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Master Dissertation

The Effect of Transformational Leadership on Innovative Work Behavior: Examining Mediation Role of Knowledge Sharing, Motivation to Learn, and High-Performance Work System

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APPROVAL

Dissertation Approval

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I acknowledge that the source of the scientific content of this dissertation has been determined and that it is not provided for any other degree, and that it reflects the opinions of the researcher which are not necessarily adopted by the donor.

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DEDICATION

To begin with, I would like to thank Allah for blessing me with determination to achieve my goals. As well as this, I would like to express my gratitude to Dr. Saleh Al-Sinawi, my honorable supervisor. My sincere appreciation goes out to him for his dedication, patience, and generosity.

To my beloved family, I extend my sincere gratitude and thanks. As well as my dear parents, I want to thank them for their understanding and support of my dream. Finally, I thank my colleagues and friends for their gracious support and encouragement.

ABSTRACT

Higher education institutions (HEIs) perceive continuous development and improvement as a way to sustain themselves in the modern, dynamic environment. The most crucial requirements for HEIs to prosper and endure with a competitive advantage are perceived to be leadership and innovation. This study aims to investigate the influence of transformational leadership on innovative work behavior empirically. Precisely, it intends to examine the mediation role of knowledge sharing, motivation to learn, and high-performance work systems on the linkage between transformational leadership and innovative work behavior. By investigating employee perceptions through administrated questionnaires, a total of 283 employees of HEIs participated in a questionnaire. A Pearson correlation and multiple regression analysis were employed to examine the research hypothesis. Sobel test was employed to investigate mediating impact of the mediation factors. According to the research findings, transformational leadership directly and positively influences employees' innovative work behavior. A high-performance work system, knowledge sharing, and motivation to learn are all essential to reinforcing the link between transformational leadership and innovative performance. Theoretically, this study contributed to the existing understanding of leadership and innovation in education by helping scholars, academics, and practitioners identify the factors that determine and influence employees' innovative work behavior. In addition, it expanded existing knowledge and research in innovation, HRM, and leadership. From practical implications, this research can offer policymakers and practitioners crucial theoretical understanding and valuable insights that could enable leaders to support and encourage employees' innovative work behaviors in Omani HEIs, accordingly improves HEI performance.

Keywords: Leadership, Innovation, Innovative Work Behavior, Transformational Leadership, Knowledge Sharing, Human Resources Management Practices, High-Performance Work System, Motivation to Learn

الملخص

يعتبر التطوير والتحسين وسيلة مهمة للحفاظ على مؤسسات التعليم العالي في كلا البيئتين الديناميكية والحديثة. و من هذا المنطلق يُنظر إلى القيادة والإبداع على أنهما من ضمن المتطلبات الأكثر أهمية لمؤسسات التعليم العالي للحصول والاحتفاظ بميزة تنافسية تميزها عن باقي القطاعات الاخرى. يهدف هذا البحث إلى معرفة تأثير القيادة التحويلية على سلوك العمل الإبداعي. كذلك يسلط الضوء على دور مشاركة المعرفة، والتشجيع على التعلم، ونظام العمل عالي الأداء كعوامل وسيطة تؤثر على العلاقة بين القيادة التحويلية وسلوك العمل الإبداعي من وجهة نظر الموظفين في مؤسسات التعليم العالي. الأداة المستخدمة في هذه الدراسة كانت الاستبانة، والتي شارك فيها ما يقارب مجموع من 283 موظفًا من مؤسسات التعليم العالي. تم استخدام تحليل ارتباط بيرسون وتحليل الانحدار المتعدد لاختبار فرضيات البحث. كذلك تم استخدام اختبار سوبل لاختبار التأثير الوسيط للعوامل الوسيطة. وفقًا لنتائج البحث ، فإن القيادة التحويلية لها تأثير مباشر وإيجابي على سلوك العمل الإبداعي للموظفين. يعد نظام العمل عالي الأداء ومشاركة المعرفة والتشجيع على التعلم جميعها ضرورية لتعزيز الصلة بين القيادة التحويلية وسلوك العمل الإبداعي.

ساهم هذا البحث في الفهم الحالي للقيادة والابداع في التعليم من خلال مساعدة العلماء والأكاديميين ومستخدمين هذه المفاهيم في تحديد العوامل التي تحدد سلوك العمل الإبداعي للموظفين و الجوانب التي تؤثر عليها. بالإضافة إلى ذلك ، ساهمت المعرفة والأبحاث الحالية في مجال الإبداع و الابتكار وإدارة الموارد البشرية والقيادة في الجانب التطبيقي الى تقديم المساعدة الاساسية لواضعي السياسات والممارسين للمعرفة النظرية والرؤى العملية التي يمكن أن تمكن القادة من دعم وتشجيع سلوكيات العمل الابداعية للموظفين في مؤسسات التعليم العالي العمانية ، مما يؤدي بدوره إلى تحسين أداء مؤسسات التعليم العالي ككل.

الكلمات المفتاحية: القيادة، الإبداع، سلوك العمل الإبداعي، القيادة التحويلية، مشاركة المعرفة، ممارسات إدارة الموارد البشرية، أنظمة العمل عالية الإداء، التشجيع على التعلم

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LIST OF ABBREVIATION

HEIs	**Higher Education Institutions**
HRM	Human Resources Management
SME	Small and Medium Enterprises
GCC	Gulf Cooperation Council
CSR	Corporate Social Responsibility
RBV	Resource Based View
KBV	Knowledge Based View
TL	Transformational Leadership
MTL	Motivation To Learn
KS	Knowledge Sharing
HPWS	High-Performance Work System
SPSS	Statistical Package for Social Science

CHAPTER ONE

INTRODUCTION

1.1 Background

As a result of globalization and the different technological, economic, and political challenges facing Higher Education Institutions (HEIs), HEIs strive for survival and continually attempt to be competitive(Azziz et al., 2019; Nauffal & Nader, 2021; Ogunmokun et al., 2021). Meanwhile, HEIs in today's dynamic environment would need continuous innovation improvement to succeed (Jackson, 2019; Prelipcean, 2016). The factors affecting innovation in higher education institutions have always posed an important question in organizational studies(Meek et al., 2009). Many scholars agreed that leadership plays a crucial role in resolving paradoxes of innovation and is useful for boosting innovation. Appropriate leadership style can drive organizational innovation by encouraging people and creating an environment that encourages the growth of their creative and innovative skills, leading to increased innovation capabilities and superior competitive advantages for the organization(Alblooshi et al., 2020; Xie et al., 2018; Zuraik & Kelly, 2018). Particularly, transformational leadership significantly influences innovation within organization(Alrowwad & Abualoush, 2020; Naguib & Naem, 2018). In detail, transformational leadership style echoes leadership behaviors and characteristics that endorse organizational creativity and innovation in today's complex and innovative HEIs environment(S. B. Choi et al., 2016b).

However, in today's market, when organizations must be innovative to gain more tremendous advantages that allow them to improve their outcomes, the link between transformational leadership and organizational performance is even more vital(Donate & de Pablo, 2015). In this case, managers must persuade their staff to participate in innovation processes and acquire new knowledge, allowing organizations to introduce new products onto the market (Le & Lei, 2019). Hence, transformational leadership with human resource (HR) practices improves learning competencies and innovation (Fındıklı et al., 2015). In particular, a high-performance work system is one of the most significant HR practices that improve the skills, motivation, and morale of an organization (Jyoti & Rani, 2017). Furthermore, knowledge is considered catalysts of innovation(Kianto et al., 2017; Wikhamn, 2019). Hence, sharing and exchanging knowledge among employees will also improve innovative

behavior(Fındıklı et al., 2015; Le & Lei, 2019). Besides, a study indicates that knowledge and skills will help people generate new ideas. As a result, it was argued that motivation to learn allows employees to devote more time and effort to acquiring new skills and knowledge, hence improving innovative behavior and expanding cognitive pathways(Afsar & Umrani, 2020; Dong et al., 2017). Thus, it confirmed that employees' motivation to learn affects their decision to engage or not engage in innovative behaviors(Yu et al., 2018).

1.2 Problem Statement

HEIs globally face challenges, including increased globalization pressure, scarcity of funding, and the fluctuation in demand and supply for higher education, and thereby HEIs strive for sustainability and chase strategic competitive advantages through creativity and innovation(Kianto et al., 2017). As innovation is indispensable to the well-being for the survival of HEIs, previous research has established several factors, including leadership styles and knowledge sharing, that influence innovation in HEIs(Elrehail et al., 2018). Accordingly, transformational leadership is one of the significant factors that assist in creating an atmosphere of trust that encourages innovation in the organization(Afsar & Masood, 2018).

Today, no organization can survive without continuous innovation. Organizations must empower their employees to be innovative(S. Park & Jo, 2018). It asserts that leaders directly or indirectly support innovative behavior at all levels of the organization(Purwanto et al., 2021). In particular, transformational leaders usually inspire their employees by encouraging them(Bednall et al., 2018). Consequently, Masood & Afsar (2017) reported that transformational leaders inspire, motivate, and personalize considerations to create a good and supportive workplace. Then, the employees become more likely to generate and implement innovative ideas when they work in an environment that encourages them.

Due to individuals are the ones who come up with and implement new ideas, good human resource management (HRM) is essential. It will also be determined by knowledge, as all innovation entails creating new knowledge as both an input and an output(Donate et al., 2016; Donate & Guadamillas, 2015). Consequently, HRM practices and knowledge are critical drivers of innovation in organizations(Kianto et al., 2017). Because the leader influences indivdual behavior, previous study has investigated the relationship between leadership, HRM practices, and their function in promoting innovative work behavior. According to the scholars, more mediators and moderators' factors in the relationship as mentioned above needs to be studied (Afsar & Umrani, 2019; Matej et al., 2020).

Based on the above motivation and on best researcher knowledge, the earlier studies examined the relationship between different styles of leadership, HRM practices, and innovative work behavior in different contexts. However, the previously mentioned relationship model is not examined in Omani context. Thus, the present thesis intends to examine the influence of transformational leadership on innovative work behavior among HEIs in Sultanate of Oman. Furthermore, it extends the investigation to examine the mediation role of knowledge sharing, motivation to learn, and high-performance work system in the relationship mentioned above.

1.3 Research Questions

To better understand innovative work behavior among HEIs in Oman context, this thesis specifically investigated the following research sub-questions:

1. Is there any significant effect of transformational leadership on innovative work behavior among HEIS?
2. Are (a) knowledge sharing, (b) motivation to learn, and (c) high-performance work systems mediating the relationship between transformational leadership and innovative work behavior among HEIs?

