, organisational climate and employee innovative behaviour.

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Path-Goal Theory

Path-Goal theory is classed under the contingency approach, which centers its study on the interplay between the factors involved in a leadership scenario and patterns of leadership conduct. The thesis is founded on the concept that rejects the existence of a single leadership pattern for all instances (Fielder, 1967). According to House and Mitchell (1974), Path-Goal theory focuses on the actions a leader utilizes to drive subordinates' motivation to attain both personal and organisational objectives. In the first edition, House (1971), defined two categories of leadership behaviours; that are behaviour geared toward the fulfilment of individual's wants and path-goal clarifying conduct.

Based on these descriptions, they were not adequately defined operationally as part of the theory. The two leadership traits were enlarged to four clearly characterized behaviours (House & Mitchell, 1974). The four traits comprised; Directive leadership, which represents the psychological support a leader offers to others via fundamental duties of delivering instructions on what is expected of subordinates, how it is done and offering timeliness. In addition, supportive leadership, which is another behaviour centered on being nice and approachable, and eager on serving the needs of others. The third leadership attitude is participatory leadership, which normally is a directed leadership conduct that encourages individual engagement in decision making, where subordinates are encouraged to give comments and discuss ideas to be incorporated in the business. The fourth trait is the achievement-oriented leadership, this style focuses on pushing individuals via setting performance

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objectives, emphasizing on performance excellence to attain high standards and enhanced confidence (House & Mitchell, 1974; House, 1996).

Leadership behaviours can be applied in various settings by the same individual (House & Mitchell, ibid). Ratyan, Khalaf and Rasli (2013) add that, the implementations of one or several of these behaviours by a manager can results in influencing subordinates and pave the path for the attainment of goals. House (1996) adds that, the essence of the path-goal theory is rooted in the fact that, the effectiveness of leadership rest in the engagement of behaviours that complements subordinates' environments and abilities in a way that is instrumental to the subordinate's satisfaction, individual and work unit performance and compensates for deficiencies that exits within the system. By adopting the proper behaviors, leaders can improve subordinates' expectations for success and contentment (House & Mitchell, 1974).

An evaluation of the Path-goal theory has found some shortcomings. It is difficult to employ the theory in a specific institutional environment since it involves a huge number of interrelated hypothesis sets. The theory fails in detecting the leadership transactional character yet it is leader-oriented theory. Furthermore, the approach does not encourage the subordinates to participate in leadership process (Northhouse, 2010; Ratyan, et al. 2013). Amidst these limitations, the theory has numerous positive aspects which include; the providing of foundation for understanding instances when a leader's attitude would drive an individual's performance and job satisfaction in unique leadership practices (Jermier, 1996; Cote, 2017).

The theory provides a wonderful paradigm for helping individuals explain goals and create goals through coaching and direction to attain goals of

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productivity (House & Mitchell, 1974; Cote, 2017). In the opinion of Ratyan et al (2013), the path-goal theory is applied to explain the fact that the leader's behaviour influences the subordinate's happiness, motivation and performance. The notion claims that leadership characteristics can be applied in different contexts and periods by the same leader. Based on the assumptions offered by the path-goal theory, this study suggests that leaders within the educational sector function as facilitators and diverse leadership behaviours to push subordinate towards innovativeness by eliminating obstacles, developing support networks and creating an innovation promoting atmosphere.

Based on the path-goal theory, leadership activities as a source of influence can modify the attitude, motivation, and behaviour of an individual subordinate (Malik, Dhar, & Handa, 2016). Given the high levels of environmental complexity that characterises the educational sector, leadership behaviours appear to be a realistic strategy for fulfilling the requirement for an innovative workforce (Sarti, 2014; Bos-Nheles et al., 2017).

Social Exchange Theory

The social exchange theory (SET) was initiated by Hormans in 1958 (Devan, 2006). The theory refers to a two-sided rewarding process involving two or more social groups engaged in tangible or intangible exchanges (Balu, 1964; Rasoolimanesh et al. 2015). It implies that social behaviour is the result of an exchange process (Soieb, Othman & D'Silva, 2013). Social exchange theory aims to explain human behaviour in social exchange, and differs from the economic exchange theory through two assumptions: general expectations of future return with uncertainty and long-term relationships rather than one-off

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exchange (Blau 1964). The main reason for this exchange is to maximize benefits and minimize costs (Soieb et al. 2013).

The theory has been used in many fields, especially in investigating innovative behaviour and creativity (kheng et al. 2013; Zhang, Zheng & Darko, 2018). According to Blau (1964), SET in the environment of an organisation has the principle that employees might feel obliged toward their supervisor, co-worker, or organisation if they have received any benefit from an exchange with the individual or the organisation in the past. Konovsky and Pugh (1994) suggest that the immediate supervisor or leader is an agent of the organisation. Therefore, because a supervisor has his/her own exchange relationship with employees and can influence the relationship an employee has with the organisation, supervisors are considered to be a pillar that supports the social exchange framework (Tekleab & Chiaburu, 2010).

The theory has the basic principle that employees will pay back their supportive leaders by demonstrating positive behaviours and attitudes, which contribute positively to organisational citizenship behaviour, work performance, and innovative work behaviour (Xerri & Brunetto, 2013; Choi, Kim, Ullah & Kang, 2016). In this study, it is postulated that based on the SET, leaders adopt specific leadership behaviours and create an innovation supportive climate in the organisation which in turn stimulates innovative behaviours among employees based on the reciprocity principle (Gouldner, 1960). Leaders create an innovative supportive climate by providing innovation resources in advance, not as a direct reward of performance by employees (Schulte, Hauser & kirsch, 2009).

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This theory, therefore, implies that employees will increase their loyalty, engagement, and work performance since they are obliged to return the act of kindness that they have received (Aselage & Eisenberger, 2003). Hence, the above descriptions depict that when employees are given more innovation-relevant resources, the more trust and fairness will be perceived by them exist in the organisation. This will, in turn, make the employees obliged to take on the extra role behaviour which is important in seeding innovative behaviour among the employees (Organ, 1988). The larger the obligation, the greater it will exert the innovative behaviour on them (Blau, 1964).

Deductions from the theoretical review

The path-goal theory supports the concept that leadership conduct is contextual, dependent on the aim and the environment. Given the complex structure of the educational sector, a look at leadership based on only a behavioural or attribute viewpoint would provide a myopic picture of the influence of leadership in organisational context. Therefore, if the objective is to inspire innovative behaviour to cope with complex public challenges, leadership may best be tackled from a multi-behavioural viewpoint. This presents a context for tackling the leadership behaviour-employee innovative behaviour relationship from the five innovation-related leadership characteristics described by Ricard et al. (2017) and Lewis et al (2018).

The social exchange theory as employed in this study, supports the idea that an employee's innovative behaviour is dependent on leadership behaviour and the institutional climate within the educational sector. The extent that leadership style and climate promote creative activity is predicated on the concept of reciprocity. Innovativeness may, therefore, be stimulated in the

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educational sector if leaders adopt behaviours that express the proper sense of trust, fairness and support for innovation to the teaching staff. In addition to this, public leaders can achieve the aim of fostering creative behaviour among teaching staff if the tools for innovation are offered, not necessarily as a reward for employees' achievement. When such tools and assistance is supplied in advance, it offers workers notion of an innovation fostering atmosphere. In summary, leadership conduct and supply of innovation resources will foster innovativeness among personnel.

Conceptual Review

This section tries to give a comprehensive explanation and expanded understanding with respect to the constructs employed in this study. How the various notions are operationalized in literature will be discussed. Leadership behaviour will initially be addressed followed by a description of the four behaviours studied in this study. In addition, innovative work behaviour will be explored with an emphasis on the setting of the educational sector. Finally, organisational climate will also be explored with special attention on innovation resource providing.

Leadership

In literature, most definitions of leadership reflect the concept that it entails a social influence process whereby purposeful influence is exerted by one person over the others to organize the actions and relationships in a group or organisation (Nguyen, 2009). Leadership behaviour is described as a collection of attitudes, qualities and abilities employed by a manager in diverse situations in accordance with individual and organisational principles

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(Mohammad & Hossein, 2006). However, for the purpose of this research, the author focuses on the notion of leadership from an innovative work behaviour viewpoint. Leadership, via its impact component, fosters the invention and execution of ideas in an organisation.

Bass (1990), described leadership as a relationship between two or more members of a group that typically entails a structuring or restructuring of the circumstance and the perceptions and expectations of the member. Leaders are agents of change — folks whose activities impact other people more than other people's acts affect them. Huber (2006) described leadership styles as diverse mixes of task and relational behaviours used to persuade people to accomplish goals. According to Bass (1990), there are sufficient commonalities across the various conceptions of leadership to identify key common components.

Leadership in enterprises does not take place in a vacuum; it takes place in organisational settings (Porter & McLaughlin, 2006). Avolio (2007) proposed that context should be incorporated in all theories of leadership since it may impact and be affected by leadership effectiveness. Therefore, the leader's attitude influences the organisational environment in which he or she operates or works, and the many features of an organisation's context (e.g., how centralised or formalised it is, its culture and conventions, etc.) influence organisational performance. Radu, Deaconu and Frăsineanu (2017) also point out that leadership is contextual, as people's and organisational qualities contribute to different perspectives and behavior. It is necessary to also comprehend leadership in the framework of the political system, not merely with the conceptual and cognitive frame of corporate companies (Villoria & Iglesias, 2010).

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In literature, most definitions of leadership reflect the concept that it entails a social influence process whereby purposeful influence is exerted by one person over the others to organize the actions and relationships in a group or organisation (Nguyen, 2009). Leadership behaviour is described as a collection of attitudes, qualities and abilities employed by a manager in diverse situations in accordance with individual and organisational principles (Mohammad & Hossein, 2006). However, for the purpose of this research, the author focuses on the notion of leadership from an innovative work behaviour viewpoint. Leadership, via its impact component, fosters the invention and execution of ideas in an organisation. Bass (1990), described leadership as a relationship between two or more members of a group that typically entails a structuring or restructuring of the circumstance and the perceptions and expectations of the member.

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Leadership Behaviours

It has been demonstrated that leadership conduct is the single most important method in which a person may affect the amount of innovation in an organisation (Gumusluoğlu & Ilsev, 2009; Busaibe, Ahmad, & Gaur, 2017). In accordance with this notion, Ricard et. al., (2017) studied critical leadership attributes for innovation. The study found five leaderships traits crucial for innovation. These leadership behaviours include; transactional leadership, transformational leadership, altruistic leadership, entrepreneurial leadership and network governance leadership. These leadership behaviours represent the attributes described in research and theory as important for innovation (Ricard et al., 2017, Lewis et al., 2018). This study however, focused on four out of five of these dimensions and ignored the entrepreneurial dimension of leadership trait due to the study sample.

Transformational leadership

Transformational leadership was initially introduced by Burns (1979) and later expanded by Bass (1985). Transformational leadership is a leadership style that is built on creating revolutionary change in the company via devotion to the goal of that organisation (Sullivan & Decker, 2001; Nayab, 2010). According to Bass (1997), it is a people-centred form of leadership that stimulates innovation among subordinates and improvement at working environment. Yukl (1989) views the major purpose of transformational leadership research in the conceptualisation of an acceptable style to transform organisations especially within the educational sector.

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Transformational leaders are devoted to organisational goals and seek the greatest possible performance via motivating and inspiring their followers to reach high expectations and through supporting information dissemination and inventive culture by organisational members (Bass & Avolio, 2000). Bass (2006) presented four conceptual components to transformational leadership as; Charisma or idealized impact, inspiring motivation, intellectual stimulation, and personalized concern, which has been called as "The Four I's". The Charismatic or Idealized influence reflects respect and trust that is established on a firmer basis of ethics and morality. These arises from the charismatic leaders' exhibition of specific traits including taking stances, showing care for the emotional and physical needs of followers, sharing risk, expressing unambiguous principles and acting them out to the latter and serving as a role model to the follower. These would lead to a later admiration by the follower for the leader (Adjei, 2015; Al-Farhan, 2018).

With respect to "Inspirational Motivation", leaders are capable of enhancing team spirit by inspiring hope and enthusiasm through their emotional, non-intellectual, attributes. They clearly anticipate appealing future possibilities and express objectives, shared vision, challenges, and expectations that followers would desire to fulfill. Such leaders are typically successful in developing self-confident, action-oriented followers (Chaudhry, Javed, & Sabir, 2012; Al-Farhan, 2018). The third dimension is intellectual stimulation. Leaders, who display this, tend to foster creativity among their followers' leaders urge their followers to challenge assumptions, conceive about old circumstances in new unexpected ways, and reframe issues and provide solutions.

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Under these conditions, creativity and innovativeness are fostered and there is no place for public criticism of blunders as members are encouraged to attempt new techniques that may be different from the leader's way of doing things (Adjei, 2015). The fourth component is "Individualized consideration". The inspiring motivation, another component of transformational leadership, stimulates and pushes the followers to attain the organisational goals whilst intellectual stimulation, motivates employees to be more creative and imaginative to solve issues (Bass & Avolio, 2000). (Bass & Avolio, 2000). The transformational leader is at the centre as the primary character around whom changes, and hence also innovations take place.

Transactional leadership

Leithwood (1994) defines the transactional leadership style as a leader model employing multiple financial incentive to exchange results desired. Transactional leadership style is a task-oriented and engaged leader method. It relies on timely and adequate rewards. Different from transformational leadership style, transactional leadership style helps firms achieve their goals by making job reward and payment obvious (Burns, 1978). Van Wart (2012) postulates that with the transactional approach of leadership, leaders focus largely on logical incentives and methods to get the desired performance. Leaders aim to guide by explaining goals, monitoring the conduct of subordinates and highlighting task-oriented areas (Van Wart 2012). Innovation definitely originates from the leader and his/her capacity to influence followers (Ricard et al. 2017).

Burns (1978), who was first to examine the transactional leadership style, implies that the transactional leaders constantly strive to motivate their

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subordinates by luring and appealing to personal recompense. According to Bass (1995, 1997), there are various different forms of behaviors inherent in transactional leadership. (A) Contingent reward: The leader offers contingent incentives for excellent effort and good performance, and celebrates success in order to reinforce suitable behaviours and discourage bad behavior. (B) Management by exception: The leader preserves the status quo and intervenes when employees do not achieve acceptable performance standards. This practice entails monitoring subordinates and corrective action, where necessary, to guarantee that the activities are carried out efficiently. (C) Laissez-Faire: This is the avoidance or absence of leadership. This conduct comprises evading decision making and abdicating duties.

Transactional leadership has received less attention by scholars in its relation with innovative behaviour, possibly because this style is more tasks oriented and promotes status-quo for achieving desired performance which does not seem appropriate for innovation (Faraz, Ahmed, Estifo, & Raza, 2018). However, a close study of the current research on the association of this leadership conduct to employee's innovativeness found an excess of contradictions in the findings. This spans from immediately negative (Bass, 1985; Lee, Si & Wei, 2012) to directly positive (Hussain, Abbas, Lei, Haider & Akram, 2017; Faraz, Yanxia, Ahmed, Estifo & Raza, 2018) and even no association (Lewis et al., 2018). The present literature reveals a large vacuum for future research to study the influence of this leadership approach on innovative work behaviour.