1.4 Research Objectives

Given the above motivations, this thesis intends to investigate the effect of transformational leadership on innovative work behavior. Furthermore, it also examines mediating impact of a high-performance work system, motivation to learn, and knowledge sharing on innovative work behavior and transformational leadership relationship. To gain a better understanding, this research objective intends to attain:

1. To investigate the effect of transformational leadership on innovative work behavior among the staff of HEIs in the Sultanate of Oman.
2. To determine the mediating effects of (a) knowledge sharing, (b) motivation to learn, and (c) high-performance work system on the relationship between transformational leadership and employees' innovative work behavior of HEIs in the Sultanate of Oman.

1.5 Research Hypothesis

The researcher intends to discuss and investigate the influence of transformational leadership on employees' innovative work behavior by highlighting the mediation role of multiple factors, namely, knowledge sharing, motivation to learn, and high-performance work

system. As shown in Figure 1.5-1, transformational leadership variable act as an independent variable, whereas innovative work behavior act as a dependent variable. While knowledge sharing, motivation to learn, and high-performance work systems are mediation variables in the proposed relationship between transformational leadership and innovative work behavior.

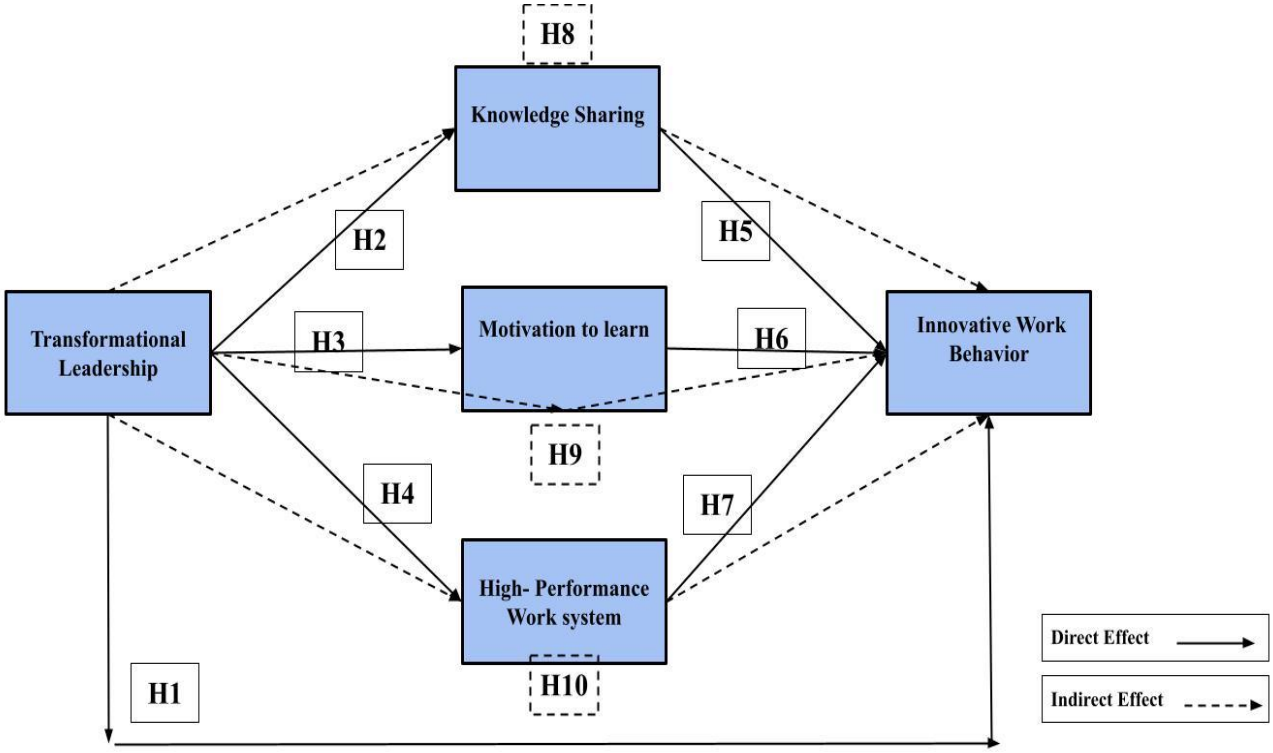


Figure 1.5-1: Theoretical Research Framework

- H1: There is a significant impact of Transformational leadership on employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).
- H2: There is a significant impact of Transformational leadership on knowledge sharing in Omani HEIs at level ($\alpha \leq 0.05$).
- H3: There is significant impact of Transformational leadership on employees' motivation to learn in Omani HEIs at level ($\alpha \leq 0.05$).
- H4: Transformational leadership significantly affects high-performance work system in Omani HEIs at level ($\alpha \leq 0.05$).
- H5: Knowledge sharing directly and positively affects employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).

- H6: Motivation to learn significantly influences employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).
- H7: High-performance work system significantly affects employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).
- H8: There is a significant mediation impact of knowledge sharing on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).
- H9: There is a significant mediation effect of motivation to learn on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).
- H10: There is a significant mediation impact of a high-performance work system on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).

1.6 Study Scope

The study intended to extend the research on leadership, innovation, knowledge, and HRM practices by investigating the impact of transformational leadership on innovative work behavior. Additionally, the study examines the mediation role of knowledge sharing, motivation to learn, and high-performance work system on relationship between transformational leadership and innovative work behavior. This study covers government and private higher education institutions in the Sultanate of Oman. The data are limited to the higher education institutions' staff across Oman, including General Manager, Assistant General Managers, Managers, Assistant Manager, Administrators, Head of Department, Engineering, Technician, and Academic staff. The data were collected using convenience sampling.

1.7 Significance of The Study

HEIs in the country are geared toward personnel development, followed by employment in various socioeconomic activities, including service, science, economics, technology, and other types of management. Their system is in charge of providing future specialists with the skills and special knowledge they will need, guiding young people toward revealing the theoretical or practical aspects of their chosen profession while also incorporating the creative application of modern science and technology (Abdurakhmanov et al., 2019). Many HEIs across the world strive for survival and seek competitive advantages through innovations because of rising pressure from globalization, changing funding arrangements in higher

education, and shifting supply and demand for higher education (Bilevičiūtė et al., 2020; Ogunmokun et al., 2021). Due to the significant role of innovation, a study was conducted in the Gulf Cooperation Council (GCC) context to assess the level of innovative work behavior of university academic staff leaders. The study confirmed that innovative work behavior enhancement could boost and aids HEIs to perform successfully within the competitive environment. In line with the above motivation, this begs the question of what methods can enhance and promote innovative work behavior among HEIs. Therefore, in this sense, Oman has been selected purposively for this research to examine the relationship between leadership, HRM practices, knowledge, and innovative work behavior. Specifically, this research extends the investigation by examining the role of knowledge sharing, motivation to learn and high-performance work system on the relationship between transformational leadership and innovative work behavior.

Oman Vision 2040 main key strategic direction is "Inclusive Education, Lifelong Learning, and Scientific Research that Lead to a Knowledge-based Society and Competitive National Talents."(*Vision Oman 2040*, n.d.). Also, in Oman, it is the Ministry of Higher Education, Research, and Innovation's role to promote research and innovation by developing national strategies and providing funding for significant chunks of projects related to the Oman Vision 2040(Fazari, 2022). Hence, highlighting and investigating the effects of transformational leadership on innovative work behavior would remedy many issues in the administration of HEIs, which would significantly enhance quality and performance outcomes. Moreover, this research contributes significantly to producing insights needed by practitioners and academic leaders of HEIs to strengthen and improve performance through boosting innovation and, in particular innovative work behaviors. Furthermore, the findings of this study are valuable, particularly when considering the lack of studies focused on innovative work behavior in Oman. Then, accordingly, improvement in Omani HEIs, raise its role in its positive contribution to Oman's development.

This research is designed to act as a path for further research and to provide significance and evidence to:

1. Address the significant role of innovation in Oman's higher education institutions.
2. Provide information and insights to specialists and those interested in leadership and human resources practices in HEIs in Oman to enhance their innovative work behavior.

3. Improve educational institutions' leadership, HRM practices, knowledge sharing, and innovative work behavior, as well as ensure quality to attain recognized and measurable successful outcomes.

1.8 Definition of The Terms

The operational definitions of the variables used in this study are as follows.

Transformational leadership

Burns (1978) pioneered the concept of transformational Leadership. He defined transformational leadership as a leader's behavior, where motivation and inspiration provided to the subordinate. Bass (1999) described transformational leadership as when a leader uses ideal charisma, motivation, and self-actualization to drive subordinates beyond self-interests.

Knowledge sharing

Connelly & Kelloway (2003) defined knowledge sharing as" the exchange of knowledge or the behavior that help others with knowledge." Yi (2009) described knowledge sharing at work as "a set of behaviors that involves sharing one employee's work-related knowledge with another to achieve organizational goals."

Motivation to learn

Colquitt et al., (2000) defined the term as "the direction, intensity, and persistence of learning-directed behavior in training contexts."

High-performance work system

Way (2002) defined the term as interconnected practices that recruit, develop, and motivate higher-skilled individuals. Furthermore, motivated personnel put these abilities to work, resulting in improved performance and, as a result, the company's overall performance.

Innovative work behavior

Innovative work behavior defined as "the intentional behaviors of individuals to produce and implement new and useful ideas explicitly intended to benefit the individual, group or organization"

1.9 Thesis Structure

Chapter Number	Title	Description
Chapter One	Introduction	It introduces the study's background information, the research problem, objectives, and questions. The chapter also outlines research significance ending with the structure of the dissertation.
Chapter Two	Literature Review	It discusses transformational leadership and innovative work behavior. The discussion extends along with discussing employees' knowledge sharing, motivation to learn, and high-performance work system. Moreover, the theoretical framework development presented in this chapter reviews previous studies investigating the relationship between research constructs.
Chapter Three	Methodology	It outlined and justified the research methodology and strategies employed in this thesis. The development of research instruments, testing for validity and reliability of research instruments, and sample processes provided.
Chapter Four	Data Analysis and Findings	It discusses the data analysis and findings. It starts by outlining the procedures for giving the questionnaire, then reports on the overall response rates and evaluates non-response bias. Before assessing the research measurement model, the processes for data preparation are discussed. Then, descriptive statistics will be used to describe the demographic profile of respondents and the characteristics of their responses. Inferential statistics and Smart PLS analysis are used to test the research model and hypotheses. Finally, this chapter contains a summary of all findings.
Chapter Five	Discussion, conclusion, and recommendations	It is the final part of this research study. The chapter discusses the findings, managerial and practical implications of the study, limitations of the present research, suggestions for the future, and conclusion.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The researcher will address and broaden this chapter's discussion about transformational leadership and innovative behavior. It also discusses knowledge sharing, motivation to learn, and high- performance work system. The discussion will culminate with an account of how transformational leadership influences innovative work behavior. Transformational leadership will be discussed in this context with the employee's knowledge sharing, motivation to learn, and high-performance work system.

The chapter has two parts. The first part mainly reviews previous studies on transformational leadership, innovative work behavior, knowledge sharing, motivation to learn, and high-performance work system. The chapter presents theoretical research development. It is thoroughly reviewing the findings of previous studies regarding these research constructs. Furthermore, the second part will critically discuss and emphasize previous studies that investigate and examine the relationship between research variables, which will help establish a conceptual framework. By the end of this part, a table will be presented to summarize all related and previous studies that investigate the relationship between research varaibles.

2.2 Transformational Leadership

2.2.1 Leadership

Leadership is one of those concepts that can be extremely difficult to define. Stogdill affirmed more than four decades ago that "there are almost as many different definitions of leadership as there are persons who have attempted to define the concept"(Stogdill, 1974). Reviewing the literature on the definition of leadership, it appeared that there are many different definitions. The following are some important definitions of leadership that scholars have offered in long-term research.

- Stogdill (1950) defined leadership as "the process (act) of influencing the activities of an organized group in its efforts toward goal setting and goal achievement."
- Hemphill (1957) considered leadership as how an agent influences followers to achieve the desired outcome.

- Massarik & Weschler (1961) defined leadership as a communication process to achieve a specified goal through interpersonal influence.
- Katz (1978) referred to leadership as the organization's incremental impact over and above its routine directives.
- Yukl (1989) defined leadership as “influencing task objectives and strategies, influencing commitment and compliance in task performance to achieve these objectives, influencing group maintenance and identification, and influencing the company's culture.”
- Jacobs & Jaques (1990) defined leadership as responsible for giving the collective effort purpose so that a willing attempt is made to achieve that purpose.
- Clark & Clark (1996) defined leadership as “an activity or set of activities, observable to others, which occurs in a group, organization, or institution and involves a leader and followers who willingly subscribe to common purposes and work together to achieve them.”
- Northouse (1998) defined leadership as influencing a group of people to strive toward a common goal.
- Bush & Glover (2003) defined leadership as persuasion to attain desired results.

Following the definitions above, it is evident that leadership in terms of personality traits, entailed of leader behaviors, interaction patterns, role relationships, subordinates' perspectives, the exercise of influence, inducing compliance, a type of persuasion, and a power relationship(B. M. Bass & Stogdill, 1990). Moreover, Kellerman described leadership as an equilateral triangle with three sides: the leader, subordinates, and context(Volckmann, 2012). That is, acknowledged the importance of the leader, as has been done for centuries, but also stated that the subordinates are just as vital as the leader, as stated by Bass & Avolio (1990), and context has been added as an equally crucial component of the leadership process, as well(Silva, 2016).

In the history of organizational behavior, today's leadership is emerging as a new field. According to the literature, a leader's role is to influence the activities of an organized group toward the achievement of an organizational goal(Arnold & Connelly, 2013; Denti & Hemlin, 2012; Stogdill, 1950). Thereby, leadership is one of the most studied subject. But

most minor understood phenomena are associated with a stream of emerging interrelationships constantly trying to evoke motivational responses from subordinates and changing their behavior as they encounter responsiveness or resistance in a never-ending cycle of flow and counter-flow (Burns, 1978). As a result, leadership has been recognized as a significant factor influencing organizational innovation and performance(Alves et al., 2018; Hao & Yazdanifard, 2015; Hurduzeu, 2015; Moussa et al., 2018).

2.2.2 Leadership Theories

The Trait, the behavioral, the Contingency, and the Full Range approaches are the four primary schools of leadership theory.

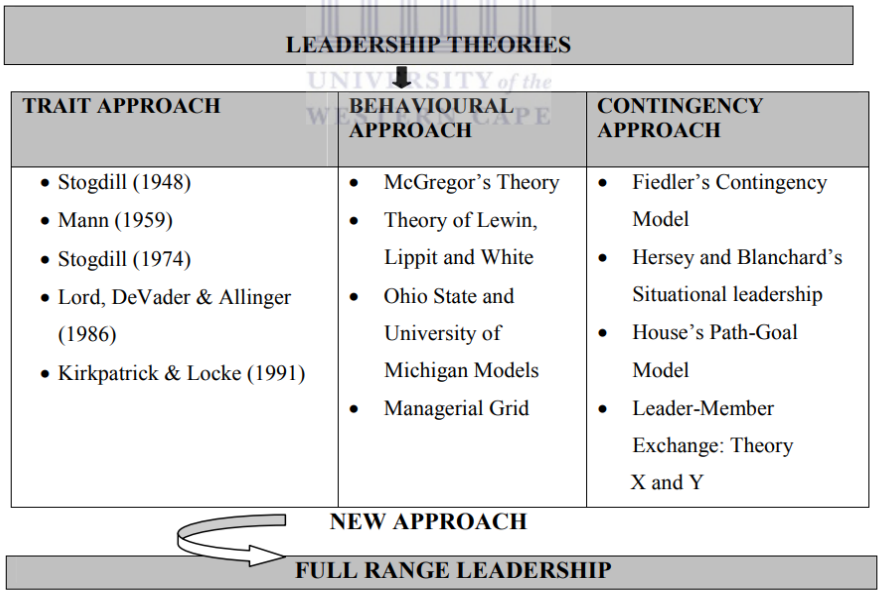


Figure 2.2-1: Basic Leadership Theories

2.2.2.1 Trait Theory

Trait theory assumes that leaders are born, not made (Spinks & Wells, 1995). The specific physical, social, and personal characteristics are inherent in particular individuals, and these attributes eventually distinguish leaders from non-leaders(B. M. Bass & Stogdill, 1981). Trait refers to "A multitude of individual traits, including features of personality, temperament, wants, reasons, and values." Some examples are self-assurance, extroversion, emotional maturity, and high energy levels. Scholars believe these are all attributes particularly suited to leadership, among other things. A successful leader would possess a diverse set of these features(Yukl, 2003). This approach proposes that certain people are born with social characteristics that make them excellent leaders. The idea explains specific

aspects that made certain people great leaders, whether in corporate, social, political, or military settings. As a result, researchers were tasked with defining an uniform set of traits shared by all leaders in order to distinguish them from non-leaders(B. M. Bass & Avolio, 1990a). Different researches reported and confirmed traits that trait approach researchers recognized leaders should have. Stogdill (1948) demonstrated that intelligence, alertness, initiative, persistence, confidence, and sociability are leaders' most common traits. At the same time, Mann (1959) confirmed that the leadership traits are intelligence, masculinity, adjustment, dominance, extroversion, and conservatism. Achievement, persistence, insight, initiative, confidence, responsibility, tolerance, influence, and sociabilities are a leader's most common traits and characteristics. Drive, motivation, integrity, trust, and cognitive ability represented the traits, and common characteristics scholars confirmed to be possessed by a leader(Kirkpatick & Locke, 1991).

The scholars like Stogdill investigated the role of the trait approach in leadership behavior to show that certain inherent features in people result in effective leadership. He could not produce consistent attributes that distinguish leaders from non-leaders. Also, his approach is widely attack due to the lack of consistent traits to distinguish the two (Stogdill, 1974). Consequently, the scholars shifted their attention and emphasis to studying leader behavior within the work context(Mester et al., 2003).

2.2.2.2 Behavioral Theory

The behavior approach focuses on the leader's behavior rather than how they appear to others or any personality traits they may possess to establish what influential leaders accomplish(Greenleaf, 2002). Researchers who studied the behavioral approach discovered that leadership comprises two types of behaviors: task-oriented and relationship-oriented(P G Northouse, 2004). P G Northouse (2004) pointed out that task-oriented leaders define a task's expected outcomes and set specific performance goals and standards that must be attained. Relationship-oriented leaders place a greater emphasis on developing relationships. When employees complete challenging jobs, they provide support and encouragement, often using tactics such as mentoring to direct and develop their subordinates. Ohio State and University of Michigan models, the Managerial Grid model, Theory X, and Theory Y model are the leading models in the leadership behaver approach(Blake & Mouton, 1964; Hellriegel et al., 2004; McGregor, 1960). Ohio State and University of Michigan models reported that there were two dimensions of leadership; employee orientation and production orientation (Robbins, 2001). According to Blake & Mouton (1964), people-oriented and task-oriented

categories are the main behaviors leaders will demonstrate. Based on the Theory X and Theory Y models, McGregor (1960) proposed two unique theories of leadership behavior. According to Theory X, employees despise work and will try to avoid it at all costs. Employees might perceive work as a good experience if they have the correct working environment and like taking on duties, according to Theory Y. Encouragement, positive reinforcement, and awards are examples of managerial behaviors. Finally, while the behavioral approach provided more insight into the leadership construct by focusing on people versus task relationships, not all scholars were satisfied with these results, believing that not all behaviors appropriate in one situation would necessarily be appropriate in another (Fiedler, 1978).

2.2.2.3 Contingency Theory

The contingency approach marked a shift in leadership study by examining the leader in the context of the context in which they worked. As a result, this theory proposed that situational factors were crucial in determining the level of success or failure in leadership behavior. Fiedler's Contingency Model, Hersey and Blanchard's Situational Leadership model, House's Path-Goal model, and the Leader-Member Exchange theory were the main contingency models developed(Fiedler, 1978). Fiedler (1967) reported that contingency theory proposed that successful group performance was contingent on the leader's personality and the environment being a good match. Leader-member relations, task structure, and position authority were three situational characteristics that affected leadership effectiveness. As a contingency theory, Hersey et al. (2001) described their situational leadership model. It is fundamentally based on selecting the right leadership style based on the readiness of the subordinates, but in a unique situation. House's Path-Goal Model described how leaders motivate their people to attain predetermined objectives(House, 1971). This theory explains how leaders encourage their people to achieve predetermined goals(Bauer & Green, 1996).