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Altruistic leadership

The Altruistic approach highlights how leaders engage with their people and how they manage these relationships to get the best out of them, even at the price of personal benefit (Tummers & Knies, 2013). According to Simmons (1991) altruism: first, is the readiness to do activities that attempt to promote the welfare of others, not one's own, second, is voluntary, third, is purposeful, includes aiding others, and fourth, expects no return. Altruism is, then, the emotion or propensity to do good to others, even at the price of personal benefit. Altruistic leadership is the guiding of people with the eventual purpose of enhancing their health, but sadly, there are not many research about altruistic leadership (Barker, 1997; Staub, 1991, 1992).

Barker (1997) describes altruistic leadership as a shared higher vocation to social compassion from a universal ethical conscience. This leadership trait is crucial for dedication to public service. Kanungo and Conger (1993) argue that the high complexity of today's economy and society demand for a larger degree of connection (rather than independence), more attention centered on collaboration (rather than competition) and stronger organisational loyalty, moving away from individualism. Chin (2012) contends that selfless leadership conduct is important to engage people for innovation. Altruistic leadership as well helps leaders build up trust among the team and it helps their subordinates match their own ambitions with business aims. It may stimulate altruistic attitudes among workers and build a reciprocal culture inside the firm. Therefore, any organisation which has dedicated leadership may attain the necessary degree of participation with less expense of accomplishing it.

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Ricard et al. (2017) hypothesize that under the altruistic viewpoint, the leader is a facilitator who establishes relationships vis-à-vis the people in the organisation, gives a moral example and is prepared to bear responsibility for the whole organisation and its members (stewardship). Activities undertaken by leaders in this viewpoint generally entail the empowering of employees and establishing a culture of trust and collaboration among employees (Van Dierendonck, 2011). Innovation arises from the ingenuity of the organisation's followers and employees. This study, therefore, adds that altruistic leadership style builds trusts, gives support which are crucial traits for innovative activity.

Network governance leadership

Network leadership refers to the individual ability to develop direct and indirect interpersonal communication patterns of influence (Brass & Krackhardt, 1999; Osborn, Hunt & Jauch, 2002). However, networking is not only a skill to construct interpersonal relationships and develop interactions with others. It is also a series of actions with structural power implications (Marion & Uhl-Bien, 2001) which are crucial to understanding the distinctiveness of leadership in public administration. In organisations where authority is dispersed, success or failure of the strategy process rests, among other things, on the capacity of leaders to establish and sustain powerful and enduring networks. The specific relevance of networks in the public sector has been stressed in the classic work of Laumann and Knoke (1987) and other academics (e.g., Kickert, Klijn & Koppenjan, 1997). According to Hajer (2011), present modernistic political structures have a three-fold problem: 1) there is an implementation shortage where policy does not resolve the issue, 2) a shortage of learning capacity (experienced knowledge and experiences are not integrated

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into existing processes) and, partly because of this, 3) there is a shortage of legitimacy (citizens and organisations do not trust the government anymore) (citizens and organisations do not trust the government anymore).

Hajer (ibid) contends that network governance is the answer for this three-folded problem: an alternative policy process where multiple levels of government (national government, provinces, and municipalities) engage with social partners to tackle societal and technology difficulties. The network leadership concentrates on cooperation and it is the leadership style needed in a network situation such as the public sector (Kickert, Klijn, & Koppenjan 1997, McGuire & Agranoff 2011; Klijn, Edelenbos, & Steijn 2010). Owusu and Appiah (2014) have stressed the role of multi-level and multi-actor collaboration within the Ghanaian local government to overcome "wicked challenges". The rising emphasis on collaborative governance across the area of public administration constantly demanded a rethinking of leadership skills and behaviours to manage networks (Getha-Taylor & Morse, 2013).

The notion of a 'network' involves contact between multiple players on the basis of trust, with the objective of addressing a policy problem, rather than depending on systems of operation. Network governance may establish a sense of communal effort and mutual support, to harness the network of resources more efficiently and effectively. Network governance is intended to revolutionize local government by pushing the local economy to expand, compete and generate employment, and make better use of local resources (Trah, 2004). Network governance may promote inter- and intra-government connections as it increases team spirit, mutual accountability and cooperation.

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Ricard et. al., (2017) also espoused this view by stating that the role of a network leader within the public sector is someone who carefully examines the network of available actors, connects them to each other, facilitates exploration of solutions to address problems and engages the involved actors in order to deploy the resources needed for implementation (Klijn, Steijn & Edelenbos 2010). Additionally, they have to create trust and collaboration among individuals with various views of the problems in question, different perspectives about the most desired solutions to them and distinct interests (Koppenjan & Klijn 2004; Klijn, Edelenbos & Steijn 2010; McGuire & Agranoff 2011). Innovations, in this perspective, are accomplished by collaborative leaders who link players and required knowledge and are able to share their accomplishment with others (Ricard ibid) (Ricard ibid). The next section emphasizes on employee creative work behaviors.

Employee's Innovative Behaviour

West and Farr (1990) defined innovative work behaviour as "all employee behaviour directed at the generation, introduction and/or application (within a role, group or organisation) of ideas, processes, products or procedures, new to the relevant unit of adoption that supposedly significantly benefit the relevant unit of adoption. Yuan and Woodman (2010) defined employee innovative work behaviour (IWB) as "the invention, acceptance and implementation of novel ideas for goods, technology and work techniques by employees". Simply, stating that it is the application of fresh ideas to an established activity. As proposed by Scott and Bruce (1994), the concept of creative work behaviour covers not only the invention of new ideas but also the organisation's proactive activities such as the execution of good ideas.

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Innovative work behaviour is presently commonly viewed to comprise a broad collection of behaviours connected to the production of ideas, establishing support for them, and assisting their implementation (e.g., Scott & Bruce, 1998; Janssen, 2000). Employees' IWB is at the heart of organisational efficiency. This relevance of employees' innovative work behaviour for organisational sustainability has been addressed in the literature (Agarwal, Datta, Beard, & Bhargava, 2012). Workers' creative conduct is the cornerstone of improved performance for the company and so, it is extremely vital to determine that what promotes or encourages this innovative activity by employees (Scott & Bruce, 1994).

Employees' IWB effects performance and image outcomes and is crucial to a firm's success (Yuan & Woodman, 2010). As most public organisations are under increasing pressure to improve their service quality and safety while at the same time to optimize their efficiency levels (Veld et al., 2010; Decramer et al., 2013; Knies et al., 2015), the importance of developing and implementing more efficient technologies and work processes is likely to become essential for the future performance and survival of public organisations. Lack of innovation or fresh ideas impairs the functioning of the public service and other sectors of the economy via poor utilisation of resources. Costs, time and quality criteria are most times not attained owing to lack of originality and innovation (Awosika, 2014).

The research of IWB is therefore significant since such behaviour is particularly needed in public sector services to improve its service delivery effectiveness (De Vries et al.,2016; Torugsa & Arundel, 2016). It is vital to distinguish between creativity and IWB, two similar terms that usually tend to

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overlap each other. Although by definition, creative conduct entails both, development and execution of new ideas (Khan, et al., 2015). Creative behaviour is often regarded as one part of IWB since innovative behaviour not only comprises individual unique idea production but also adopts other's ideas that may be described as novel to the company or work unit, specifically in the educational sector (Woodman et al., 1993).

Furthermore, creative behaviour just concerns new idea creation, while IWB involves both the generation and application of new ideas (Shalley; 2004, Zhou; 2003). The similar difference is typically drawn between invention and innovation, with invention stressing the development and building of new concepts or artefacts and innovation emphasizing the commercialization, or bringing into use of such artefacts (Conway & Steward, 2009).

Much of the work on IWB conceptually discriminate between multiple dimensions, which are typically tied to distinct stages of the innovation process. For example, Scott and Bruce (1994) operationalize IWB as a multi-stage procedure. Scott and Bruce (1994) separated between idea creation, idea promotion and concept realisation, whereas De Jong and Den Hartog (2010) concluded on idea exploration, idea generating, idea championing and idea execution. Kleysen and Street (2002) stated that the process of IWB consists of opportunity discovery, generativity, formative inquiry, championing and implementation. However, the operationalisation of Scott and Bruce is the most preferred one since, it clearly distinguishes between the individual processes, posing three independent actions without any overlap between them.

Second, whereas various models offering more than three dimensions have been created afterwards, empirical evidence on their validity typically is

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weak (Nijenhuis, 2015). Idea exploration and generation involve looking for methods to enhance current goods or processes or solving issues via trying to think about them in various ways and to integrate or rearrange information and existing concepts (De Jong & Den Hartog, 2010). Concept marketing becomes crucial after an idea has been produced. This often implies that a strong coalition needs to be built (Galbrath, 1982), resources are to be mobilized (i.e. Staw, 1990; Howen & Higgins, 1990; Ford, 1996), the right people are to be involved (Howell, Shea & Higgins, 2005) and risks need to be taken (i.e. Kanter, 1983; Amabile 1996) as for most ideas it is not clear whether their benefits will exceed the cost of developing and implementing them and resistance to change often occurs (Kanter, 1988). Finally, implementing new ideas entails tasks such as building a prototype or model of the new product, technology, method or way of doing things (Janssen, 2004) Thus, the closing part of the IWB process is focused with the actual manufacturing, testing and deployment of the inventive attempt.

Organisational Climate

Organisational climate refers to workgroup perspectives of individuals that may or may not be shared (James et al., 2008). Yukl (2006) identified the organisational environment as the assumptions, beliefs, and values that member of a group share. Organisational atmosphere is a situational factor that may readily impact the inventive work behaviour of co-workers. A co-worker's opinion of climate determines the amount to which creative solutions are encouraged, promoted and executed. It enables inventive methods of portraying issues and finding solutions (Martins & Terblanche, 2003). Innovative

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businesses appear to display positive organisational environment (Hartmann, 2006).

Organisational culture and climate have been considered as being different, a consequence of, or response to one another (Hughes, Ginnett, & Curphy, 2002). Nystrom (1990) defined climate as the sentiments, attitudes and behavioural inclinations that shape corporate life. It conveys to individuals what is seen as essential and how it may be performed, and directly links to people's perceptions of events, practices and processes and the sorts of actions that are rewarded, encouraged, and anticipated (Schneider, 1990). Denison (1996), who studied the differences between organisational culture and climate, added that culture, on the other hand, refers to what Denison (1996) termed as an evolved context within which a situation could be embedded and which was rooted in history, collectively held, and sufficiently complex to resist attempts through direct manipulation. Scholars have frequently asserted that it is difficult to modify an organisational culture (Perry, LeMay, Rodway, Tracy, & Galer, 2005) without first addressing the organisational environment. Organisational atmosphere is highly associated to both creativity and leadership (Scott & Bruce, 1994; Kheng, et. al, 2013; Gendi, 2017).

Organisational climate for innovation (OCI) is described as the employees' view about their workplace, including a general sense of adaptability to change, acknowledging the creativity and giving supplies of resources and time for innovation (Kim & Yoon, 2015). The responsibility of leaders in building an organisational environment for innovation involves; allocation of resources that include human, financial and time (Lui, 2011; Lopez & Esteves, 2011), creating an atmosphere where workers feel free to express

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themselves (Diefenbach, 2011). Leaders can impact an innovative atmosphere by their behaviors (Kazama et al.,2002; Scott & Bruce, 1994). Innovations are also made simpler when leaders attempt to build an organisational environment that encourages people to "to explore new possibilities, embrace risk, cooperate, and devote themselves to the company beyond self-interest" (Kalyani, 2011, p. 85).

Lewin et al. (1939) suggest that diverse leadership approaches produce varied climates which in turn give birth to varying employee emotions and behaviours. In accordance with this, Montes et al. (2004) believe that innovation should always begin with the encouragement of supervisors including the formation of a receptive organisational climate. Leaders have a key role in generating distinct climates and must adjust them to the different phases of the innovation cycle (Mumford et al., 2002). In addition to that, leadership behaviour may drastically affect the impressions workers to have regarding the atmosphere for innovation (Isaksen et al., 2001; Ekvall, 1997; Ekvall & Arvonen, 1984). Leaders impact the atmosphere through their observable acts over time that later becomes employees' views. Employees would be inspired to innovate only when they think the leader wants particular organisational practices that support innovation (Mumford et al., 2002).

Organisational Climate Dimensions

A model by Dombrowski, Kim, Desouza, Braganza, Papagari and Baloh (2007) presented a larger set of factors that include certain team or group-based motivators. They contain aspects such as democratic communication, safe places, adaptability, cooperation and border transcending. Indeed, Martins and Terblanche (2003) recognized that the study provided "little consensus on the

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sort of organisational climate needed to foster creativity and invention" (p. 69). Once again, as with organisational environment, there seems to be no definite list of criteria that allow a company to be innovative.

As argued by Kheng and Mahmood (2016), the factors of organisational climate cannot be precisely divided, documented and replicated. In this study, the organisational climate is based on the model of Scott and Bruce (1994). They presented a two-factor dimension of organisational environment; Support for Innovation and resource provision for innovation. Support for innovation, which assesses the individual's impression of their company, whether it open to change, promotes new ideas from collaborators and is tolerant of variety 2) Resource supply, analyze the employee's perspective about the organisational resources, if they adequate. Resource supply offers access to relevant resources, including people, materials, and information (Ronquillo, 2011).

This scale is regarded the most beneficial since it is directed directly on organisational support for innovation (Scott & Bruce, 1994; Sarros, Cooper & Joseph, 2008). Adequate supplies of such resources as equipment, facilities, and time are crucial to innovation and the delivery of such resources is another expression of the organisational support for innovation (Amabile et al, 2004; Nijenhuis, 2015). Organisational environment for creativity has been measured both as mono dimensional and a multi-dimensional variable. Some study has studied the influence of support for innovation and resource supply separately on innovative work behaviour (Scott & Bruce, 1994; Subramaniam, 2012; Naguib, & Naem, 2018), whiles others have evaluated climate as a unidimensional variable (Letchumanasamy, 2013; Kheng et al. 2013). Using the social exchange theory, this study focuses on the influence of resource supply

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as an innovative climate component on influencing creative behaviour. As it has been demonstrated that availability of the\sneeded resource might encourage inventive activity (Martín, Salanova, & Peiró, 2007; Chang, 2013).

Empirical Review

The empirical review was developed in line with the specific objectives of the study. The contributions of leadership behaviours and organisational climate on employees' innovative behaviour have been acknowledged in literature.

Transformational leadership and employees innovative work behaviour

Naqvi, Ullah and Javed (2017) found no direct significant relationship between transformative leadership and employees' IWB. The study's sample comprised of 325 employees and their supervisors in five large cities of Pakistan. The 5X (MLQ) was used to measure transformational leadership and IWB). Structural Equation Modelling was employed for the investigation, the route analysis was tested using IBM AMOS. Also, Turunc, Celik, Tabak and Kabak (2010) likewise concluded that transformational leadership actions have no direct impact on workers' creative activity. The study was based on a responder total of 120 tutors in Ankara. Transformational leadership was measured with a Likert type scale of 5 items devised by Podsakoff (1990,1996). The scale of Scott and Bruce was used to quantify the propensity of employees' conduct. Likewise, research of 480 information technology professional teachers in India by Pradhan (2015), indicated a favorable association between transformational leadership and job outcomes factors excluding creative work behaviour. Software tools like SPSS, AMOS and WARP PLS were utilized to analyse the data.

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The investigation of Mesut (2012) showed a contradicting conclusion. His study based on the view of 710 teachers and 55 principals selected from 55 elementary schools in the center of Nigde and its districts, on the empowering leadership and teachers' innovative behaviour: the moderating role of innovation climate, found that transformational leadership has a strong substantial effect on employee's innovative behaviour. The analysis was completed utilizing the SPSS macro procedure. Transformational leadership was examined using 12-items of the Multifactor Leadership Questionnaire (MLQ).

Similarly, Rashi and Halim (2014) wanted to innovative behaviour in educational institutions: the role of transformational leadership and teamwork attitude. The study was based on a survey of 507 teachers in educational institutions and concluded that the degree to which a teacher views principals' transformational leadership is positively connected to the degree to which the employee sees a culture of innovation. It is therefore necessary to assess its implementation within the Ghanaian public sector environment. Agreeably, Gkorezis (2016), also evaluated the principal empowering leadership and teacher innovative behaviour: a moderated moderation model. Structural equation modelling and hierarchical regression analyses were employed for the analyses. The study revealed that there is a direct and beneficial influence of transformational leadership on IWB.

Based on a study of 322 teachers in Odense, Hensen and Pihl-Thingvad (2019) concluded that transformational leadership conduct has a positive significant influence on creativity. Adding that transformational leadership stresses charm, motivating of staff and presenting exciting visions as highly

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vital for accomplishing innovation and change. The study employs structural equation modelling to evaluate the data, transformational leadership was judged based on a five items scale by Ricard et al (2017). The study employed a 3 item self-rated innovation capacity test.

Ismail and Mydin (2019) also did a study on the impact of transformational leadership and commitment on teachers' innovative behaviour. Data was received from 704 female teachers and 257 male teachers. The results demonstrated that transformational leadership through psychological empowerment, information sharing, and intrinsic motivation encourages teacher's innovative behaviour. A cross-sectional design was adopted in the investigation.

Transactional leadership and employees' innovative work behaviour

The association between transactional leadership and creative work habits of workers is not conclusive. Because of the nature of transactional leadership, several researches suggest that it is a barrier to creativity. The study of Lewis et al (2018) on leadership and self-rated innovation ability among the 322 teachers likewise indicated that there was no significant influence of transactional leadership on innovation capacity. Again, Rank, Nelson, Allen and Xu (2008) explored the association between supervisors' leadership actions and subordinate's inventive behaviors. Based on a field survey data (161) obtained in research and development, marketing and human resources departments of numerous German organizations, the study found that active corrective transactional leadership adversely impacted creative behaviour of teachers.

Also, Contreras et al. (2017), also evaluated the influence of leadership on employees' IWB, mitigating the role of organisational climate among a total

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of 267 Colombian workers from different sort of organizations. Structural equation modelling and hierarchical regression analyses were employed for the analyses. In contrary to the premise provided in the study, a positive significant effect of transactional leadership on IWB was found based on the data. The research was a cross-sectional survey.

Xie et.al (2018) also observed that transactional leadership style favorably connects with innovation atmosphere. The study was an online survey based on 294 respondents in China. The study of Kim and Yoon (2015) indicated that supervisor's transactional leadership style is crucial for innovation in the public sector. Tichy and De Vanna (1990) proposed that Supervisors' transactional leadership may affect organisational transformation, reforms, and a culture of creativity in government. Some studies have showed that transactional leadership is ideal when the objective is to establish a culture of creativity (Golla & Johnson, 2013).

An analysis by Faraz et al (2018) also reveals that transactional leadership conduct has a positive substantial influence on employees' creative work behaviour. The study was based on data obtained from 260 middle managers from the electricity industry of Pakistan. The study was based on the full range theory of leadership and the expectation theory. In addition, Naqvi et al (2017) discovered a direct substantial positive link between transactional leadership and employees' IWB. The study's sample comprised of 325 bank employees and their supervisors in five large cities of Pakistan. The 5X (MLQ) was used to measure transformational leadership and IWB using the scale of Janssen (2000).

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Altruistic leadership behaviour and employees' innovative work behaviour

Altruistic leadership attitude has been related with employee's inventive activity. When employees are driven by prosocial acts, they go above their obligations, boost their productivity and performance (Grant, 2008) and stimulate their creativity (Grant & Berry, 2011). Consequently, they are inclined to produce fresh and beneficial ideas that may be positive for others (Grant and Berry, 2011). (Grant and Berry, 2011). Research undertaken by Mallen, Dominguez Escrig, Lapiedra and Chiva (2019) on leaders' humility, generosity and creativity across Spanish enterprises. The study was based on a total of 568 valid questionnaires gathered from 284 different firms. The study revealed that altruism has a positive substantial influence on innovation inside the organizations. Altruism was assessed by the scale of Podsakoff et al. (1990).

Additionally, Salas-vallina, Ferrer-franco and Guerrero (2018) explored the impacts of altruistic leadership on creative work behaviour across Spanish public hospitals. The study was a cross-sectional survey based on 324 nurses at public hospitals. The study employed structural equation modelling to evaluate the idea. The results demonstrated that selfless leadership has a direct influence on employees' creative work behaviour. Similarly, Dominguez Escrig et al (2016), revealed that altruistic leader behaviour had positive substantial influence on radical innovation. However, Ricard et al (2017) observed a favorable effect of altruistic leadership conduct on self-rated innovation potential of public sector managers.

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Network governance leadership and Employees' innovative behaviour

The significance of networks and multi-actor collaboration has been underlined as vital to assuring production of new solutions to social problem (Owusu & Appiah, 2014). As suggested by Imperial et al (2016), the complexity and interconnection of the current world need networked ways to tackling social challenges. Leadership is necessary to build and sustain network governance long enough to successfully collaborate across political and organisational borders to achieve common goals (Huxham & Vangen 2000; Ansell & Gash 2008). Lewis et al (2018) in the research of leadership and self-rated innovation ability in three European cities indicated that the network governance leadership had the greatest significant influence on innovation within the public sector.

Network governance leadership was assessed based on the scale of Ricard et al (2017). Erickson and Jacoby (2003) point out that networks are not only vital for obtaining information to produce in-house innovations or for the transmission of innovation but they are also important for learning about creative work practices that other companies have established or implemented. In addition, Speek (2017) studied the influence of network governance on the facilitation of urban innovation in Holland. The study was based on an interview with forty-four (44) City Deal officials. The study revealed that network governance is crucial to solve challenges with the restricted resource set available. Haug (2018) further highlighted that networks help entrepreneurship, but without an integrated and well-functioning administrative superstructure, their potential to innovate might be undermined. Indicating that the role of leadership is crucial in network governance.

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The study by Namara, Karyeija and Mubangizi (2015) nevertheless showed no connection between network governance and employee capacity to be innovative. The goal of the study was to analyze network governance and its contribution to the capacity of local governments (LGs) to provide local economic development (LED) in Uganda. This study so hypothesised that; H1e: Network governance leadership has a beneficial influence on creative work behaviour

Leadership behaviour, organisational climate and employee innovative behaviour

In the study by Conteras et al (2017), it was established that both transformational and transactional leadership behaviours had a favorable impact on organisational environment for innovation. Organisational climate was assessed based on the scale of Scott and Bruce (1994). Novac and Bratanov (2014) evaluated the influence of leadership style on organisational climate in a public institution in Romania. The study noted that certain leaders' actions have a favorable influence on organization atmosphere. The formation of an acceptable organisational environment is the major task of leadership inside every business (Amabile et al., 2004). Similarly, Isaksen (2007) believes that leaders through their activities impact employees' views of atmosphere for innovation and promotion of change and creativity. Thus, it can be stated that the organisational environment is a direct effect of leadership in the company (Gendi, 2017).

Zhang et al (2018) explored the function of transformational leadership in moulding employees' innovative behaviour by studying the moderating effect of innovation climate and the cross-level moderating effect of

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innovativeness as a project requirement. A questionnaire survey was done with 300 construction industry professionals in China and 251 valid answers were gathered for the study. Data acquired by the questionnaire were examined using the approach of hierarchical linear modelling (HLM). The results demonstrated that transformational leaders might cultivate a shared atmosphere for innovation to drive employees' innovative activities.

Scott and Bruce (1994) combined a variety of lines of research on the antecedents of creativity to build and test a model of individual inventive behaviour. The study setting was a research and development subunit. The study studied the influence of leadership style on employees' creative work behaviour based on a moderating effect of organisational environment. Organisational climate was assessed independently in terms of support for innovation and resource provision. The model explained around 37 percent of the variance in inventive conduct. The results suggested that encouragement for innovation has a favorable influence on inventive conduct whiles resource supply had a negative effect. Though leadership has a favorable influence on both elements of corporate atmosphere and inventive conduct. The author argued that this may be an indicator that resource supply variable is different from support for innovation. Indicating the necessity for additional study on the variable.

Also, Naguib and Naem (2018), studied the moderating impact of organisational environment on the connection between transformative leadership and innovation. Transformational leadership was measured using the MLQ-form 5X, organisational environment was measured by the scale created by Scott and Bruce (1994). Organisational innovation was measured using (innovation inputs, process and results), the metrics proposed by Andrew and

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Haanaes (2009). The investigation was done utilizing 103 Egyptians businesses. The study revealed that both top management support and resource supply influence the link between transformational leadership and innovation.

Similarly, Park and Jo (2017) observed that organisational atmosphere had a favorable influence on creative conduct in the Korean government sector. The findings were based on a survey of 1,011 respondents using SEM. Again, Kim and Yoon (2015) intended to study how senior managers' transformational leadership and supervisors' transactional leadership linked with workers' perspective of a culture of innovation through the moderating function of organisational environment. The study was based on a survey of 1,567 employees in the Seoul Metropolitan Government, the study found that climate is climate— through enhancing the recognition of employee creativity, the flexibility to change, and resources for innovation—is significantly associated with employees' perceptions of a culture of innovation. Concluding that, the degree to which an employee sees resources for innovation is positively connected to the degree to which the employee perceives a culture of innovation at his or her work unit.

Conceptual Framework

The conceptual framework of this study is based on four independent variables namely: transformational, transactional, altruistic and network governance leadership styles with the employee innovative behaviour as the dependent variable, with organizational climate as a moderating varible. The influence of the independent variables on the dependent variable is illustrated in figure 1.

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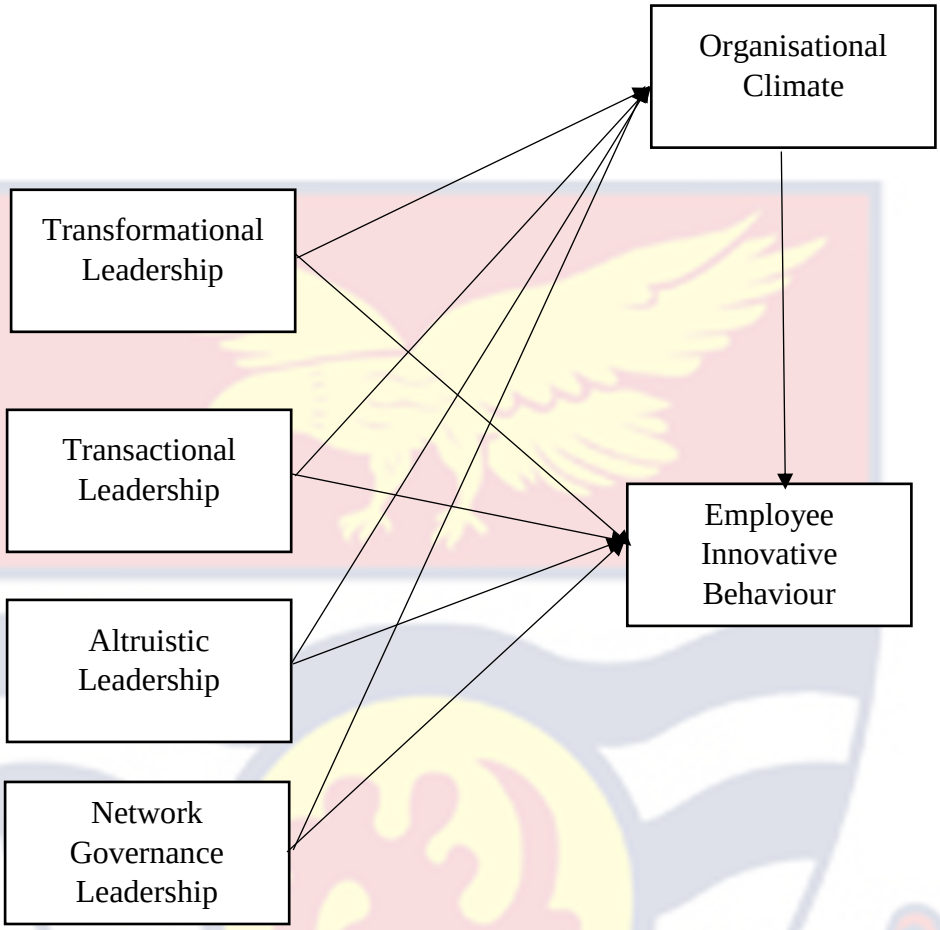

Figure 1: Conceptual Framework

Source: Authors' construct (2022)

Chapter summary

The chapter addressed the literature on theoretical, conceptual and empirical concerns linked to leadership style, employees' innovative work behaviour and organisational climate as documented in past research. Important concerns and insights from the review informed the conceptual framework of the study. The review will further prove valuable in the methodology, analyses, presentation of findings, debates, conclusions and suggestions. The next chapter provides the technique utilized to carry out this investigation.

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CHAPTER THREE

RESEARCH METHODS

Introduction

The research methods portion of this study outlines the methodologies and procedures that was used and followed in conducting the research. According to Mishra and Alok (2011), research technique is the science behind how a given research activity is carried out. It tells forth the systematic steps performed in examining a particular research subject. It becomes eminent for a well-organized scientific enquiry to be followed so as to provide justifiable grounds for validating the reliability and accuracy of processes, procedures, methods and findings of this study. This section gives a description of the research strategy and research design, the study region, the population, and the sample size and sampling technique which are used for the research. It also includes a vivid description of data sources, data gathering instrument, data collection procedure, as well as protocols for data processing and analysis.