2.2.2.4 Full Range Leadership Theory

In light of the previous theories, the research could not agree on the best way for leaders to influence their subordinates. It eventually led to the development of a new theory known as the Full Range Leadership Approach, which is now widely accepted as the most proper leadership style in 21st-century organizations. This Theory consists of three main dimensions; transactional leadership, transformational leadership, and laissez-faire leadership styles(B. M. Bass & Riggio, 2006). The basic premise of this theory is that every leader will show aspects

of each style to varying degrees, but the frequency with which specific leadership behaviors are most frequently displayed will decide whether the leader has a transformational, transactional, or laissez-faire leadership style.

2.2.3 Transformational Leadership

Different leadership style is critical strategic components influencing innovation and creativity in the literature(A. Alheet et al., 2021; M. A. Khan et al., 2020; Lei et al., 2020; Schuckert et al., 2018). In particular, transformational leadership promotes innovation and creativity, improving organizational performance(Al-Husseini & Elbeltagi, 2016; Alrowwad & Abualoush, 2020; S. B. Choi et al., 2016a; Suifan et al., 2018). The term transformational leadership was coined by Burns in 1978. He defined transformational leadership as a leader's behavior that provides subordinates with motivation and inspiration (Burns, 1978). Bass (1999) described transformational leadership as when a leader uses ideal charisma, motivation, and self-actualization to drive subordinates beyond self-interests.

A rising number of studies in the transformational leadership literature indicated that transformational leadership could improve subordinates' performance beyond expectations, as well as their satisfaction and commitment to workgroups and organization(Ayoub et al., 2021; B. M. Bass & Riggio, 2006; Hater & Bass, 1988). According to Bass (1999), transformational leadership is a kind of leadership in which leaders practice idealized influence, inspiration, intellectual stimulation, or individualized consideration to move their subordinates above their immediate self-interests.

2.2.4 The Foundation of Transformational Leadership Theory

Transactional-transformational leadership is one of today's most popular leadership theories (Albert et al., 2020; Yahaya & Ebrahim, 2016). In 1978, Burns introduced the theory of transformational leadership(Burns,1978). The concept of the transformational leadership style developed by the researcher has undergone numerous expansions and revisions(B. M. Bass, 1985). In particular, this concept was developed further by scholar Bass himself in 1981, 1985, 1988, 1990, 1997, and 1998. Moreover, the scholar Bass extended and developed the concept in cooperation with other scholars like Avolio in 1993 and 1995(Alarifi, 2014).

Burns (1978) described transformational leadership as a journey in which leaders and subordinates engage in a mutual relationship to assist and support one other in attaining better levels of morality and motivation. He defined two opposing and mutually contradictory approaches in this way: Transformational and transactional leadership are two different

leadership styles. According to him, the fundamental differences between leadership styles trace back to specific behaviors and characteristics. Employees' attitudes and ideals are reshaped, and their objectives might influence by transformational leadership. On the other hand, transactional leaders are primarily concerned with results and how people complete their responsibilities, and they supervise them using the traditional reward and punishment system.

Burns' publications established the groundwork for Bass's studies, which coined the term "transformational leadership"(B. M. Bass, 1985). Bass (1985) defined transformational leadership as the leader's influence on their subordinates. When subordinates have faith in, admiration for, devotion to, and respect for their leader and are inspired to go above and beyond, their leader can alter them by directing their followers' attention to the significance and value of task outcomes. Additionally, They can motivate people to put the organization's demands ahead of their own and help their followers meet their higher-order needs(B. M. Bass, 1985). Regarding Bass (1985), “charisma is a necessary ingredient of transformational leadership, but by itself, it is not sufficient to account for the transformational process” the scholar argued that transformational leaders' influence is not solely due to their charisma.

Transformational leaders, according to Bass & Riggio (2006), stimulate and motivate followers to both achieve extraordinary achievements and, in the process, improve their leadership capacity. Accordingly, those leaders facilitate and smooth the growth of their subordinates to develop their skills and character, in turn becoming leaders. In detail, this transformational leader can help followers to become leaders by firstly responding to their needs and empowering them, secondly, bringing followers, leader, group, and the organization's objectives and goals into alignment(B. M. Bass & Riggio, 2006).

2.2.5 Transformational Leadership Dimensions

Transformational leadership has been shown in a growing number of studies to improve subordinates' performance beyond expectations, as well as boost their satisfaction and commitment to the group and organization(Boamah et al., 2018; S. L. Choi et al., 2016; Jameel & Ahmad, 2019; Kammerhoff et al., 2019). According to the researchers, transformational leadership has four behavioral dimensions: idealized influence, inspirational motivation, individualized consideration, and intellectual stimulation(B. M. Bass & Avolio, 1990a).

2.2.5.1 Idealized Influence

Idealized influence is essential for a leader to provide relevant ethical ideals to their followers while also serving as a role model through cultivating trust and respect. It refers to a leader's charisma, which gives them a vision, direction, and goal instills pride, and earns them respect and trust(B. M. Bass & Avolio, 1990a). Bass (1985) used the term idealized influence to describe the quality of transformational leaders' charisma. He defined charisma as a mechanism by which a leader can influence followers by evoking powerful emotions and causing them to identify with the leader. According to B. Bass & Avolio (1995), leaders used their idealized influence to inspire loyalty, respect, and adoration, as well as to emphasize the need for a sense of mission. Subsequently, the charismatic leaders' subordinates feel pride in their relationships with their leaders. Furthermore, charismatic leaders can persuade their followers to think about their decisions' moral and ethical implications (Latif, 2016; Nassif et al., 2017; Supratman et al., 2021).

2.2.5.2 Inspirational Motivation

Inspiration motivation considered one of the transformational leadership dimensions. This dimension represents a leader's ability to communicate a vision to their subordinates in an interesting way. It is related to a leader's ability to communicate high expectations, use symbols to focus efforts, and express vital goals in straightforward ways(B. M. Bass & Avolio, 1990a). Leaders inspire their people with inspirational motivation by presenting a compelling vision (Avolio et al., 1999). According to B. Bass & Avolio (1995), inspiring motivation occurs when leaders express an appealing vision of the future, direct their followers toward goals, and trust their followers' talents. Furthermore, it is seen to be successful in communicating essential goals in a style that followers can comprehend and relate to(Petter et al., 1998).

2.2.5.3 Intellectual Stimulation

Intellectual stimulation is considered one of the most significant dimensions of transformational leadership, which refers to the leader's ability to enhance and promote intelligence, rationality, and problem-solving skills. It also refers to the level at which a leader is willing to take risks and motivates followers to question the status quo through novel ideas(B. M. Bass & Avolio, 1990a). Accordingly, transformational leaders are known for challenging assumptions and approaching old problems and situations in novel ways, allowing their followers to be more creative and imaginative(Avolio & Bass, 2002). Because

they see unanticipated crises as opportunities, these leaders' learning curve never ends. Similarly, followers try to devise novel ways to carry out their responsibilities, improving their disruptive thinking(B. M. Bass & Avolio, 1990a.

2.2.5.4 Individualized Consideration

Individualized consideration refers to a leader's ability to pay personal attention to each follower, treat each follower as an individual, coach their advancement, and counsel those who follow them(B. M. Bass & Avolio, 1990a). According to Avolio & Bass (2002), transformational leaders give and pay more attention to the growth and development of each subordinate individually. Furthermore, individualized consideration encourages and supports the followers(B. M. Bass, 1985). Individualized consideration appears when leaders pay attention to their followers' developmental needs, support, coach, and delegate duties as opportunities for progress(B. M. Bass, 1999). Leaders develop one-to-one relationships with their followers and recognize differences in their goals, abilities, and ambitions through individualized consideration(B. Bass & Avolio, 1995).

To recapitulate, it emphasized above that transformational leaders must have the four characteristics of charisma, inspiration, intellectual stimulation, and individualized consideration(Avolio et al., 1999; B. Bass & Avolio, 1995; B. M. Bass, 1985; B. M. Bass & Avolio, 1990a, 1990b; B. M. Bass & Riggio, 2006). As a result, followers of transformational leaders are likely to be more creative and innovative if they give those four elements. In this regard, researchers have looked into the importance of leadership and discovered that leaders who possess those four behavioral dimensions are better able to improve employee values and norms, encourage individual and organizational change, and support their employees to perform above and beyond expectations(Jung & Avolio, 2000).

2.2.6 Benefits of Transformational Leadership

In organizational science, transformational leadership is one of the most frequently studied forms of leader behaviors(Avolio et al., 2009; B. M. Bass & Riggio, 2006). This interest arises from findings linking transformational leadership to a wide range of follower attitudes and behaviors, including positive emotions, job satisfaction, affective commitment, self-efficacy, creativity, and proactive behavior(Abelha et al., 2018; Astuty & Udin, 2020; Bayraktar & Jiménez, 2020; Bernarto et al., 2020; Buil et al., 2019; Mahmood et al., 2018). From 39 studies of transformational leadership literature, a scholar found that transformational leaders were more effective leaders with better work outcomes than

transactional leaders in both the private and governmental sectors(P G Northouse, 2004). According to B. M. Bass & Avolio (2004), transformational leaders are more effective because they recognize the need to adapt to their followers' needs and motives. As a result, they can inspire and motivate their followers to do good deeds while accomplishing duties and meeting their requirements. They attain those outcomes by boosting the followers, acting as a role model, coaching, monitoring, and inspiring innovative solutions to work problems(B. M. Bass & Bass Bernard, 1985; B. M. Bass & Riggio, 2006).

The benefits of transformational leadership behaviors were identified in studies conducted within different contexts like education, health, military, hospitality, and business. Ribeiro et al. (2018) investigated health context and examined the influence of transformational leadership on employees' affective commitment and individual performance. A total of 476 Turkish healthcare professionals participated in this study. The study revealed that transformational leaders create an environment in which employees believe the organization supports, values, and cares for them, which leads to attachments among the organization's members and the development of a high degree of affective commitment. Also, through transformational leadership behaviors such as individual attention, inspiration, intellectual stimulation, and motivation, transformational leaders raise employee expectations and recognition of their work while also increasing individual performance. Kovach (2019) conducted a review study to investigate the impact of transformational leadership in educational and military contexts. The scholar reviewed nine papers published during the last eight years. Five papers were reviewed in the educational context, and the scholar concluded that transformational leadership has a long-term positive impact on change management, raising cognitive learning and academic success, students' motivation to learn and the instructors and teachers' job satisfaction. While in military context, four papers were reviewed. The scholar confirmed that transformational leadership has role in improving team's effectiveness and cohesion, employee performance, improved individual emotional intelligence, and follower's satisfactions.