Research Paradigm

Research paradigm of a study explains how knowledge is developed and the nature that knowledge takes. Guba (1990) explained Research Paradigm as "sets of beliefs that guide action". Adjei, (2015) postulated that what guides every researcher through the entire research are certain beliefs, values and a view of the world making up the research paradigm. Every research is underpinned by a research paradigm. A researcher's types of beliefs based on these factors will mostly lead to adopting a strong qualitative, quantitative, or mixed-methods approach in their study (Creswell & Creswell, 2018). Saunders et al (2016) listed five major philosophies that have shaped social science

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research over the years: positivism, critical realism, interpretivism, postmodernism and pragmatism.

This study adopted the positivist approach. The positivist research paradigm is of the view that social sciences research can replicate scientific or natural sciences research methods. That is, positivist social science duplicates steps followed by natural scientists to control and comprehend the natural world. As opined by Saunders et al (2016), positivism is the philosophical system that holds topics that can be scientifically tested and hence generalise the findings. Therefore, positivists emphasis on the research procedures that would lead to the generation of facts which are not influenced by human interpretation. The research is supposed to use existing theory to develop hypotheses. The hypotheses would be used to test and confirm, wholly or partly, or disproved, leading to the further development of theory which then may be tested by further research (Creswell, 2009; Saunders et al, 2016). The main purpose of positivism research paradigm methodology is to explain cause and effect relationships. It is an appropriate guide for this study given that based on the theories of social exchange theory, and work family conflict, relationships and effects will be tested.

Research Design

According to Potwarka, Snelgrove, Drewery, Bakhsh and wood (2019) research design is considered as a set of arrangements created to gather and evaluate data in a way that aims to blend compliance with the purpose of the research process and economics. Williams (2007) also described the organization of the study as "a system, structure and strategies and an integrated investigation to ensure query inquiry and diversity control" as mentioned in

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Zikmund (2000). (2000). According to Young and Javalgi (2007) a master plan that defines the process and methods for gathering and analyzing the required information is called a research design.

Various explanations presented by Zikmund (2000), Zikmund, Babin, Carr and Griffin (2012), Williams (2007) and Young and Javalgi (2007) have indicated that the development of research involves a systematic approach in which significant information is examined and interpreted economically and procedural form. It is consequently a concept of data collection, measurement and analysis. The research design should be immediately discovered and the research topic picked and arranged, the objectives of the research are well specified, the concepts and challenges are well defined and the research ideas are properly documented (Zikmund, 2000). Akhtar (2016) indicated that study design comprises a systematic strategy in which the proper information is collected examined and evaluated cheaply and with procedure.

The study used the explanatory survey design. This design was appropriate per this study because it is recommended by Amin and Wollenberg (2005) for studies which involve a cross section of respondents or subjects with almost similar characteristics. According to Best and Khan (1998), a survey is concerned with the conditions or relationships that exist, such as determining the nature of prevailing conditions, practices and attitudes; opinions that are held; processes that are going on; or trends that are developed. The survey design is deemed suitable for this research for reasons being that, it reduces chance of surveyor bias because the same questions are asked of all respondents, many people are familiar with surveys, some people feel more comfortable responding to a survey than participating in an interview, tabulation of close-

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ended responses is an easy and straightforward process. Thus, the approach is adopted on the basis of its advantages of economy of design, the swift turnaround in data collection and the ability to identify characteristics of the population from a sample derived from that population.

Research Approach

The study followed the quantitative research approach. This is because the measurements of the items in the scale were quantitatively scored by the respondents based on established rating scales (7-point Likert scale) Besides, per the nature of the primary data required, design of the data collection instrument, research objectives, statistically application for data processing, statistical tools for data analysis as well as the theoretical foundation of the study, the adoption of quantitative research design becomes most preferred an obvious option in the face of both qualitative and mixed research approaches.

According to Creswell (2014) quantitative approach works with describing events by gathering numerical data that are evaluated using mathematically based procedures (in particular statistics). Quantitative research methodology is a research strategy that quantification in the collecting and analysis of data (Bryman, 2012; Lincoln & Guba, 1985). Quantitative methods (normally using deductive logic) seek regularities in human lives, by separating the social world into empirical components called variables which can be represented numerically as frequencies or rate, whose associations with each other can be explored by statistical techniques, and accessed through researcher-introduced stimuli and systematic measurement (Rahman, 2017).

This strategy usually begins with data collecting based on hypothesis or theory and is followed by the use of descriptive statistics (Shekhar, Prince,

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Finelli, Demonbrun & Waters, 2019, Tashakkori & Teddlie, 2010). Measurement methods are typically described as environmentally friendly, in the sense that assumptions from statistical tests lead to broad assumptions about demographic features. Calculation methods are also commonly perceived as assuming that there is just one "truth" existent, regardless of human perception (Galli, 2019). Quantitative findings may be made for the general public or minority because it contains a bigger randomly selected sample (Carr, 1994).

Study Setting

The study was conducted among staff in College of Distance Education, University of Cape Coast (CoDE-UCC). University of Cape Coast is a force to reckon with when it comes to quality Distance Education delivery through one of its colleges named College of Distance Education (CoDE). The college since its inception has adopted the face- to- face method of distance education by using solely the human touch to distance learning. This is usually done through the help of facilitators or mentors or course tutors through promoting different types of interactions between instructors, students and resource centres nationwide. These tutors have demonstrated competence and contributed immensely over the years toward the immense success of the distance education programme and still form key to its continuity or survival since the incorporation of computer technology has not yet been introduced.

The College of Distance Education (formerly Centre for Continuing Education) was formed in 1997 and gained a college status on 1st August, 2014. The College started with an initial student enrolment of 750 in 2001, using the print-based delivery mode with nine study centres in nine regions. With this approach, the managers of the programmes ensure that there is no disparity in

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teaching and assessment between the conventional system and the distance learning system. In view of this, modules used by the distance education students are written by the lecturers of the conventional programmes. These lecturers set quizzes, assignments, examinations, and also responsible for grading students' examination scripts whereas the university engages different tutors or facilitators who take students through the designed modules at various centres across the country.

More importantly, the CoDE aimed at providing access for applicants who fail to enter the conventional university system due to constraints in physical facilities even though they had qualified for admission. CoDE currently runs programmes in business and education leading to the award of diploma, bachelor's degree and master's degree. Presently, there are 84 learning Centres across the country, offering twenty-seven (27) programmes in Education, Business and Science. The vision of College of Distance education (CoDE) is to become a reference point for the delivery of quality distance education in Ghana and Beyond. Its mission is uniquely placed to provide quality education through the provision of comprehensive, liberal and professional programmes that challenge learners to be creative, innovative and morally responsible citizens.

Situating this study among the staff of the College of Distance education (CoDEUCC) is very important given the nature of Distance education programme is increasingly becoming the most common educational alternative across the country as well as a key provider to the newly competitive landscape in higher education through face-to-face meetings or learning through computer technology. The distance learning arena has become extremely competitive, and

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students are experiencing pressure to make and develop themselves to meet market requirements. This has called for the essence of diverse leadership behaviours of coordinators or supervisors of the staff at the various centers to yield or result in innovative behaviours of the tutors at their centers. As such, they are to create a conducive climate within their centers to facilitate a good response from the tutors to produce quality education to all those that patronize their services.

Population

Population according to Amrhein, Trafimow and Greenland (2019) comprises of the complete group of persons who are of interest to the researcher and who meet the criteria that the researcher is interested in investigating, or a grouping of individuals sharing some common features. According to Saunders, Thornhill and Lewis (2007) population is the whole set of cases from which a sample is drawn. Population can be considered as the target group about whom the researcher is interested in gathering information and reaching conclusion (Leedy & Ormrod, 2010; Robson, 2002).

The target population comprise all tutors of the College of Distance Education of the University of Cape Coast who are primarily teaching at the various centers in Ghana. The target population of the study therefore constitute 486 course tutors at the various centers across Ghana (Accounts, CoDE-UCC, 2022). The selection of all the course tutors at the various centers was a choice by the researcher because of the intended purpose of the study to understand the terrain of how the various coordinators at the centers creates a conducive organizational climate to accommodate the innovativeness of tutors. Thence, making them the reliable repository to answer the set questions of the study.

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Sample and Sampling Procedure

Sampling is a statistical strategy of getting a representative population to take information or data concerning a total population by evaluating only a fraction of it (Babbie, 2007). Sampling has also been referred as the act, process, or technique of selecting a suitable sample, or a representative part of a population for the goal of determining parameters or characteristics of the complete population (Strouse, Donovan & Fatima, 2019; Malhotra & Birks, 2007; Bassey, 1995). According to Bryman (2009) sampling is particularly essential since, in virtually all circumstances, it is not possible to investigate all the members of a population.

Three primary types of sampling procedures exist. These are non-probability sampling, probability sampling and mixed approach sampling approaches. According to Buchanan and Bryman (2009) in non-probability sampling, not all the individuals of the population have the opportunity to be picked for the sample. The definition of a non-probability sampling approach describes the population that will produce a reliable inference about a population. Non-probability sampling strategies include convenience sampling, quota sampling, network sampling and purposive sampling. Probability sampling on the other hand, has its elements having equal chance or possibility of being selected for the sample.

This selection strategy tends to increase the likelihood of attaining the purpose of choosing members that accurately represent the full population from which the members were picked. Probability sampling technique includes basic random, stratified, cluster or multi stage sampling (Cavana, Delahaye, & Sekaran, 2001). Estimating the extent of probable success is the major purpose

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of the probability sampling technique. As a result, probability theory serves as the basis for a member of a population to be included in a sample. Mixed sampling technique, according to Wurtz (2015) is a sampling strategy whereby the combination of non-probability and probability sample techniques are applied at different stages in a project.

Before sampling, it was vital for the sample size to be determined first. Based on the desired population size of 486, a minimum sample size of 214 course tutors of the College of Distance Education, University of Cape Coast, at the various centers across Ghana, was selected to participate in the study by a random sampling approach. The sample size was selected based on the sample determination table by Krejcie and Morgan (1970). Sampling was important in this study because sampling permits a step-by-step strategy of choosing a few respondents from a broader population to be used as a basis of estimating the prevalence of information of interest to one (Kumar, 2011).

Simple random sample technique was utilized for the selection of the respondents from the sampling frame. Unique identification numbers were generated for all the elements in the sample frame and through the lottery approach, the qualified respondents were randomly selected through hand-picking method (Lohr, 2019; Mohammed, Ibrahim, Siri & Noor, 2019; Sharma, Hickman & Nassir, 2019). This allowed each respondent similar probability of selection (Kim & Wang, 2019; Kadilar & Cingi, 2006; Vijayalakshmi & Sivapragasam, 2019) and also supported the parametric technique to analyze the primary data (Choromanski, Pacchiano, Parker-Holder, Hsu, Iscen, Jain & Sindhwani, 2019).

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Measurement of variables

The variables used in this study were measured relying on previous empirical literature is areas of leadership and innovative behaviour. This allowed for the design of an instrument based on validated scales. Leadership behaviours in this study were measured using various sources. The concept of four leadership behaviours for innovation was adopted from Ricard et al. (2017) and Lewis et al (2018), however the measures of the individual leadership behaviours were adopted from scales with confirmed reliability. Leadership behaviours were measured in terms of employee's perception of their supervisor's behaviour. This was done in conformance with studies conducted in the area of leadership (Contreras et al, 2017; Li et al, 2019).

Organisational climate and innovative behaviour were also measured in terms of employees' perception. This will guard against biases related to supervisor's and another colleagues' assessment of IWB (Radaelli et al., 2014; Chen et al., 2016). Transformational and transactional leadership was measured using the Multifactor Leadership Questionnaire (MLQ) developed by (Avolio & Bass, 2004). Altruistic leadership behaviour was adapted from the scale of Dominguez Escrig et al (2016), made up of four (4)-items measuring altruism. Network governance leadership was measured based on the scale developed by Tummers and Knies (2016). The scale contained seven (7) items measuring network governance leadership. Innovative work behaviour was measured using the validated scale (Janssen, 2000; Kheng et al. 2013). The scale contains nine (9) statements with three each measuring the three dimensions of IWB proposed by Scott and Bruce (1994); Idea generation; idea promotion; and idea realisation.

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Data Collection Instruments

A self-administered questionnaire was the instrument used in collecting for this study. Sekaran and Bougie (2016) postulated that greater uniformity, consistency and objectivity are guaranteed when a questionnaire is used for data collection. In addition, privacy and convenience of respondents can be accomplished during questionnaire completion, thereby ensuring greater anonymity (Neelankavil, 2015). Close-ended questions were used to elicit responses needed to answer the research questions and achieve the objectives set for this study. The closed-ended questions require the respondent to choose from among a given set of responses and require the respondent to examine each possible response independent of the other choice. The use of a self-administered questionnaire is justified since based on the busy nature of the respondents; they could best provide responses in a non-supervised way.

The questionnaire was structured into four sections. The structure was based on the objectives of this study. Section "A" covered the demographic details of the respondents, Section "B" dealt with the scale of transformational, transactional, altruistic and network governance leadership behaviours, while Section "C" measured innovative work behaviour and Section "D" also measured organizational climate. All items in sections B, C, and D were measured on a seven-point Likert-like scale. With the seven-point Likert-like scale "1" represented the least of agreement and "7" represented the highest of the agreement. The details of the questionnaire were added to the appendices.

Pre-Testing

Zikmund (2012) defines the pre-testing process as "a collective term for any small-scale exploratory research technique that uses sampling but does not

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apply rigorous standards". Pallant (2016) posits that pre-tests are required ahead of the main survey. This process assists in ensuring that instructions, questions and scale items are clear. They further help potential respondents to comprehend the questions and respond appropriately. Based on the approval of the questionnaire by the department, the study engaged in pilot testing on twenty (20) tutors of the College of Distance Education, the center at UCC. This sample size was deemed appropriate as it conforms to Saunders et al.'s (2016) minimum criteria of 10 for pilot studies by students. The only complaint that emanated from the pilot study was the length of the questionnaire's items. Based on this, the statements were summarised and preamble introduced to encourage answering.

Validity and Reliability

In order to ensure content validity of the instrument, the study ensured proper definition measuring items, scale scrutiny by experts and scale pre-testing. These were in line with the principles of McDaniel and Gates (1996). Reliability and validity are two key components to be considered when evaluating a particular instrument. The level of the reliability of an instrument is measured by Cronbach's Alpha value (Saunders & Lewis, 2012). As posited by Pallant (2016), Cronbach's alpha coefficient for variables is generated to validate the reliability of the instrument. Pallant (ibid) also indicates that scales with a Cronbach's alpha coefficient of 0.70 and above are considered reliable. However, studies such as Boohene, Agyapong and Asomaning (2012) and Mahmoud (2010) support coefficient of 0.5. The results of the pre-test were used to assess the reliability of the instrument. The result is presented in Table 1.

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Table 1: Questionnaire items and their reliability coefficients

Variables	Questionnaire Items	Sample	Cronbach's Alpha
Altruistic leadership	4	20	0.705
Network governance leadership	7	20	0.722
Transactional leadership	6	20	0.689
Transformational leadership	12	20	0.911
Organisational climate	6	20	0.759
Innovative work behaviour	9	20	0.842

Source: Field survey (2022)

Based on the criteria of Pallant (2016) and Boohene et al (2012), all items showed a high level of reliability.

Data Collection Procedure

According to Sekaran and Bougie (2016), there are different ways by which data can be collected through a questionnaire. The authors indicated that the method could be through the internet, post and hand delivery and collection of questionnaires. For this study, the hand delivery and collection of the questionnaire method was employed. This method was employed because of the difficulty in getting most of the respondents to respond to a questionnaire through the internet or post for this type of study in the country. The method chosen allowed the researcher to visit the various centers across Ghana and hand-delivered the questionnaire to the respondents. Also, the hand delivery and collection technique of data collection also helped the researcher to inquire from the respondents the time they will use to complete the questionnaire and the convenient time for the researcher to collect the questionnaire.

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Furthermore, the collection of data took place in the final quarter of 2022. The premises of the respondents were visited during the working hours. Introductory letters were submitted to the management of each center, upon approval of the letters, the questionnaires were administered to the course tutors based on the permission of the units and departmental heads. Even though self-administered surveys come with some disadvantages, they were minimized where possible and did not outweigh the benefits provided by high response rates in a short period of time.

Data Analysis

The study employed statistical tools like Statistical Package for Services Solution (SPSS) version 26 and SmartPLS version 3. The SPSS was used in the descriptive analysis and the Smart PLS was used for the structural equation modelling based on the objectives of this research. The descriptive statistics such as frequencies and percentages were used to represent the characteristics of the respondents. Each of the research objectives was analysed as follows:

1. Assess the influence of dimensions of leadership behaviour on innovative work behaviour of staff of distance education at the University of Cape Coast. Structural equation modelling was used to analyse this objective.
2. Assess the effect of organisational climate on innovative work behaviour of staff of distance education at the University of Cape Coast. This objective was analysed using structural equation modelling.
3. Examine the moderating role of organisational climate on leadership behaviour and innovative work behaviour nexus among staff of distance education at the University of Cape Coast. Structural equation modelling was used for this objective.

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Structural Equation Modelling

There are two generations of Statistical methods. Structural equation modelling (SEM) is among the second-generation statistical techniques developed in the 1980s. It helps researchers to incorporate multivariate statistical techniques and analysed unobservable variables measured indirectly by indicator variables. Measurement errors that occurred in the observed variables are accounted for (Chin, 1998 as cited in Hair, Jr., Hult, Ringle & Sarstedt, 2014). Partial Least Squares-Structural Equation Modelling (PLS-SEM) bases on available data to estimate the relationships of the paths in the model to decrease the residual variance of the endogenous constructs. SEM consists of two important elements; measurement equations (by Confirmatory Factor Analysis) and structural equations (by path analysis). Confirmatory factor analysis models (CFA) are employed when doing construct validation and scale refinement, but Path Analysis is used to determine the relationships that exist among study constructs.

PLS-SEM estimates path model relationships that maximize the R^2 values of the endogenous constructs (Hair et al., 2014). It is also important when working with complex models and small sample sizes (Hair et al., 2014; Rezaei & Ghodsi, 2014; Rezaei, 2015; Shahijan, Rezaei, Preece & Ismail, 2014). PLS-SEM is also more appropriate where theory is less developed (Ravand & Baghaei, 2016; Rönkkö & Evermann, 2013). According to Hair et al. (2014), two forms of measurement scale are done under structural equation modelling: Formative or Reflective. In a formative measurement scale, it is the indicators that cause the constructs of the study, but in a reflective measurement scale it is the constructs that cause indicators of the study. The current study used a

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reflective measurement scale because all the indicators were caused by the constructs.

Moreover, Jeon (2015) has listed a number of benefits SEM has over other models such as regression. She stated that SEM uses “latent variables” which lets multiple indicators to capture constructs validly and reliably. Also, SEM’s causal equation model between latent variables is clearer as compared to regression. She also added that SEM permits one or more independent variables to be regressed on one or more dependent variable. Finally, In SEM, a researcher can identify the direct effect, indirect effect, and total effect because several exogenous variables and endogenous variables can be estimated simultaneously. PLS is relatively vigorous when it comes to inadequacies like skewness, multicollinearity of indicators and misspecification of the structural model (Cassel et al, 1999). In SEM, confirmatory factor analysis, correlation analysis, and regression analysis can be conducted at the same time in a model. In line with the benefits above associated with SEM, this study relied on PLS-SEM to test the various hypotheses.

Moderation Procedure in SEM

Hair, Hult, Ringle and Sarstedt (2017) explain moderating effect as when a third variable interferes between two other related constructs “Mediator variables fascinate part of the relationship between the construct in Partial least squares path model that is an exogenous and an endogenous construct. Thus, mediators tell the "true" relationship between an exogenous and an endogenous construct. In this study, the moderating role of job satisfaction is tested on the relationship between WLB (exogenous) and Employee performance (endogenous). Hair et al. (2017) laid down a systematic mediator analysis

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process in PLS-SEM, to solve the misemployment of Baron and Kenny's procedure in the PLS-SEM field (Nitzl, Roldan & Cepeda, 2016; Carrión, Nitzl & Roldán, 2017). Hair et al. (2014) argue that in a structural equation when both direct and indirect effect is significant, then, there is moderation.

Validity and Reliability of the model

There are different ways of measuring model structures. In general, a systematic application of the several ways is done in a two-step process, (1) the assessment of the measurement model and (2) the assessment of the structural model. The Cronbach's coefficient alpha (α) was used in this study to determine the reliability of items in the questionnaire. The value of Cronbach's alpha ranged from 0 to 1. It is worthy to note that, the suitable range of acceptance of the α values should be greater than or equal to 0.7.

1) Assessment of Measurement Models

Assessment of reflective measurement models comprises composite reliability to evaluate internal consistency, individual indicator reliability, and average variance extracted (AVE) to evaluate convergent validity. Also, the Fornell-Larcker criterion and cross-loadings are used to measure discriminant validity (Hair et al, 2013).

Internal Consistency Reliability

It is a type of reliability adopted to judge the consistency of results athwart items on the same test. It shows whether the items assessing a construct are similar in their scores that are whether the correlations between the items are large (Drolet & Morrison, 2001). The composite reliability is a more apt measure of internal consistency than the Cronbach's alpha (Rossiter, 2002). The composite reliability differs between 0 and 1, with higher values depicting

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higher levels of reliability. It is commonly interpreted in the same way as Cronbach's alpha. Precisely, composite reliability values of 0.60 to 0. 70 are acceptable in exploratory research, while in advanced stages of research, values between 0. 70 and 0.90 can be regarded as satisfactory (Nunally & Bernstein, 1994).

Convergent validity

Convergent validity is the scope to which multiple items measuring the same concept agree (MacKinnon, 2008). Anderson and Gerbing (1988) explained there is convergent validity when all factor loadings for the items assessing the same construct are statistically significant. According to Hair, et al. (2016) convergent validity could be measured through factor loadings and the average variance extracted (AVE). Hair, Ringle, and Sarstedt, (2011) point out that to establish convergent validity, factor loadings should range from 0.70 and above. An AVE value of 0.50 or higher indicates that, on the regular, the construct explains majority of the variance of its indicators. Conversely, an AVE of less than 0.50 indicates that, on the regular, more errors remain in the items than the variance explained by the construct.

Discriminant Validity

Discriminant validity is the scope showing how truly distinct a construct is from other constructs by empirical standards. That is, assessing discriminant validity shows that a construct is unique and measures phenomena not represented by other constructs in the model (MacKinnon, 2008). The Heterotrait - Monotrait Ratio (HTMT) is a way of measuring the discriminant validity of a PLS-SEM model. According to Henseler, Ringle & Sarstedt (2015), a latent construct shows discriminant validity when its HTMT ratio is

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below 0.850. The Fornell-Larcker criterion can also be used to measure discriminant validity. It compares the square root of the AVE values with the latent variable correlations (Fornell and Larcker, 1981). Definitely, the square root of each construct's AVE should be above its highest correlation with any other construct. (Hair et al. 2013).

2) Assessment of the structural model

The most important measure for the assessment of the PLS-SEM is the coefficient of multiple determinations (R^2) for each endogenous construct. R-square (R^2) measures the explained variance of a latent variable relative to its total variance. Hair et al. (2014) indicated that coefficient of determination (R^2) of 0.25, 0.5 and 0.75 are considered as weak, moderate and substantial individually for structural models. The next thing to do in assessing the structural model is the evaluation of the regression coefficients between the validated latent variables. A regression coefficient magnitude shows the strength of the relationship between two latent variables. Moreover, regression coefficients must be significant at the 0.05 level, in order to determine the significance (Bradley & Tibshirani, 1993).

The last part of assessing structural model involves the model's capability to predict. The predictive significance of the structural model is measured by Stone-Geisser's Q^2 statistic (Stone, 1974). Structural model showing Q^2 values larger than zero for a certain reflective endogenous latent variable specifies the path model's predictive significance for the construct. When the predictive relevance values show 0.02, 0.15, and 0.35, it means that an exogenous construct has a small, medium, or large predictive significance for a certain endogenous construct. (Hair et al, 2016). Also, it measures the

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impact of individual endogenous variables on the exogenous variable. This is achieved by assessing the effect size (f^2). As posited by Cohen (1988), f^2 values of 0.02, 0.15, and 0.35, respectively, represent small, medium, and large effects of the exogenous latent variable.

Specifying the structural and measurement model

The section specifies the structure of the model of this study. It indicates the exogenous and the endogenous variables with the various indicators. The structural model is specified in figure 2. There are four exogenous variables and two endogenous variables in this study. The exogenous variables are; Altruistic leadership (ALL), Transactional leadership (TSL), Transformational Leadership (TFL), and Network governance leadership (NGL). The endogenous are; Organisational climate (OGC) and Employee Innovative Behaviour (EIB). The latent variable Altruistic leadership has four indicators (*ALL1, ALL2, ALL3 and ALL4*). Transactional leadership is measured with six items (TSL*1, TSL2, TSL3, TSL4, TSL5 and TSL6*). Transformational leadership has the highest number of indicators, twelve (*TFL1, TFL2, TFL3, TFL4, TFL5, TFL6, TFL7, TFL8, TFL9, TFL10, TFL11, and TFL12*). Network governance leadership is measured by seven indicators (*NGL1, NGL2, NGL3, NGL4, NGL5, NGL6 and NGL7*).

Innovative work behaviour is measured with nine items (*EIB1, EIB2, EIB3, EIB4, EIB5, EIB6, EIB7, EIB8 and EIB9*). The moderating variable, organisational climate, is measured with six items (*OGC1, OGC2, OGC3, OGC4, OGC5 and OGC6*). There are 9 paths hypotheses in the model (figure 2). The study hypothesises a positive relationship between NGL and EIB, NGL and OGC; ALL and EIB, ALL and OGC; TSL and EIB, TSL and OGC; TFL

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and EIB and TFL and OGC. The study also hypothesises a significant link between OGC and EIB and creating an indirect effect between leadership behaviours and innovative work behaviour through organisational climate.

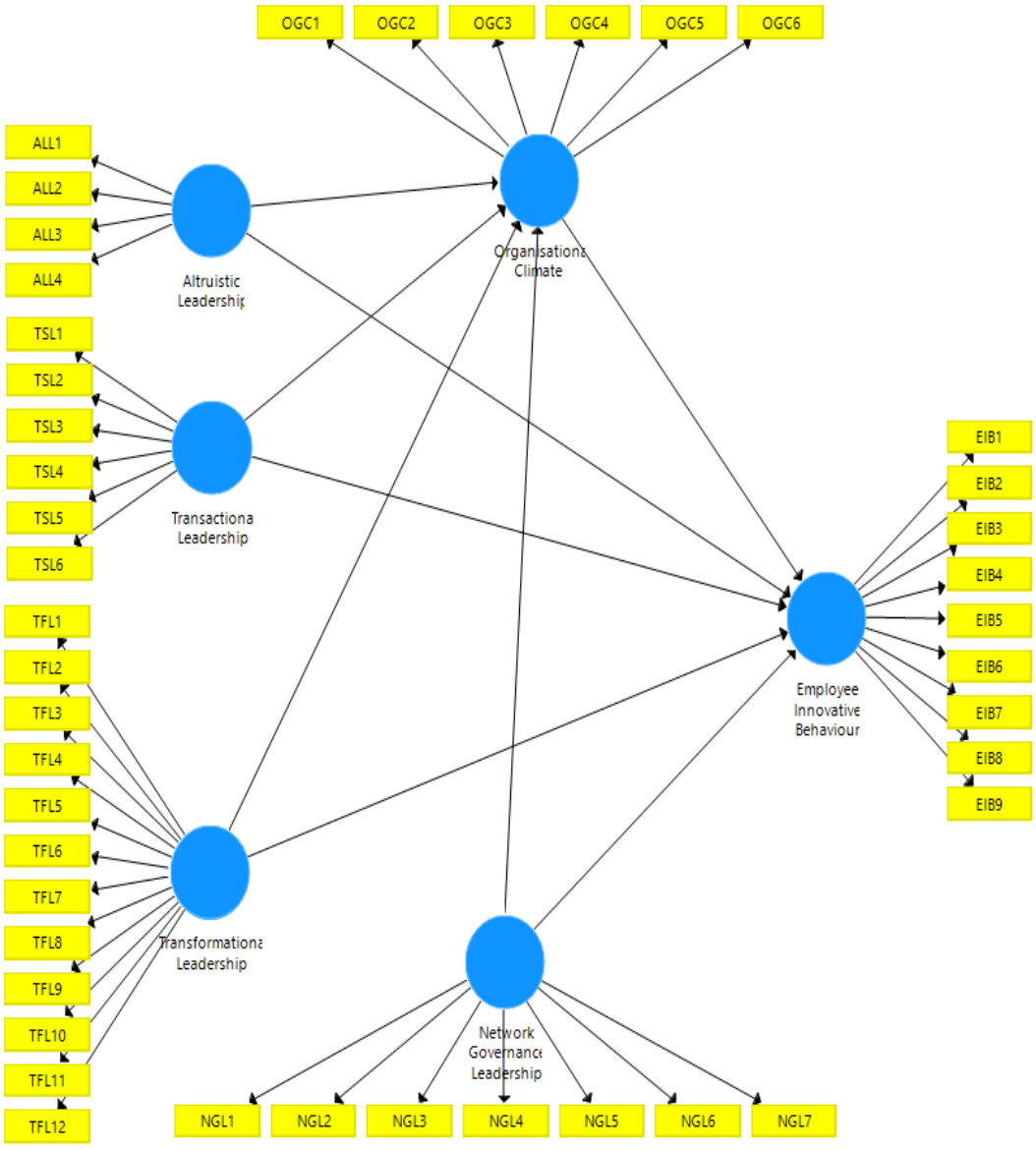

***Figure 2*: Structural model**

Source: Smart PLS (2022)

Common Method Bias

Common method bias can occur due to self-report measures (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Common method bias is a biasing of results that are caused by a common method, such as a single survey (Favero &

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Bullock, 2015). Another possible cause of common method bias is the implicit social desirability associated with answering questions in a questionnaire in a particular way, again causing the indicators to share a certain amount of common variation (Kock & Lynn, 2012). To deal with common method bias, only previously tested scales were used (Alfes, Shantz, Truss, & Soane, 2013).