In the business context and specifically among small and medium enterprises (SMEs), a study investigated factors that influence organizational performance and employee job performance, as well as what goals they should pursue that generate a profit for their employees or contribute to society in another way. This research aimed to observe how transformational leadership affects job performance and investigate the mediating role of corporate social responsibility (CSR). The study found a positive and significant relationship

between transformational leadership and employee job performance in SMEs and a positive meditating effect of corporate social responsibility on the relationship. It indicated that employees who exhibit the best transformational leadership behaviors and CSR policies would be more satisfied at work. As a result, they will be more productive(Manzoor et al., 2019).

Specific to the hospitality context, a meta-analysis was conducted to explore transformational leadership's effect on followers' attitudinal outcomes, relational perceptions, and behavioral outcomes. Based on 62 primary studies, a quantitative meta-analysis conducted. The study found that transformational leadership is positively associated with subordinates' outcomes. Meanwhile, it strongly affects the followers' relational perceptions, followed by their attitudes and behaviors. Specifically, there is a strong relationship between transformational leadership and organizational performance and climate, as well as satisfaction of the organization's employees. Also, it significantly influences work engagement and corporate identifications(Gui et al., 2020).

In a health context, a study conducted among nurses as a research sample. It found that leaders who exhibit higher levels of transformational leadership behaviors have subordinates who report being more satisfied with their jobs, have fewer plans to leave the field, and have lower absence rates(Labrague et al., 2020). Charoensukmongkol & Puyod (2021) investigated the impact of transformational leadership on role ambiguity and work-life balance among university employees in the Philippines during COVID-19 period. The findings indicated the effect of transformational leadership on minimizing role ambiguity and promoting and enhancing work-life balance among Filipino employees.

2.3 Innovative Work Behavior

2.3.1 Innovation Overview

The need for organizations to innovate is growing increasingly acute in today's global marketplace, defined by solid competitiveness, changing customer demands and lifestyles, technical developments, and a changing business environment(Kahn, 2018). Innovation is widely considered a critical component of organizations' value creation and a source of long-term competitive advantage(Chesbrough et al., 2018; Distanont & Khongmalai, 2020). Overall, innovation refers to a sense of purpose in human evolution, as defined by the creative capacity of creation as a source of technological, social, and cultural change. Simultaneously, innovation has become a cornerstone in global economic growth and

sustainability agendas(Fagerberg, 2018). Despite the vast body of literature available, providing a comprehensive definition of the term and clearly describing its nature is extremely difficult. Innovation is a multidimensional concept with various meanings and reports from multiple disciplines(J. Chen et al., 2018; Cunningham, 2013; Edwards-Schachter & Wallace, 2017; Fagerberg & Verspagen, 2009).

Schumpeter (1934) defined innovation as new combinations of productive resources, and this combinatory activity was labeled "the entrepreneurial function," which will be fulfilled by "entrepreneurs." While Drucker (1985) defined the term as " a specific tool that entrepreneurs utilize to exploit change as an opportunity to offer a different business or service." Another scholar defined innovation as "the intentional introduction and application within a role, group, or organization of ideas, processes, products or procedures, new to the relevant unit of adoption, designed to significantly benefit the individual, the group, organization or wider society." Damanpour (1991) defined it as "the generation, development, and adaptation of novel ideas on the part of the firm." Thus, the lack of agreement on a standard definition of the term is refelcted by different scholars' disparate perspectives on innovation.

Innovation is a broad terminology with different definitions and dimensions too. The scholars concave the innovation in an organization, either process or outcome. As a process, innovation entails how new ideas emerge, grow, and become institutionalized in a firm's daily operations and activities(Damanpour & Gopalakrishnan, 1998). Innovation as an outcome dimension attempt to understand the nature of innovation by distinguishing its multiple kinds. The degree of novelty of an innovation outcome is one dimension of innovation. Researchers have dichotomously classified innovation as radical or incremental depending on the extent of change(Garcia & Calantone, 2002). Radical innovation leads to significant changes in the activities of organizations or industries, resulting in the massive transformation of these organizations or industries.

In contrast, incremental innovation refers to little adjustments in a company's operations that merely enhance its current capabilities(Gopalakrishnan & Damanpour, 1997). Innovativeness can result in both kinds of innovation. On the other hand, employees' innovative behaviors are more likely to result in incremental rather than radical innovations in firms(Chan & Parhankangas, 2017). Moreover, in the literature, there are many different types of innovation. Product or service innovation, process innovation, organizational

innovation, marketing innovation, and business model innovation are examples of these innovations(Crossan & Apaydin, 2010).

Innovation was seen as a multistage process requiring specific activities and individual behaviors at each stage. Individuals can expect to engage in any combination of these behaviors simultaneously because innovation is defined by discontinuous behaviors rather than discrete, sequential processes(Scott & Bruce, 1994). Thus, there is a relatively recent stream of research on individual innovation that focuses on proactive behaviors of individuals, i.e., taking self-initiated and future-oriented actions to modify and enhance one's position(Parker et al., 2006). Examples of such behaviors include proactive work behavior, taking charge, voice, and innovative work behavior (Crant, 2000; Janssen, 2000; LePine & Van Dyne, 1998; Morrison & Phelps, 1999).

2.3.2 Innovative Work Behavior Concept

organizations must become more innovative as environments become more complex and dynamic to identify more opportunities for sustained outstanding performance (Teece & Leih, 2016). Employees' human capital and work behavior are heavily used as critical factors in the value creation process in innovation initiatives(Amankwaa et al., 2022). In line with this, management scholars are becoming interested in determining what factors impact employees' innovative work behavior(Scott & Bruce, 1994; Woodman et al., 1993).

Innovative work behavior could help employees to operate successfully in dynamic business environments(Muchiri et al., 2020). Since the 1980s, when innovation research moved from administrative science, communications, and anthropology to psychology and sociology, it has been considered a human activity(Farr & Ford, 1990). The term "innovative work behavior" was coined by the first psychological works on innovation. It is the deliberate generation, promotion, and implementation of new ideas inside a work role, workgroup, or organization to benefit the position, the group, or the organization(Farr & Ford, 1990). Employee innovative work behavior, according to Scott & Bruce (1994), is the production or adoption of beneficial ideas and their implementation. Another scholar defined the term as “Innovative behaviors reflect the creation of something new or different. Innovative behaviors are change-oriented because they involve the creation of a new product, service, idea, procedure, or process” (Spreitzer, 1995). Innovative work behavior is a multi-stage process in which ideas or solutions are firstly developed, then promoted, or championed to get support for the idea/solution(Onne Janssen, 2000). Following that, De Jong & Den Hartog

(2008) defined the term as ‘an individual’s behavior that aims to achieve the initiation and intentional introduction within a work role, group or organization of new and useful ideas, processes, products or procedures as well as the implementation of those ideas”. AlEssa & Durugbo (2021) conducted a systematic review analysis on innovative work behavior. The scholars provided Table2.3-1, which presented various important innovative work behavior definitions. This variation emphasizes the value of integrating different descriptions to propose a more comprehensive definition that reflects the various aspects of innovative work behavior.

Table 2.3-1: Key Definitions of Innovative Work Behavior

Innovative work behavior definition	**Source**
“The behavior of employees to create, introduce and apply new ideas intentionally at work, within a group or an organization for contributing to performance.”	(Janssen, 2000)
“The capability of improvement in new ideas relating to the jobs within organizations”	(Axtell et al., 2000)
“A series of behaviors about introducing a new idea that is important and useful to be developed and implemented to improve employee and organizational performance.”	(J. P. J. De Jong & Den Hartog, 2007)
“The development, adoption, and implementation of new ideas for products, technologies and work methods by employees”	(Yuan & Woodman, 2010)
“A complex, non-routine behavior where employees speak up for new ideas, avoid traditional thin.”	(Kessel et al., 2012)
“The ability to work actively to produce new products, find new markets, processes, and combinations.”	(Dhar, 2015)
“The process in which new ideas are generated, created, developed, applied, promoted, realized, and modified by employees to benefit their role performance in organizations.”	(Thurlings et al., 2015)
“The ability of individuals to generate new ideas and viewpoints, which transformed into innovation”	(Escribá-Carda, Balbastre-Benavent, & Canet-Giner, 2017)
“An individual behavior intentionally introduces new and valuable ideas, work processes, products, and procedures in the workplace and modern work context. New ideas are needed to increase significant changes in organizations, for example, the creating of new routines, simplifying work processes, using new work tools, and growing cooperation both internally and externally.	(Siregar et al., 2019)

Nevertheless, innovative work behavior is a novel idea, and literature on creativity frequently discusses its relationship to other constructs(J. De Jong & Den Hartog, 2010). More significantly, according to the innovation theory, innovation is broader than creativity and includes the implementation of ideas(Amabile, 1988). To start explaining the distinction between the two terms, McLean (2005) stated that the terms creativity and innovation had been employed interchangeably and synonymously in various studies. While creativity entails generating new and interesting ideas, innovation entails implementing those ideas(Amabile, 1988). Regarding decision variety, scholars agree that creativity is confined to innovative behavior(Brem et al., 2016; J. P. De Jong & Den Hartog, 2008). In other words, creativity can be defined as an aspect of innovative work behavior that emerges from the first stage of the innovation process, when difficulties or performance gaps are identified, and ideas are generated in response to the perceived need for innovation(J. P. De Jong & Den Hartog, 2008).

Similarly, J. P. J. De Jong & Den Hartog (2007) distinguish the concepts of creativity and innovative work behavior, claiming that the distinction is based on importance rather than substance. For instance, creative work behavior is associated with the generation of ideas, necessitating the exploration of ideas in practice to improve business performance(J. P. De Jong & Den Hartog, 2008; Örnek & Ayas, 2015). As a result, innovative work behavior can be considered a significant factor(Bos-Nehles et al., 2017).

2.3.1 Innovative Work Behavior Dimensions

Reflecting on the various types of behavior required to be part of the innovative activities within an organization. Innovative behavior can be defined as a collection of distinct conduct that people display when participating in an innovative process. While there are differing perspectives on the number and content of different types of innovative behavior, it is agreed that it begins with the recognition of a problem and ends with the implementation of a solution(O Janssen et al., 1997; Scott & Bruce, 1994). This research will follow a process involving three types of behavior based on work by Onne Janssen (2000) and Scott & Bruce (1994): idea generation, promotion, and implementation.