Common method bias (CMB) can also be tested using Harman's single factor test (Podsakoff & Organ, 1986) and VIF scores (Kock & Lynn, 2012). Podsakoff and Organ (1986) suggested that a single factor would emerge from a factor analysis or one general factor would account for most of the covariance in the independent and criterion variables if CMB was a serious problem. All seven variables were entered into an exploratory factor analysis with a principal axis factoring analysis, extracting eleven factors, with factor 1 accounting for only 30.32 percent of the variance. The results indicated that no single factor emerged and no one general factor accounted for the majority of the covariance among the latent factors. Therefore, CMB was unlikely to be a serious issue in this study.

Ethical consideration

Cooper and Schindler (2008) defined ethics as the standards of behavior that guide moral choices about our behavior and relationships with others. Research ethics emphasizes how we carry out our study, from formulating the research topic to the results discussed morally and responsibly. When conducting research, ethical issues relating to the respondents and the general public is of primary concern of the researcher (Malhotra & Birks, 2007). To avoid the ethical dilemma, the research and ethical rules were precisely followed by the researcher in order not to harm the respondents. The researcher

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gave a commitment to all participants relating to anonymity and confidentiality and did not attribute comments to individuals.

Chapter Summary

This chapter discussed in details and in a systematic manner the methodology used for the study, and this includes the research setting, research design, the study population, sampling and sampling procedures adopted for the study, the instruments used, and procedures followed in the collection and analysis of data. The discussion has provided the basis for the choice of the study's population and the sample of the study. In line with the purpose of the study, the chapter has described in details the instrument to be used for this study and the analysis to be conducted on each objective. The SPSS was employed for descriptive analysis and the Smart PLS was employed for structural equation modelling based on the hypotheses of this study. The chapter provided data on the reliability of the instrument of measurement used in this study and provided for ethical consideration of the researcher. It enshrines that the anonymity of the respondents is protected and the results will be used for purely academic purposes.

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CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

The purpose of the study was to determine leadership behaviours' influence on innovative work behaviour of staff at the distance education at the University of Cape Coast and the role of organisational climate in moderating such a nexus. The previous section provided information in respect of the research methods that were employed in gathering and analysing the data in respect of the specific research objectives. This section provides information in respect of findings and discussions made in respect of the specific research objectives.

Response Rate

In this study, the sample size was two hundred and fourteen (214) staff from the University of Cape Coast. This means that a total of 214 questionnaires were issued from which 198 were filled and returned which represents a response rate of 92.52%. This means 16 (approximately 7.48%) was not returned as it can be seen in Table 2.

Table 2: Response Rate

Questionnaire	Count	Percentage (%)
Returned	198	92.52
Non-Returned	16	7.48
Total	**214**	**100**

Source: Field survey (2022)

The 92.52% return rate was considered to be satisfactory based on Mugenda and Mugenda (2008) who opined that a response rate of 50% is enough for analysis and reporting; a rate of (60%) is good and a response rate

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of (70%) and over is excellent. The high response rate was accredited to the fact that the candidate had contacts in the study area and that facilitated the data collection process. Besides, the candidate personally administered the questionnaires and made a lot of efforts to make many follow-ups through employing other research assistants and the respondents calls to clarify queries with the intention to improve the high response rate.

Demographic Profile of Respondents

This section provides information on the background characteristics of respondents which are summarised in Table 3. In this study, Table 3 presents demographic statistics on the frequencies and percentages of responses on sex, age, academic qualifications and years worked.

Table 3: Demographic characteristics of Respondents

Variable	Options	Frequency	Percentage
Gender	Male	147	74.2%
	Female	51	25.8%
Age	Below 30 years	60	30.3%
	31-40 years	83	41.9%
	41-50 years	40	20.2%
	51-60 years	10	5.1%
	60 and above	5	2.5%
Level of Education	1st Degree	119	60.1%
	Post Graduate	51	25.8%
	Professional	28	14.1%
Years of experience	Below 5 years	90	45.5%
	6-10 years	41	20.7%
	11-15 years	61	30.8%

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	Above 16 years	6	3.0%
Category of Staff	Junior course tutor	103	52.0%
	Senior course tutor	95	48.0%
Total		198	100.0%

Source: Field survey (2023)

As presented in Table 3, the workforce of the staff of the distance education of the University of Cape Coast in Ghana is male dominated. Majority of the respondents 147 (74.2%) were males with 51 (25.8%) of the respondents being females. This implies that a more males are employed in the service which is not surprising considering the gender inequality in terms of higher educational levels' differentials between male and female and subsequent differences in gender employment levels in the country. From the Annual Report of Ghana Statistical Service (2020), it can be noted that generally, labour force participation rate of females remains lower than that of males although females constitute over half of the entire population. In addition, the unemployment rate is estimated to be higher among women than men, whilst at the same time the share of females in wage employment is also lower than that of males.

In terms of the age distribution of the respondents, it was realised that 83 (41.9%) of the respondents are between the age of 31 and 40 years. This gives a good impression that a large number of the respondents are in their prime age and that the university can be considered to have had a lot of potentials in terms of innovative behaviours in the future. Moreover, the result indicates that 60 (30.3%) were below 30 years, implying that in the service, that quite a number of employees are endowed with young and energetic workforce which could be a benefit to the tertiary institutions in the context of development.

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Besides, 40 (20.2%) of the respondents was between ages of 41-50. However, the least age group was those above 51 years representing 15 (7.6%). This could mean that among the staff of the distance education tutors at the University of Cape Coast, very few of them are nearing retirement.

In respect to the level of education, it can be noted that majority of the respondents representing 119 (60.1%) were 1st degree holders', while respondents with postgraduate degree were 51 (25.8%). The third highest educational level group was Professionals representing 28 (14.1%). With regards to how long each respondent has worked in the university, it was found that 90 (45.5%) of the respondents fell below 5 years, while 41 (20.7%) had worked for years between 6 and 10. Those who have worked between 11 and 15 years were 61 (30.8%), whereas 6 (3.0%) respondents have worked for over 16 years. This means that those who have worked longer in the institutions were largely represented.

The Findings of the Main Study Objectives

This section presents results and analysis based on the three key research objectives of this study. The Smart PLS was employed for structural equation modelling based on the hypotheses of this study and was used in analysing the data. The results and analysis are presented chronologically based on the stated objectives of this study.

Assessment of Measurement Models for the Study

This section focusses on the measurement models for the study. The section begins with the assessment of the indicator loadings. The measurement model assessments include indicator loadings, Internal consistency reliability (Composite reliability), Convergent validity (AVE-Average variance extracted)

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and Discriminant validity (Fornell-Lacker and HTMT). A consistent PLS algorithm was run to generate indicators for the assessment of the measurement model. The results are presented in the subsequent tables.

Assessing indicator loadings

Table 4 shows that some indicators have been dropped in comparison to indicators in figure 3. All indicators that loaded below the threshold of 0.7 as recommended by Hair, Risher, Sarstedt and Ringle (2019) were dropped to improve the reliability of the overall model. Out of a total of 44 indicators measuring the various latent variables, 17 indicators were dropped for failure to meet the indicator reliability criteria. Thus, 4 scales measuring the existence of altruistic leadership; 4 scales measuring transactional leadership; 4 scales measuring transformational leadership and 5 scales measuring network governance leadership, all as measures of leadership behaviour among staff of the distance education. In addition, 4 scales measured the moderating variable which is the organisational climate and 6 of the scales measured employee innovative behaviour among staff of the distance education at the University of Cape Coast. The indicator loadings of the items are shown in Table 4.

Table 4: Indicator loadings

	ALL	TSL	TFL	NGL	OGC	EIB
ALL1	0.880					
ALL2	0.944					
ALL3	0.881					
ALL4	0.845					
TSL2		0.804				
TSL3		0.932				

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TSL5	0.790			
TSL6	0.891			
TFL7		0.836		
TFL8		0.717		
TFL10		0.718		
NGL1			0.786	
NGL3			0.831	
NGL4			0.818	
NGL5			0.788	
NGL6			0.810	
OGC1				0.769
OGC3				0.727
OGC4				0.666
OGC6				0.688
EIB1				0.835
EIB2				0.716
EIB3				0.607
EIB5				0.843
EIB7				0.758
EIB8				0.679

Source: Field survey (2023)

From Table 4, four indicators of altruistic leadership loaded above 0.6. The least was (0.845) and the highest (0.944), indicating that the retained indicators are reliable; transactional leadership (0.790 – 0.932); transformational leadership (0.717 – 0.836) and network governance leadership

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(0.786 – 0.831). The minimum indicator loading on organisational climate was (0.666) and the highest (0.769), and finally indicators under employee innovative behaviour loaded from 0.607-0.843.

Assessing internal consistency reliability

In this study, the internal consistency reliability of the constructs was measured using the composite reliability. The composite reliability is a more appropriate measure of internal consistency than the Cronbach's alpha (Rossiter, 2002). The results in Table 5 indicates that all latent variables in this study are reliable, as they all loaded above the 0.7 threshold by (Bagozzi & Yi, 1988). Altruistic leadership had the highest score of composite reliability (0.937) this was followed by transactional leadership (0.916). The results indicate that the model has internal consistency reliability. Table 5 also includes results on convergence validity.

Table 5: Validity and Reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
ALL	0.914	0.969	0.937	0.789
TSL	0.908	0.761	0.916	0.733
TFL	0.860	0.720	0.804	0.511
NGL	0.866	0.866	0.903	0.651
OGC	0.706	0.723	0.805	0.509
EIB	0.836	0.843	0.880	0.554

Source: Field survey (2022)

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Assessing convergent validity

The average variance extracted was used in assessing convergent validity. Convergent validity is the extent to which a measure correlates positively with alternative measures of the same construct (Hair et al., 2017). An AVE value of 0.50 or higher indicates that, on average, the construct explains more than half of the variance of its indicators. Conversely, an AVE of less than 0.50 indicates that, on average, more variance remains in the error of the items than in the variance explained by the construct. The results from Table 5 indicates that all constructs have an AVE of more than 0.5. With the highest being psychological work environment and the least being altruistic leadership. This means that the constructs in this model are able to account for more than half of the variance in their indicators. As part of assessing the measurement model, discriminant validity was also assessed.

Assessing discriminant validity

Establishing discriminant validity implies that a construct is unique and captures phenomena not represented by other constructs in the model (MacKinnon, 2008). In this study, both the Fornell-Lacker criterion and the HTMT were used to establish discriminant validity. The Fornell-Larcker criterion compares the square root of the AVE values with the latent variable correlations (Fornell & Larcker, 1981). Specifically, the square root of each construct's AVE should be greater than its highest correlation with any other construct (Hair et al. 2013). The results from Table 6 indicates that the square root of each variable is well above their correlations with other constructs in the study. This means that each construct is unique and no two constructs capture the same phenomenon.

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Table 6: Fornell-Lacker criterion

	ALL	TSL	TFL	NGL	OGC	EIB
ALL	**0.888**					
TSL	0.076	**0.856**				
TFL	0.131	-0.049	**0.715**			
NGL	0.151	0.058	0.671	**0.807**		
OGC	0.175	-0.092	0.493	0.532	**0.714**	
EIB	0.145	-0.042	0.683	0.523	0.522	**0.744**

Bold values are the square root of each construct's AVE which is higher than their correlation with other constructs.

Source: Field survey (2023)

The Fornell-Larcker criterion performs very poorly, especially when indicator loadings of the constructs under consideration differ only slightly (e.g., all indicator loadings vary between 0.60 and 0.80). When indicator loadings vary more strongly, the Fornell-Larcker criterion's performance in detecting discriminant validity issues improves but it is still rather poor in assessing overall discriminant validity (Voorhees, Brady, Calantone, & Ramirez, 2016). As a remedy, Henseler, Ringle and Sarstedt (2015) propose assessing the Heterotrait Monotrait ratio (HTMT) of the correlations. According to Henseler et al (ibid), a latent construct has discriminant validity when its HTMT ratio is below 0.850. The results presented in Table 7 show HTMT values well below 0.850.

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Table 7: Heterotrait - Monotrait Ratio (HTMT)

	ALL	TSL	TFL	NGL	OGC	EIB
ALL						
TSL	**0.107**					
TFL	0.280	**0.102**				
NGL	0.174	0.135	**0.647**			
OGC	0.257	0.166	0.630	**0.581**		
EIB	0.186	0.094	0.831	0.836	**0.622**	

Source: Field survey (2023)

Assessing the structural model

This section provides an assessment of the hypotheses of this study. Assessment of the structural model entails assessing collinearity among constructs, coefficient of determination, predictive relevance, effect size, path coefficient and its significance. In this study, both the direct and the indirect model was run together based on the recommendation of Nitzl et al. (2016).

Also, the VIF results confirms the absence of common method bias. Based on the criteria proposed by Kock and Lynn (2012), the occurrence of a VIF value greater than 3.3 is proposed as an indication of pathological collinearity, and also as an indication that a model may be contaminated by common method bias. Therefore, if all VIFs resulting from a full collinearity test are equal to or lower than 3.3, the model can be considered free from the problem of vertical or lateral collinearity and common method bias (Kock, 2013).

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Assessing coefficient of determination and predictive relevance

The R^2 is a measure of the model's predictive accuracy. Another way to view R^2 is that it represents the exogenous variable's combined effect on the endogenous variable(s). Hair et al. (2014) advanced that a coefficient of determination (R^2) of 0.25, 0.5 and 0.75 are considered as weak, moderate and substantial respectively for structural models. The author further asserted that a predictive relevance (Q^2) of "0.02, 0.15 and 0.35" and effect size (f^2) of "0.02, 0.15 and 0.35" are seen as "small, medium and large" respectively for structural models.

Objective one

The first objective of this study sought to assess the influence of leadership behaviour on employee innovative behaviour. The path model in Figure 3 shows four direct paths from leadership behaviour to employee innovative behaviour. These paths represent hypothesis 1a to 1d. The direct effect showed that leadership behaviour and organisational climate accounted for 67.2 percent of the variation in employee innovative behaviour.

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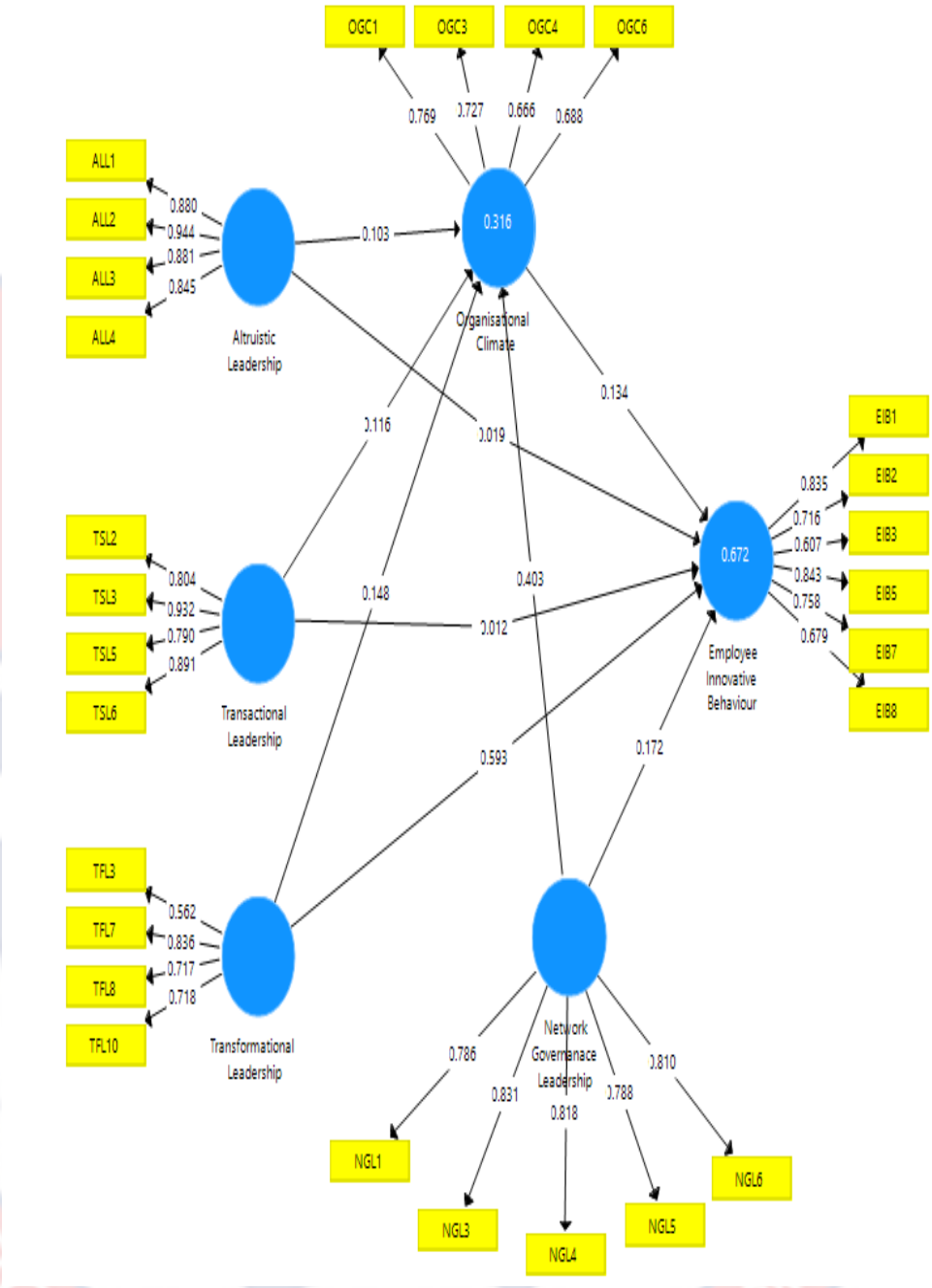

Figure 3: Outer and inner model results

Source: Field survey (2022)

The first hypothesis was formulated to determine whether there is a relationship between altruistic leadership and employee innovative behaviour. The formulated hypothesis thus reads:

H1a: Altruistic leadership has a positive effect on employee innovative behaviour

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Table 8: Structural model results for hypotheses 1a, 1b, 1c, and 1d

	Path	T Statistics	R^2	Adjusted R^2	Q^2	P-Value	f^2
EIB			0.672	0.655	0.342		
ALL	0.019	0.219				0.427	0.001
TSL	0.012	0.175				0.161	0.005
TFL	0.593	5.513				0.000	0.362
NGL	0.172	1.483				0.139	0.028

Source: Field survey (2023)

Referring from Table 8, it can be concluded that leadership behaviour and organizational climate had a large (0.672) coefficient of determination on employees' innovative behaviour, accounting for 67.2 percent of the variation in employee innovative behaviour. With respect to predictive relevance, the results show a moderate predictive relevance of the model on the endogenous variable (0.342). This shows that the exogenous variable does well to predict the endogenous variable. The results of the effect size show that leadership behaviour had a moderate effect size on the endogenous variable (employee innovative behaviour).

Based on the path estimation, the results of the PLS-SEM showed that altruistic leadership behaviour had no significant effect on employees' innovative work behaviour (β = 0.019, p>0.05; Table 8, Figure 3). The result fails to support the hypothesis that altruistic leadership behaviour has a positive effect on innovative behaviour. The results are inversely related to what was hypothesis. It leads to a conclusion that innovative behaviour among staff of the

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distance education at the University of Cape Coast is not necessarily stimulated by prosocial leadership behaviours. The relationship between altruistic leadership and innovative behaviour could be based on the context of the study, most of the studies on altruistic leadership behaviours and employees' innovative behaviour were conducted within hospitals and among health workers (Dominguez Escrig et al, 2016; Sallas-vallina, 2018; Baafi, 2020). However, this current study focused on teaching staff. The context could account for the insignificant effect.

The second hypothesis was formulated to determine whether there is a relationship between psychological work environment and employees' engagement.

H1b: Transactional leadership has a positive effect on employee innovative behaviour

Based on the path estimation, the results of the PLS-SEM showed that transactional leadership had no significant effect on employees' innovative behaviour ($\beta = 0.012$, $p>0.05$; Table 8, Figure 3). The result fails to support the hypothesis that transactional leadership has a positive effect on employee innovative behaviour. The results are inversely related to what was hypothesised. It leads to a conclusion that employee innovative behaviour is not necessarily stimulated by the transaction to which may have been perceived as the value for services among staff of the distance education at the University of Cape Coast.

This current study is supported by the findings of Lewis et al (2018), and Rank et al (2008), who found no association and a negative association respectively between supervisor's transactional behaviours and employees'

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innovativeness. However, Golla and Johnson (2013) concluded that transactional leadership is suitable when the goal is to instil a culture of innovation. On the contrary, Kahai, Sosik and Avolio (2003) posited that, the transactional leaders can put together probability for their employees to fulfil goals and to extrinsically motivate employees to contribute creativity. Creativity leads to innovation and that is why with the exchange of reward, the creative employee is stimulated and motivated to enhance the innovative behaviour in the workplace. The positive effect of transactional leadership behaviour on employee's innovative behaviour could be due to the focus of transactional leadership on compensating for efforts and offering rewards for performance. If the public sector worker exerts more, he/she will be compensated for it. Therefore, it can be inferred that transactional leadership provides that impetus do more, bring new ideas, seeks support for implementing innovative solutions by clarifying tasks and offering compensation.

The third hypothesis of this study sought to test the effect of transformational leadership on employee innovative behaviour. The hypothesis was stated that;

H1c: Transformational leadership behaviour has a positive effect on employee innovative behaviour

The study estimated the path between transformational leadership behaviour and employees' innovative behaviour. The results as shown in Figure 3 and Table 8, indicated a path coefficient of 0.593 and a p-value of 0.000. The path coefficient was in the same direction as hypothesized, hence the hypothesis that transformational leadership was related to employees' innovative behaviour is supported. The findings lead to the conclusion that a people-focused

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leadership, based on influencing and effecting revolutionary change within the educational sector, especially, among distance education teaching and learning is key to stimulate the innovative behaviour of employees.

This conclusion is in line with the study of Lewis et al (2018) that concluded that transformational leadership is key for innovation within the educational sector. A similar conclusion was drawn by Li et al (2019) who also found a strong positive association between transformational leadership and employee's innovative work behaviour. Also supported by the findings of Kim and Yoon (2015) who concluded that, the degree to which an employee perceives senior managers' transformational leadership is positively related to the degree to which the employee perceives a culture of innovation. It, however, contradicts the findings of Naqvi et al (2017) who found no association between transformational leadership and employees' innovative work behaviour. The tenets of transforming, influencing and motivating within the public sector are needed to support innovativeness within the educational sector in Ghana.

The final hypothesis of the first objective sought to assess the influence of network governance leadership on employees' innovative behaviour. Thus, the hypothesis was stated as follow;

H1d: Network governance leadership has a positive effect on employee innovative behaviour

Based on the path estimation, the results of the PLS-SEM showed network governance leadership had no significant effect on employees' innovative work behaviour ($\beta = 0.172$, $p>0.05$; Table 8, Figure 3). Based on the path estimation, the study failed to support the hypothesis that network governance leadership is related to employees' innovative behaviour. Although,

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studies had found that, the role of network governance is key for innovation (Owusu & Appiah, 2014; Ricard et al, 2017), this finding states otherwise. The findings is supported by the study of Namara, et al (2015) who also found no association between network governance and staff capacity to be innovative. This study adds that, when public sector leaders foster networking and collaborations, it exposes staff to new knowledge and ideas, improving the capacity to generate innovative solutions for sector problems.

The findings, however, contradict with the findings of Lewis et al (2018), who concluded that network governance leadership had significant positive effect on employee's innovative behaviour. Speek (2017) also added that network governance is key to solve problems with the limited resource set available. In addition, Klijn and Koppenjan (2016) opine that multi-actor arrangements are seen to be more effective than hierarchy or markets in tackling complex societal problems−so-called wicked issues.

A summary of the decisions with respect to objective one is presented in Table 9.

Table 9: Summary of objective 1

Hypothesis	Beta	t-value	P-value	Decision
ALL-EIB	0.019	0.219	0.427	Not supported
TSL-EIB	0.012	0.175	0.161	Not supported
TFL-EIB	0.593	5.513	0.000	**Supported**
NGL-EIB	0.172	1.483	0.139	Not supported

Source: Field survey (2023)

Three hypotheses stated as part of the first objective was not supported because their p-value was greater than 0.05. The results, however, show that,

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transformational leadership behaviour had a significant effect on employee innovative behaviour with the magnitude of its path coefficient (0.593) and a p-value of 0.000.

Objective two

The second objective sought to assess the influence of organisational climate on employee innovative behaviour. The objective was tested as part of the entire model, representing the direct path from organisational climate to employee innovative behaviour. Thus, the study hypothesised;

H2: Organisational climate has a positive effect on employee innovative behaviour

Table 10: Structural model results for hypothesis two

	Path	T Statistics	R^2	Adjusted R^2	Q^2	P-Value	f^2
EIB			0.316	0.287	0.109		
OGC	0.134	7.325				0.002	0.281

Source: Field survey (2022)

Based on the path estimation, the results of the PLS-SEM showed that organisational climate had a significant positive effect of employee innovative behaviour ($\beta = 0.134$, $p<0.05$; Table 10, Figure 3). The results show that the organisational climate is a key determinant to facilitate employees' innovative behaviour at the workplace. Comparatively, Organisational climates' effect size of (0.281) shows a moderate effect on employee innovative behaviour. The results also show that organisational climate has a medium and a positive effect (0.134) on employee innovative behaviour based on the criteria of Hair et al. (2019). Therefore, based on the direction and the significance of the path between organisational climate and employee innovative behaviour, the study

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supports the assertion that organisational climate has a significant effect on the decisions to employees to engage in the activities within the organization towards ogranisational survival and growth.

Because the p-value is <0.05, the study will therefore side with the assertion of the research hypothesis that; organisational climate has a significant and a positive effect on employee innovative behaviour.

Objective three

The third objective of this study sought to examine the moderating role of organisational climate on leadership behaviour and employee innovative behaviour nexus. Given that leadership behaviour had a significant effect on employees' innovative behaviour, and organisational climate also had a significant and positive effect on employee innovative behaviour, a moderation test was possible. As Nitzl (2016) had indicated, a significant indirect effect is the only prerequisite for establishing a moderation effect. This objective formed the basis for testing hypothesis 3a to 3d. According to the procedure outlined by Hair et al (2019), the moderating effect of organisational climate on the nexus between leadership behaviour and employee innovative behaviour was examined through bootstrapping.

The results of the total effect are presented in Table 11. It indicates the significance of every path hypothesised in the model.

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Table 11: Total effect

	Path	T Statistics (|O/STDEV|)	P-Values	f^2
ALL -> EIB	0.019	0.219	0.427	0.001
ALL -> OGC	0.103	1.088	0.277	0.081
TSL -> EIB	0.012	0.175	0.161	0.005
TSL -> OGC	0.116	4.901	0.003	0.107
TFL -> EIB	0.593	5.513	0.000	0.362
TFL -> OGC	0.148	3.226	0.000	0.011
NGL -> EIB	0.172	0.816	0.415	0.028
NGL -> OGC	0.403	2.274	0.023	0.081
OGC -> EIB	0.134	7.325	0.002	0.281

Source: Field survey (2023)

The results of the total effect are presented in Table 11. It indicates the significance of every path hypothesised in the model. With respect to transactional leadership, the results indicate that transactional leadership has a positive influence on employees' innovative work behaviour, however, the relationship is not statistically significant (p= 0.161). Whiles there was found a positive significant association between transactional leadership behaviour and organisational climate (p=0.003). Transactional leadership had a small effect size on both innovative behaviour and organisational climate. However, altruistic leadership had no influence on both innovative work behaviour (p= 0.427) and organisational climate (p=0.277), this shows that the variable (ALL) is not fit for moderation analysis.

The results from Table 11 indicate that transformational leadership has a positive influence on both employee innovative behaviour (p= 0.000) and

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organisational climate (p= 0.000). Transformational leadership, therefore, can have a direct influence on both employees' innovative behaviour and organisational climate. In this study it has been concluded that an organisational climate has a significant and positive influence on employees' innovative behaviour at the workplace (p= 0.002). Having already established a positive relationship between network governance leadership (NGL) and employee innovative behaviour in its positive directional path (β = 0.172), the relationship between network governance leadership and employee innovative behaviour is not significant (p=0.415). However, the relationship between network governance leadership and organisational climate was deemed to have a positive directional path and at a significant level (β = 0.403, p=0.023). It can therefore be said that, organisational climate is key for establishing a significant effect between network governance leadership and employee innovative behaviour.

Table 12 shows the coefficient of determination and predictive relevance of the model on the two endogenous variables. The results show that the entire model accounts for 67.2% of the variation in the employee innovative behaviour. According to Chin (1998), an R^2 value of 67.2% indicates a large variation, which is sufficient (Hair et al, 2019). Also, with respect to the moderating variable, the results show that 31.6% of the variation in employee innovative behaviour is accounted for by the perceived organisational climate within the organisation. The Stone-Geisser's Q^2 statistic (Stone, 1974) was used to assess the predictive relevance of the model. The model shows a predictive relevance of 0.342 for employee innovative behaviour and 0.109 for organisational climate which indicate medium predictive relevance according to Hair et al (2019).