2.3.1.1 Idea Generation

Innovation requires coming up with new ideas, and the best source of new ideas generally found among individuals(Björk & Magnusson, 2009; Du Preez & Louw, 2008). Scott & Bruce (1994) reported the idea of a general generation that covers producing ideas and

recognizing problems. According to Kheng et al. (2013) research, the generation of ideas is a dynamic process that includes the creation, association, generation of representation of opportunities, and distribution of abstract, tangible, or visual ideas. Being innovative at work entails coming up with new ideas for altered services, products, processes, or supporting technologies(Amabile, 1988; Van de Ven & Rogers, 1988). Ideas arise when information and existing concepts on the route to solving a problem or improving performance emerged and altered(J. P. J. De Jong & Den Hartog, 2007).

The innovation process begins when a performance gap is identified in which there exists a difference between expected and actual performance(Tushman et al., 2002). Consequently, new ideas can be copied, tweaked, created, and developed from scratch to make big and significant changes and improvements(Abdullatif, 2017). The scholar confirmed that the concept of idea generation seems akin to creativity concept. However, in the literature on employee innovation, ideas are usually divided into two categories: new but not unique ideas and new and original ideas, with creativity being confined to the latter(Amabile, 1996). After the idea generation step, idea promotion step comes forward(J. De Jong & Den Hartog, 2010).

2.3.1.2 Idea Promotion

Once an idea has been generated, idea championing and promotion becomes crucial. Thereby idea promotion can be defined as a socio-political behavior that mobilizes resources, persuades and influences, urges and negotiates, confronts and accepts risks – behavior needed to bring about possible ideas, solutions, and innovations(Howell & Boies, 2004). Most ideas require promotion because they frequently differ from what is currently employed in their work group or company(J. De Jong & Den Hartog, 2010). Even if ideas are legitimate or appear to address a performance gap, it is uncertain if the value or benefit of most ideas will outweigh the expense of creating and executing them, and resistance to change is occurred usually(Kanter, 1988). In this regard, the champions of innovation literature rely on individuals in informal roles who drive creative ideas beyond organizational bottlenecks and assist in realizing innovative ideas(Shane, 1994). According to Shane (1994), a champion takes on an informal role in pushing an innovative idea over organizational roadblocks. However, Kleysen & Street (2001) defined a champion as someone who emerges from the masses to try to realize creative ideas and enhance their acceptance. A champion's role includes persuasion and influence over other employees or management and may also involve pressuring and negotiating(Shane, 1994; Van de Ven, 1986).

2.3.1.3 Idea Implementation

The last dimension of innovative work behavior is idea implementation or application(J. De Jong & Den Hartog, 2010; J. P. De Jong & Den Hartog, 2008). Implementation is the process of improving or developing existing products and methods. In essence, idea implementation behavior tied to an individual's efforts in producing a practical idea (Kleysen & Street, 2001), as well as specific behaviors related to new product/process development, testing, and modification(Farr & Ford, 1990; Kanter, 1988; Van de Ven, 1986). Making innovations part of routine work processes and behaviors, such as generating new goods or work processes and testing and updating them, is also part of idea implementation(Kanter, 1988; Kleysen & Street, 2001). For this to happen, employees must work hard and have a results-oriented mindset (J. P. De Jong & Den Hartog, 2008). Thus, making ideas a life requires considerable effort and a goal-oriented approach.

2.4 Knowledge Sharing

2.4.1 Resource-Based View

In 1959, Penrose developed the Resource-Based View(RBV)(Barney, 1991). An organization's resources are defined in RBV as "all assets, capabilities, organizational processes, firm attributes, information, knowledge, etc. controlled by a firm that enable the firm to conceive of and implement strategies that improve its efficiency and effectiveness"(Barney, 1991). According to the RBV, an organization's competitiveness is built on unique bundles of tangible and intangible assets that are valuable, imperfectly imitable, scarce, and sustainable. Assets, capabilities, management skills, organizational processes, organizational practices, organizational traits, information, and knowledge are all resources that organizations own and control(Barney, 1991; Barney et al., 200.

According to Grant (1991), those who advocate RBV of the firm strongly believe that knowledge can and should be managed. Subsequently, it highlighted the importance of knowledge in RBV. He stated that knowledge can be thought of as a resource that is always present in an individual or a collective or ingrained in a routine or process(Grant, 1996). Accordingly, scholars emphasized knowledge usage as a source of sustainable competitive advantage by organizations to improve their effectiveness and competitiveness(Halawi et al., 2005). Furthermore, it is critical for organizations to examine how to transfer knowledge from specialists to those who require it(Pan & Scarbrough, 1999), so they strive to highlight

and leverage knowledge-based resources that already exist within the organization(Davenport & Prusak, 1998).

Knowledge-Based View (KBV) is considered a center in RBV. It indicated that knowledge creation and utilization are considered vital sources for an organization's sustainable competitive advantage. Thereby from the RBV, KBV developed the view of the firm as a collection of resources, focused on the most strategically valuable and perhaps the only source of competitive advantage. It also has another definition of a firm: "an institution where the issues of creating, acquiring, storing and deploying knowledge are the fundamental organizational activities"(Grant, 1996). Thus, knowledge becomes widely considered a valuable asset for businesses, resulting in the attainment of competitiveness in which the organizations have to systematically manage, store and disseminate organizational knowledge using available technologies and methodologies(Mahdi et al., 2019). As a result, knowledge management has become a strategic agenda item for leaders and managers in both the public and private sectors(Ragab & Arisha, 2013). To reap the expected benefits from knowledge management programs, senior management must continue encouraging knowledge sharing behavior and develop the right culture for such activity(Omotayo, 2015).

2.4.2 Knowledge Sharing

In the knowledge-based view, knowledge has been considered the most strategically significant resource and a primary source of value creation(Felin & Hesterly, 2007). Individuals have valuable knowledge, which they can share to transfer to different individuals and groups(Ipe, 2003). Knowledge sharing is an essential organizational characteristic for maintaining a sustainable competitive advantage(Bollinger & Smith, 2001). Knowledge sharing is a critical process that connects all the other knowledge management processes and practices. It is difficult for an organization to fully benefit from the efforts it has made in its ability to capture and create knowledge without knowledge sharing(Abdelwhab Ali et al., 2019).

Knowledge sharing became an interest for practitioners and researchers. Thereby, the terminology was defined by different scholars. Connelly & Kelloway (2003) explained knowledge sharing as" the exchange of knowledge or the behavior that helps others with knowledge." Yi (2009) described knowledge sharing at work as "a set of behaviors that involves sharing one employee's work-related knowledge with another employee to achieve organizational goals." Wang (2009) defined knowledge sharing as "the transfer of wisdom,

skills, and technology between organizational subunits". Lin (2015) referred to knowledge sharing as "collective beliefs or behavioral routines related to exchanging employee knowledge, experiences, and skills throughout a department or organization". In line with the above, all scholars confirmed that knowledge sharing is communication behavior that leads to transfer and knowledge between groups of people or individuals in both implicit and explicit forms.

2.4.3 Reasons Behind Knowledge Sharing Implementation

Knowledge sharing between organizational units and employees can result in significant learning gains and is a potent mechanism for raising an organization's productivity and survival prospects(Riege, 2007). Furthermore, it enables employees to share, contribute, and add value to knowledge applications, enhancing the organization's competitive advantage(Mao et al., 2016; Marouf, 2016). It can reduce production costs, assist in the development of new products and projects, improve team performance and the organization's ability to innovate, and boost sales and revenue(Alsharo et al., 2017; Cao & Chen, 2021; Estrada et al., 2016; Gong et al., 2009; Ha et al., 2017; Marouf, 2016). Since knowledge sharing implementation positively and significantly impacts organization success from different perspectives. Different studies have been conducted and the most typical finding is that using collective know-how and expert opinion facilitated by knowledge sharing improves task completion, problem-solving, and decision-making efficiency which leads to boosting and improving employee performance(Masa'deh et al., 2016; Zhu, 2017). Also, knowledge sharing has been demonstrated to improve employees' absorptive capacity since participation in mutual discussion and to exchange of ideas enhances an individual's ability to make sense of things(Kang & Lee, 2017). From a physiological effect perspective, Jiang & Hu (2016) found that knowledge sharing boosts employee satisfaction by promoting quality relationships, reducing work-related stress, and reducing work-life conflict.

Furthermore, the studies confirmed that intensive knowledge sharing significantly affects team performance and creativity(Cheung et al., 2016; Song et al., 2015). From the organizational level, different studies revealed that knowledge sharing has a significant and vital role in enhancing and augmenting organizational performance(Gomes et al., 2017; Mohd Noor et al., 2015; Oyemomi et al., 2016; Rezaei et al., 2017). According to Z. Wang et al. (2016), knowledge sharing promotes organizational learning capability and enables knowledge embedment in routines and procedures, as well as knowledge exploitation in relationships with stakeholders. In SMEs, De Clercq et al. (2015) revealed that there is an

association between knowledge sharing and organizational entrepreneurship. Organizations can develop knowledge that can be utilized to generate new ideas, experiment, compare different decisions, and build innovations through intensive knowledge sharing. Based on the above, it is clear that the impact of knowledge sharing can be categorized into three primary levels: individual, team, and organizational.

2.5 Motivation to Learn

2.5.1 Motivation Overview

Motivation is one of the most crucial factors organizations require to achieve their goals and objectives(Dobre, 2013; Kanfer et al., 2017; Osabiya, 2015; Shahzadi et al., 2014; Zlate & Cucui, 2015). Also, motivation is considered one of the most significant concepts in human management, which is critical for managers who want to guide and direct their subordinates' growth toward worthwhile goals(Sabir, 2017). Generally, motivation is defined as " an internal or external state that motivates and directs behavior toward a particular goal"(Mullins, 2007). Denhardt et al. (2008) also defined motivation as "an inner state which influences individuals to behave in a particular manner to accomplish specific goals and purposes." According to Deci & Ryan (2013), motivation is " psychological forces within a person that determines the course of that behavior in an organization." Buchanan & Huczynski (2019) contended that "Motivation is a blend of goals towards which people behavior is focused; the process through which those goals are pursued and achieved, and the social factors involved."

Intrinsic and extrinsic are the main two kinds of motivation. Intrinsic motivation is "the doing of an activity for its inherent satisfactions rather than for some separable consequence". While extrinsic motivation is defined as " doing something because it leads to a separable outcome." On the other hand, extrinsic motivation includes tangible rewards such as salary, security, promotion, contract of service, the work environment, and conditions of service. (Ryan & Deci, 2000).