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Table 12: Coefficient of Determination (R^2) and predictive relevance

	R Square	R Square Adjusted	Q^2 (=1-SSE/SSO)
EIB	0.672	0.655	0.342
OGC	0.316	0.287	0.109

Source: Field survey (2023)

Based on the positive significant effect of the moderating variable (Organisational climate) on employee innovative behaviour, and the positive effect of some dimensions of leadership behaviour on organisational climate, the specific indirect effect was assessed to determine the nature and type of moderating effect as proposed by (Niltz et al, 2016 & Hair et al, 2017). The moderation analysis was tested between the dimensions of leadership behaviour and employees' innovative behaviour. This led to testing 4 hypotheses with respect to the indirect effect. The results of the specific indirect effect are presented in Table 13.

Table 13: Structural model results for hypotheses 3a, 3b, 3c and 4d

	T Statistics (|O/STDEV|)	P- Value	Decision
ALL-> OGC->EIB	3.017	0.001	Not supported
TSL-> OGC->EIB	3.783	0.037	**Supported**
TFL->OGC->EIB	2.014	0.000	**Supported**
NGL->OGC->EIB	3.734	0.002	**Supported**

Source: Field survey (2023)

The first step of testing the effect of the exogenous variable on the moderating variable showed that transformational leadership, transactional leadership and network leadership dimensions of leadership behaviour had a relationship with organisational climate. The results from Table 13 shows that

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organisational climate moderates the relationship between transactional leadership and employee innovative behaviour. Based on the criteria of Carrión et al (2017), it can be concluded that a full moderation occurs between transactional leadership and employees' innovative behaviour through organisational climate.

The results show that transactional leadership, a dimension of leadership behaviour, can only influence employee innovative behaviour by ensuring that, there is a conducive working environment at the organisation. The results also show that the path network governance-organisational climate-employee innovative behaviour is significant. This leads to the conclusion that organisational climate moderates the relationship between network governance leadership and employee innovative behaviour. Based on Carrión et al (2017), the nature of the moderation of organisational climate is a complimentary partial moderation. This is because both the direct and indirect effect is statistically significant and are both positive.

Chapter Summary

This chapter began with a description of the respondents to the study. The chapter began with an assessment of the influence of leadership behaviour on employee innovative behaviour. The second objective assessed the the influence of organisational climate on employee innovative behaviour and finally, examine the moderating role of organisational climate on leadership behaviour and employee employee innovative nexus. The study showed that there was a positive relationship between leadership behaviour and organisational climate. The chapter concluded with assessment of the moderating role of organisational climate on the relationship between

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leadership behaviour and employee innovative behaviour. The next chapter presents the conclusions and recommendations of the study.

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CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The current chapter is the final chapter for this study. As a concluding chapter, it will capture information pertaining to a summary of the study, conclusions on the significant findings of the study, recommendations to the findings, limitations of the study and suggestions for future research. The presentations of the conclusions and the recommendations will be in line with the three specific objectives discussed in chapter four.

Summary of Findings

The purpose of the study is to determine leadership behaviours' influence on innovative work behaviour of staff at the distance education at the University of Cape Coast and the role of organisational climate in moderating such a nexus. Specifically, the study sought to; assess the influence of dimensions of leadership behaviour on innovative work behaviour of staff of distance education at the University of Cape Coast; assess the effect of organisational climate on innovative work behaviour of staff of distance education at the University of Cape Coast; and; to examine the moderating role of organisational climate on leadership behaviour and innovative work behaviour nexus among staff of distance education at the University of Cape Coast..

To help achieve these objectives, three supporting research questions were formulated geared towards answering the objectives accordingly. The study employed the quantitative research approach and the causal research design due to the purpose of the study. The structured questionnaire, a primary

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data collection instrument, was used to gather data from all the 214 members (staff) in the target population. However, 198 out of the total questionnaires (214) administered were reliable for the study and as such, obtained a response rate of (92.52%). The data obtained were processed using Statistical Package for Social Sciences (SPSS) version 26 and analysed using descriptive tools such as frequencies, percentages, means and standard deviations. The results were presented in tables and discussed in Chapter four. The next section presents the summary of the study's key findings.

The demographic information on respondents was analysed using descriptive statistics (Frequencies and percentages). The three main objectives of this study were analysed using partial least squares structural equation modelling techniques with the aid of the SMART PLS version 3.0, whiles the descriptive were processed with the SPSS Version 26. An alpha level of 0.05 was used for all tests of significance. Four major hypotheses were developed for the first objective, one for the second objective and four for the third objective. The major findings as they related to the specific objectives and hypotheses of the study have been summarized below.

Key Findings of the Study

With respect to the objectives of the study, these were the outcomes of the study.

The results showed that transformational leadership behaviour had a positive significant influence on employees' innovative behaviour. However altruistic, transactional and network governance leadership behaviours were found not to influence employees' innovative behaviour among staff at the distance education of the University of Cape Coast. The results also showed that

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transformational leadership had the largest significant influence on employee innovative behaviour among the leadership behaviours.

The second objective of this study examined the effect of organisational climate on employees' innovative behaviour. The results showed that, it was found that organisational climate had a positive significant influence on employees' innovative behaviour among distance education staff at the University of Cape Coast. The findings of this study show that organisational climate had a larger effect size on employee innovative behaviour.

Objective three examined the the moderating effect of organisational climate on the relationship between leadership behaviour and employees' innovative behaviour. The results showed that organisational climate mediated the relationship between three leadership behaviours (transactional, transformational and network governance behaviours) and employees' innovative behaviour. However, it had no significant indirect effect on the nexus between altruistic leadership behaviour and employee innovative behaviour.

Conclusions

The purpose of the study is to determine leadership behaviours' influence on innovative work behaviour of staff at the distance education at the University of Cape Coast and the role of organisational climate in moderating such a nexus. Three specific objectives were therefore set to help investigate the issue. These objectives have been achieved to a large extent. The conclusions are drawn based on the findings of the study;

With respect to the first objective, the study concludes that transformational leadership is important for innovation in the context of the staff of the distance education at the University of Cape Coast. Leadership

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behaviours based on influencing, motivating and effecting revolutionary change is key in stimulating employee innovative behaviour. Through the creation of a shared vision and inspiring employees, leaders spur innovative behaviours among the staff of distance education at the University of Cape Coast.

With regards to the second research objective, the study concludes that organisational climate within the institutions created for staff of distance education has a strong influence on employees' innovative work behaviour. Drawing from the social exchange theory, the study concludes that the supply of resource for innovation will positively contribute to employee's innovative behaviour, based on reciprocity. Resource supply in terms of people, time and money are key for promoting innovations among staff.

With respect to the final objective, this study concludes that altruistic leadership behaviours can only influence innovation by creating an innovation supportive climate among staff of distance education. A leadership behaviour centred on helping people and on prosocial behaviours may not have a direct effect on employees' ability to innovate if the right resources are not provided. The findings also lead to the conclusion that organisational climate moderates the relationship between transactional leadership and employees' innovative behaviour. It adds that the effect of transactional leadership on employees' innovative behaviour is complemented if an organisational climate that supports innovation is created.

Recommendations

The following recommendations are based on the conclusions drawn from this study;

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In the context of this study and based on the above discussions, it is fair to say that leadership behaviour is crucial in improving the rate of innovation among staff. Leadership training for management and supervisors of the distance education unit must be encouraged. The focus should be on developing leadership skills for leading multi actor networks, developing transformational and transactional skills. Training must focus on encouraging altruism among leaders and also encouraging network governance leadership.

It was also recommended that, the management of the distance education of the University of Cape Coast, should undertake awareness creation and sensitisation of leaders among the staff to appreciate leadership as an influence relationship and to employ the right mix of leadership behaviours within their respective context to improve the climate among the staff and spur innovative behaviours among the staff. Leadership should not be seen just as a position.

It is recommended that leadership of the distance education should put mechanisms in place which allow staff to experience an innovation supportive climate. These include; making resources available, including the time required to continuously engage in innovation activities; providing financial resources specifically for generating and implementing innovative ideas and; allowing employees to take risks in the pursuit of innovation and to tolerate and learn from failures.

Suggestions for Further Research

Although the study provides useful insight into leadership behaviours and employee innovative behaviour and organizational climate, the results cannot be generalised among staff in all tertiary institutions. This is because, the

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study relied on the opinions and suggestions of staff of the distance education at the University of Cape Coast. The study therefore recommends that, further research should focus on broader based research by including other distance education staff of other universities in Ghana as a whole.

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APPENDICE: QUESTIONNAIRE

UNIVERSITY OF CAPE COAST

SCHOOL OF BUSINESS

DEPARTMENT OF MANAGEMENT

Dear Respondent,

I am a student of University of Cape Coast, offering Master of Commerce (Management) programme at the School of Business, Department of Management. This questionnaire is designed to ascertain information for my research work on the topic: "**LEADERSHIP BEHAVIOURS AND EMPLOYEE INNOVATIVE BEHAVIOUR OF STAFF OF DISTANCE EDUCATION AT THE UNIVERSITY OF CAPE COAST: THE ROLE OF ORGANISATIONAL CLIMATE**". This research is in partial fulfilment of the requirement for the award of a Master of Commerce Degree in Management at the University of Cape Coast.

All the answers you provide will be treated with the utmost confidentiality and for academic purpose only. Please feel free to answer the questions as candid as possible.

Thank you

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QUESTIONNAIRE

SECTION A

SOCIO-DEMOGRAPHIC DATA OF RESPONDENTS

To answer a question, either tick [√] or write short notes on the space provided where necessary.

1. **Gender**:
   a. Male [ ]
   b. Female [ ]

2. Age:
   a. Below 30 years [ ]
   b. 31-40 years [ ]
   c. 41-50 years [ ]
   d. 51 -60 years [ ]
   e. Above 60 years [ ]

3. Level of Education:
   a. 1st Degree [ ]
   b. Post Graduate [ ]
   c. Professional Qualification [ ]

4. Employees' Years of Work in the Organisation
   a. 1-5 years [ ]
   b. 6-10 years [ ]
   c. 11-15years [ ]
   d. 16 years and above [ ]

5**. Category of staff**
   a. Junior course tutor [ ]
   b. Senior course tutor [ ]

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SECTION B: LEADERSHIP BEHAVIOUR

In a 7-point Likert scale, where 1 – Least level of Agreement and 7 – Highest level of Agreement, rate the following statements on leadership behaviour of your supervisor. Please indicate by [√] the extent to which you agree to the statements below;

Transformational Leadership Style							
TFL1: I have complete faith in my supervisor	1	2	3	4	5	6	7
TFL2: I am proud to be associated with my supervisor	1	2	3	4	5	6	7
TFL3: Makes others feel good to be around him/her	1	2	3	4	5	6	7
TFL4: Expresses in a few words what we could and should do	1	2	3	4	5	6	7
TFL5: Provides appealing images about what we can do	1	2	3	4	5	6	7
TFL6: Helps me find meaning in my work	1	2	3	4	5	6	7
TFL7: Enables others to think about old problems in new ways	1	2	3	4	5	6	7
TFL8: Provides others with new ways of looking at puzzling things.	1	2	3	4	5	6	7
TFL9: Gets others to rethink ideas that they had never questioned.	1	2	3	4	5	6	7
TFL10: Helps others develop themselves	1	2	3	4	5	6	7
TFL11: Let others know how he /she thinks we are doing	1	2	3	4	5	6	7
TFL12: Gives personal attention to others who seem rejected.	1	2	3	4	5	6	7
Transactional Leadership Style							
TSL1: Tells others what to do if they want to be rewarded for work.	1	2	3	4	5	6	7
TSL2: Provides recognition/rewards when others reach their goals.	1	2	3	4	5	6	7
TSL3: Calls attention to what others can get for what they accomplish.	1	2	3	4	5	6	7
TSL4: is always satisfied when others meet agreed-upon standards	1	2	3	4	5	6	7
TSL5: As long as things are working, my supervisor does not try to change anything	1	2	3	4	5	6	7

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TSL6: Tells us the standards we have to know to carry out our work	1	2	3	4	5	6	7
Altruistic Leadership Style							
ALL1: Puts the interest of the people above his own	1	2	3	4	5	6	7
ALL2: Does all he can to help people	1	2	3	4	5	6	7
ALL3: Sacrifice his own interest to meet the needs of others	1	2	3	4	5	6	7
ALL4: Goes beyond the call of duty to help others	1	2	3	4	5	6	7
Network Governance Leadership Style							
NGL1: Encourages us to maintain contacts with other organizations	1	2	3	4	5	6	7
NGL2: Encourages me and my colleagues to develop new contacts	1	2	3	4	5	6	7
NGL3: Stimulates me and my colleagues to regularly work together with people from our networks	1	2	3	4	5	6	7
NGL4: Stimulates me and my colleagues to develop many contacts with people outside our own department	1	2	3	4	5	6	7
NGL5: Spends a lot of time maintaining his / her contacts	1	2	3	4	5	6	7
NGL6: Stimulates me and my colleagues to introduce others to contacts of our own networks	1	2	3	4	5	6	7
NGL7: Encourages me and my colleagues to be a linking pin' between different organizations	1	2	3	4	5	6	7

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SECTION C: ORGANISATIONAL CLIMATE

Please rate the following with respect to the climate at the distance education of UCC by ticking (√) the most appropriate column: Where 1 represents the lowest agreement whilst 7 represents the highest agreement.

Organisational Climate							
OGC1: People in this organization attempt to build themselves up by tearing others down.	1	2	3	4	5	6	7
OGC2: There has always been an influential group in this department that no one ever crosses.	1	2	3	4	5	6	7
OGC3: Employees are encouraged to speak out frankly even when they are critical of well-established ideas.	1	2	3	4	5	6	7
OGC4: There is no place for yes-men around here; good ideas are desired even if it means disagreeing with superiors.	1	2	3	4	5	6	7
OGC5: Agreeing with powerful others is the best alternative in this organization.	1	2	3	4	5	6	7
OGC6: It is best not to rock the boat in this organization.	1	2	3	4	5	6	7

SECTION D: EMPLOYEE INNOVATIVE BEHAVIOUR

Please rate your level of agreement (from 1 to 7) with the following statement, Where, 1 represents the lowest agreement whilst 7 represents the highest agreement.

Employee Innovative Behaviour							
EIB1: I create new ideas for difficult issues	1	2	3	4	5	6	7
EIB2: I search out new technologies, processes, working methods, techniques, and ideas.	1	2	3	4	5	6	7
EIB3: I generate original solutions for problems	1	2	3	4	5	6	7
EIB4: I mobilize support for innovative ideas	1	2	3	4	5	6	7

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EIB5: I introduce ideas into the work environment in a systematic way	1	2	3	4	5	6	7
EIB6: I evaluate the utility (benefits) of innovative idea	1	2	3	4	5	6	7
EIB7: I transform innovative ideas into useful applications.	1	2	3	4	5	6	7
EIB8: I make organisational members enthusiastic for innovative ideas	1	2	3	4	5	6	7
EIB9: I try to acquire approval for innovative ideas.	1	2	3	4	5	6	7

THANK YOU FOR PARTICIPATING

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APPENDICE B: SAMPLE SIZE DETERMINATION TABLE

Krejcie and Morgan Sample Determination Table

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: N is Population Size; S is Sample Size *Source: Krejcie & Morgan, 1970*

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