Due to the significance of motivation factors, different studies were conducted to study its positive effects on different aspects. Individuals with a great and strong motivation to learn make every attempt to learn whenever a learning opportunity presents itself, potentially leading to the acquisition of new skills and knowledge(Simmering et al., 2009). As an example, Blumenfeld et al., (2006) confirmed that motivation assists an individual in establishing and improving the quality of their cognitive engagement, which leads to goal

achievement and success. Furthermore, staff commitment, performance, job morale, satisfaction, and timely service delivery are all influenced by motivation(Musinguzi et al., 2018; Sudiardhita et al., 2018.

2.5.2 Motivation to Learn

According to Tombs (2011), definitions of motivation to learn can be classified into one of four categories. These include (a) definitions that are semantic equivalents of the term motivation to learn, (b) process-oriented definitions, (c) product-oriented definitions, and (d) definitions that encapsulate attitudes. Noe (1986) provided one of the first models that focused on individual and environmental characteristics as antecedents of motivation to learn and motivation to learn as a significant driver of training outcomes. He provided a semantically equivalent straightforward definition and includes expressions corresponding to the term motivation. He defined the term motivation to learn as "motivation to learn is a specific desire of the trainee to learn the content of the training program". The second set of definitions can be classified as 'process oriented,' as they are focused on specific behaviors that are linked to motivation to learn. Here, Colquitt et al., (2000) defined the term as "the direction, intensity, and persistence of learning-directed behavior in training contexts." Also, f Kanfer & Ackerman (1989) defined the term as "the direction of attentional effort, the proportion of total attentional effort directed to the task (intensity), and the extent to which attentional effort toward the task is maintained over time (persistence)." The third category of definitions, referred to as product-oriented, includes the likely outcomes of motivation to learn behavior rather than the behaviors themselves. Marshall (1987)gives an example of this definition as "the meaningfulness, value, and benefits of academic tasks to the learner, regardless of whether or not they are intrinsically interesting." Finally, the fourth group of definitions presented an attitudinal perspective. As an example of a definition from an attitudinal perspective, Wentzel & Asher (1995) defined the term as "Children's commitment to school work, interest in school, effort expended in the classroom, and concern with earning a positive evaluation of work."

Previous research has shown that motivation to learn is significantly affecting knowledge acquisition. Thus, a meta-analytical investigation was conducted and found that motivation to learn positively correlated with declarative knowledge and skill acquisition(Colquitt et al., 2000). Machin & Treloar (2004) confirmed that motivation to learn significantly affected the trainee's reaction and learning. Another study conducted to determine the efficacy of training features that inspire motivation to learn and the effectiveness of training for workplace

learning. The scholars found that motivation to learn positively influenced training effectiveness(Aziz & Selamat, 2016).

2.6 High-Performance Work System

2.6.1 Human Resources Management

Human Resource Management (HRM) is the process of managing and employing employees to achieve specific goals(Armstrong, 2006b). HRM's emergence as a replacement for personnel management was chronicled in early 1970s literature, highlighting a shift in the function's boundaries, substance, and objectives(Miller & Burack, 1981). HRM has been widely accepted as a professional title in seminar programs, business publications in universities and colleges, and as the title of professor positions since the mid-1970s(Huselid, 1995). It is considered a strategic asset, and research has shown that human resources (HR) policies and practices are a key source of a company's competitive advantage in the marketplace because they are difficult to imitate(AlShaikhly & AlTaher, 2017). HRM is a holistic and integrated approach to people's employment and development. HRM can be seen as a philosophy about how people should be managed, underpinned by many theories about human and organizational behavior. It is concerned with the ethical dimension of how people should be treated following a set of moral principles and the contribution it may make to increasing organizational effectiveness through people(Armstrong & Taylor, 2014).

The evolution of HRM provides a significant and valuable perspective on HR's function. It encompasses crucial aspects such as HRM's role as a source of competitive advantage, HRM's integration into corporate strategy, and, eventually, line managers' role as key players in strategy implementation(Barney, 1991; Brewster et al., 1992; Lengnick-Hall et al., 2009). HRM has evolved from an administrative and reactive function to a new strategic, executive, and proactive domain in the previous 25 years(Brockbank, 1999). Because of this evolution, various perspectives on strategic HRM have emerged. For instance, Watson (2010) stated that HRM is " HRM is the managerial utilization of the efforts, knowledge, capabilities and committed behaviors which people contribute to an authoritatively coordinated human enterprise as part of an employment exchange (or more than temporary contractual arrangement) to carry out work tasks in a way which enables the enterprise to continue into the future". Also the term is simply defined as "The people an organization employs to carry out various jobs, tasks and functions in exchange for wages and other rewards"(DeNisi & Griffin, 2005). Another scholar defined the term as " the managerial utilization of the efforts,

knowledge, capabilities and committed behaviors which people contribute to an authoritatively coordinated human enterprise as part of an employment exchange (or more temporary contractual arrangement) to carry out work tasks in a way which enables the enterprise to continue into the future" (Watson, 2010). O'Brien (2011) defined the term as "management function within organizations that is concerned with people and their relationships at work". Another definition for the term was stated by Dessler (2013) as " the process of acquiring, training, appraising, and compensating employees, and of attending to their labour relations, health and safety, and fairness concerns". It also defined as " "management function within organizations that is concerned with people and their relationships at work"(Vincent & Joseph, 2013).

To describe the HRM concept, different models are postulated. According to Armstrong & Taylor (2014), models are; The Matching Model (Fombrun et al., 1984), The Harvard model(Beer et al., 1984), The European Model(Brewster, 1993), The Contextual Model(Hendry & Pettigrew, 1990), The 5-P model (Schuler, 1992), and The hard and soft model(Storey, 1992). Table 2.5-1 summarize how each model described HRM concept;

Table 2.6-1: HRM Models

HRM Models	**Source**
The authors assert that HR systems and organizational structure should be controlled in accordance with corporate strategy, hence the term "Matching model." According to this model, the human resource cycle comprises four generic processes: selection, appraisal, rewarding, and development.	(Fombrun et al., 1984)
The Harvard model recognizes that various stakeholders must be taken into account by the organization. As a result, all of these stakeholders play an equal role in affecting organizational outcomes. As a result, the interests of various groups must be brought together and considered when developing HRM and business initiatives.	(Beer et al., 1984)
The European Model is based on the idea that European organizations have restricted autonomy. The European model considers the interactions between HR strategies, business strategies, and HRM practices, as well as their interactions with the external environment, including national culture, power structures, legislation, education, and employee representation.	(Brewster, 1993)
The Contextual Model Approach (Hendry and Pettigrew, 1990) focuses on mapping the context, establishing an inner (inside the organization)	(Hendry & Pettigrew, 1990)

and an outer (within the wider environment), and investigating how HRM reacted to changes in context.	
The 5-P model is based on five components of human resources: philosophies, policies, programs, practices, and processes. According to this model, these actions constitute an intrinsic element of the HRM strategy for achieving organizational strategic goals. One important part of this model is the evaluation of external factors such as crucial success factors, threats, and opportunities, as well as internal organizational characteristics such as culture and business nature.	(Schuler, 1992)
The model differentiated between two types of HRM: soft and hard HRM. Individuals and their self-direction are emphasized in the soft perspective, which places commitment, trust, and self-regulated behavior at the center of any strategic approach to people. On the other hand, the complex model highlights the rationalism that underpins strategic business fit and focuses on the necessity to manage people so that the organization derives more value from them and therefore achieves competitive advantage.	(Storey, 1992)

The HRM-Performance relationship has been studied from various perspectives, including organizational behavior, sociology, economics, labor relations, and organizational psychology(Paauwe, 2009). From mid's the 90s, different perspectives on HRM practices arose. Delery & Doty(1996) stated that HRM perspectives were as follows; the Universalist or 'Best Practices' perspective, the Contingent or 'Best Fit' perspective, and the Configurational or 'Bundling' perspective. From a Universalist perspective, it is considered that there is a set of HRM best practices that, irrespective of the organization using them, will lead to improved performance. There are no universal HRM guidelines from a contingent or best-fit perspective. With the best fit, an organization's HRM policies must be aligned with other organizational features, particularly the strategy (vertical fit). Finally, the configurational or bundling perspective refers to the creation and execution of several HRM practices that are interconnected and complementary. These approaches premised on the assumption that HRM systems can influence organizational performance by influencing employee attitudes and behavior(Nishii et al., 2008).

2.6.2 High-Performance Work System

With the advancement of globalization, a talented, flexible, and motivated workforce is perceived as a competitive resource that may assist a firm in sustainably building its

competencies. According to this perspective, employee management has shifted away from the early control of employees advocated by Taylor's scientific management to a focus on how to recognize the value of each employee, develop their skills, and motivate them so that they are more willing to make discretionary efforts for the organization(Stofkova & Sukalova, 2020). In general, a system of practices intended to improve and boost performance outcomes through the above-mentioned work path is referred to as high-performance work system (HPWS).

Lawler III (1986) introduced the first dominating HPWS, 'high involvement management,' which involves employees in financial and psychological tasks. Then Arthur (1994) proposed the 'high commitment system' as another leading variant of HPWS. In particular, this proposed version of HPWS focused on building committed employees who can be trusted to utilize discretion to complete job responsibilities in ways that are consistent with organizational goals. Huselid (1995) is the first major scholar who studied the HPWS. Huselid (1995) has suggested that this system is more concerned with the outcomes once a set of practices has been implemented. Reduced employee turnover, increased productivity, and improved financial performance are all examples of the outcomes obtained. HPWS refers to high involvement work and high commitment work systems (Arthur, 1994; Guthrie, 2001). Most studies use different terms, namely, high involvement, high commitment, and high performance, interchangeably since they describe the main fundamental principle in general. In detail, they describe how employees are managed or engaged, leading in the identification of certain HR practices as boosting employee effectiveness and attaining improved organizational performance(Arthur, 1994; Huselid, 1995; Lawler III, 1986).

There are different definitions for HPWS. Huselid (1995) defined HPWS as " a collection of individual, interrelated HR practices that increase the performance of employees and organizations through improving the competence, attitudes, and motivation of the workforce." Cooke (2001) defined HPWS as a collection of core HR strategies that are required for high performance existing and in which incentives, high levels of training, employee involvement, rigorous selection methods, advancement from within, flexible work arrangements, job stability, and information sharing are considered as examples of this system. Way (2002) defined the term as interconnected practices that recruit, develop, and motivate higher-skilled individuals. Furthermore, motivated personnel put these abilities to work, resulting in improved performance and, as a result, the company's overall performance. Evans & Davis (2005) defined it as "an integrated system of HR practices that is internally

consistent (alignment among HR practices) and externally consistent (alignment to organizational strategy) that include selective staffing, self-managed teams, decentralized decision making, extensive training, flexible job assignments, open communication, and performance-contingent compensation". HPWS has a variety of names, definitions, and approaches. Still, they all imply that HPWS are management practices that boost employee empowerment while also strengthening their skills and encouraging them to take advantage of this greater empowerment(Appelbaum et al., 2000; Boxall & Macky, 2009).

2.6.3 High-Performance Work System Component

The scholars stated that HPWS is multidimensional (Huselid, 1995; Pfeffer & Jeffrey, 1998). HPWS is considered a bundle of systems that employ different practices: selection and recruitment, training and development, performance appraisal, compensation, involvement in decision-making, and information sharing(MacDuffie, 1995). According to strategic human resource management theory, these practices develop employees' knowledge, skills, and talents while motivating people to work to their full potential, resulting in good organizational performance and productivity(Becker et al., 1998; Schuler, 1992).

2.6.3.1 Selection and Recruitment

Even though individuals rely more on technology in many aspects of their lives, the human factor plays a critical part in organizational success. Though human resources should be improved over time, developing and augmenting suitable staffing procedures is the first step toward ensuring personnel has the traits, abilities, and knowledge to serve the organization(Lado & Wilson, 1994). Staffing practice involves recruiting and selecting individual personnel. Armstrong (2006a) argued that selection and recruitment are significant facilitator factors for an organization to gain a competitive advantage. Typically, recruitment and selection are considered as one process with the ultimate objective of filling a vacant position at an institution with the best individual for the job, who is either internally or on the job market(Staw, 1980). As a result, this practice should be included in the HRM system as one of the key practices on which the organization relies to develop competent and capable human capital(Miles & Snow, 1984).

Recruitment is the process of recognizing and attempting to attract candidates talented for filling job vacancies fitting. While the part of the recruitment process that involves determining which applicant or candidate should be hired for the job is known as selection(Armstrong, 2006a; Emsley et al., 2007). According to Armstrong (2006a), there are

four stages to recruiting and selection. The first stage of determining requirements includes creating role profiles and person specifications; deciding the terms and conditions of employment. Planning recruitment campaigns is the second stage. The third stage is attracting candidates, which includes reviewing and evaluating alternative sources of applicants, advertising, and consultants. The fourth and last stage is selecting candidates, shifting applicants, interviewing, testing, assessing candidates, offering employment, and obtaining references.

2.6.3.2 Training and Development

Due to the tremendous development of individuals' life and extraordinary technological advancement, the world is undergoing rapid transformation and change. These developments and changes are pushing the individual to undergo intensive training to keep up and adapt to the rapid changes in their environment(Carnevale, 1990). Training is considered one of the important and key methods for individuals in any organization to improve and boost their skills and talents, and it has been shown to positively impact organizational performance(J. Delery & Gupta, 2016; Pfeffer & Jeffrey, 1998). Furthermore, it is considered one of the most important factors in ensuring an adequate supply of technically and socially qualified individuals to complete the task properly. As a result, scholars had emphasized the importance of training as a critical component of any HRM system(Miles & Snow, 1984).

There were various scholars stated the important role training played. Pfeiffer & Marmo (1981) argued that organizations always engage in activities for symbolic reasons. According to this perspective, training is provided not because it is helpful or increases worker productivity but rather as a goodwill gesture from employers showing the company cares about them and values their relationship. Also, a scholar emphasized the significance of training as a complement to selection to influence company culture and employee behavior in synchronization to achieve positive outcomes(Huselid, 1995). Cooke (2001) asserted that training is a crucial instrument for acquiring the knowledge and skills needed to improve individual employee performance. Furthermore, according to human capital theory, training is an investment in employees' skills, knowledge, and talents that leads to greater productivity and quality of organizational performance(I. Ng & Dastmalchian, 2011).

2.6.3.3 Involvement

The concept of employee involvement is broad and encompasses a wide range of practices(Fenton-O'Creevy, 2001). It is one of the most crucial aspects of human resource

management. Furthermore, It is one of the most significant factors of the work performance system in terms of employee motivation, organizational performance, and efficiency(McMahan et al., 1998; Morgan & Zeffane, 2003). This concept describes how companies can improve their performance by cultivating employee interest, loyalty, and commitment(Cotton, 1993).

Involvement and participation entail building human capabilities, promoting ownership, and fostering accountability and responsibility. Hence, it is crucial as it leads to unified visions, goals, and values(Amah & Ahiauzu, 2013). In light of the preceding, employee involvement is defined as participation in making decisions and implementing them in the organization(Lodahl & Kejnar, 1965). Additionally, the level of participation by members in an organization's decision-making process is called involvement. Kanungo (1982) defined the concept as "the degree to "which one is cognitively preoccupied with, engaged in, and concerned with one's present job". Lawler (1986)classification defined employee involvement as "a process dependent on a variety of other organization systems". Employee involvement is also entitled participative management and it referred to " the degree to which employees share information, knowledge, rewards, and power throughout the organization"(Empowerment, 2000; Vroom & Jago, 1988).

Scholars confirmed that employees with a higher level of involvement tend to have more control over the decision, process, and consequences. Employee involvement is believed to improve employees' skills to perform jobs well, raise their value to the organization, and provide them with more resources for planning and managing their careers(Hinckley Jr, 1985). It imposes the sharing of information and knowledge, as employees require greater knowledge to make a significant contribution to the decision-making process(McShane & Von Glinow, 2003.

2.6.3.4 Performance Appraisal

Performance appraisal is one of the essential practices through which an organization can assess the performance of its employees and identify deficiencies or weaknesses in individual performance(R. Noe et al., 2006). The performance appraisal process can be defined as " the process of identifying, observing, measuring, and developing human performance in organizations" (Carroll & Schneier, 1982). Henderson (1980) defined performance appraisal as "a measure of the output of a job holder that contributes to productivity". The concept is also defined as measuring work and its outcomes using a scale and index that can be used to

precisely measure the intended quantity and quality while avoiding subjective judgments and ambiguous evaluation criteria(Fletcher, 2001).

Armstrong (2009) asserted that performance appraisal is considered to be one of the most critical and valuable instruments in a manager's toolbox. Although performance appraisal is a critical management tool that is typically used to make personnel decisions about employees' positions, such as promotion, transfer, and payment, it can also be used for employee training and development(Feldman, 1981). The intended outcomes of an effective performance appraisal system, according to Mohrman Jr et al. (1989) are: that the employee being appraised will have an augmented motivation to perform effectively. Furthermore, according to DeNisi & Pritchard (2006), a performance appraisal is intended to motivate employees to focus their efforts on the organization's goals. Organizations frequently use performance appraisal to motivate and assess their employees' performance. This performance evaluation method can also detect employee perceptions, preferences, beliefs, and developing areas concerning organizational objectives. Consequently, they are considered valuable members of the organization's staff and will be more committed to their organization (Getnet et al., 2014). Accordingly, more outstanding employee commitment and dedication will boost organizational effectiveness by retaining skilled and experienced personnel, lowering turnover intentions(Kadiresan et al., 2015).

2.6.3.5 Compensation

Compensation is the total amount of monetary and non-monetary awards and advantages provided by an employer to an employee in exchange for work completed as needed and as part of an employment relationship(Armstrong & Murlis, 2007). Ehrenberg & Milkovich (1987) defined pay level as the "average compensation paid by a firm relative to that paid by its competitors". Mondy & Noe (2005) defined compensation as the “total of all rewards provided to employees in return for their services”. There are two types of compensation rewards: direct and indirect. All earnings based on time worked or output generated are referred to as direct compensation. Basic pay (salary), incentive or performance pay, and supplemental compensation, such as overtime, are all examples of this. Employee benefits and services such as income protection and security , paid time off, and various employee services and perquisites are all included in indirect compensation(SoonYew et al., 2008).

According to Pfeffer (1994), compensation is one of the most successful strategies to alter employees' personalities and motivate individual employees. Additionally, according to

studies, higher compensation leads to increased job satisfaction(Malik et al., 2012; Nawab & Bhatti, 2011). In particular, different studies have shown fixed pay to boost employee motivation and job satisfaction(Card et al., 2012; Igalens & Roussel, 1999). Compensation and employee benefits were all found to be positively and statistically associated with organizational competitiveness(Resurreccion, 2012; Šikýř, 2013). Moreover, other studies conducted and confirmed the significant influence of compensation on employee performance(Arif et al., 2019; Syahreza et al., 2017). Also, it has been shown that compensation plays a significant role in employee retention(Anis et al., 2011; Khalid & Nawab, 2018).

2.7 Relationship between Transformational Leadership and Innovative Work Behavior

Innovation plays a significant and vital role in today's competitive and technologically advanced environment(Tushman & Nadler, 1986). Employee innovation is one of the most effective approaches to promoting innovation and organizational success(O'Sullivan & Dooley, 2008). Researchers and practitioners have focused on the role of managers as leaders in motivating people to innovate in intensive knowledge-based work contexts(J. P. J. De Jong & Den Hartog, 2007). Consequently, scholars have been increasingly interested in developing approaches to persuade employees at the individual level to exhibit creative behaviors through transformational leadership(Gong et al., 2009). Transformational leadership entails building and cultivating an innovative environment, as well as inspiring, stimulating, and encouraging employees to believe in and align with the leader's vision, all of which have a significant impact on the organization's innovation and performance(Boehm et al., 2015; Mittal & Dhar, 2016; T. W. H. Ng, 2017). By promoting innovation, inspired motivation, individualized thought, intellectual stimulation, and trust among the organization's employees, transformational leaders enhance the skills of their workforce(B. M. Bass & Avolio, 2000).

Furthermore, such leaders typically have strong internal and external connectivity networks and develop these relationships. When combined with a trusted partnership, knowledge sharing and creative thinking are considered core components of innovation(L. Chen et al., 2016). Consequently, transformational leadership has been associated with innovative work behavior(Afsar et al., 2014).

Numerous empirical investigations have demonstrated the significance of the relationship between transformational leadership and innovative work behavior. A study by Afsar & Masood (2018) investigated how transformational leadership influences employees' innovative work behavior among nurses with multiple moderators and mediator factors, namely, creative self-efficacy, trust in supervisors, and uncertainty avoidance. The study adopted and distributed a survey questionnaire to gather the required data, and thereby, there was 539 usable and matched survey collected from subordinate nurses and supervisors of nurses. The study confirmed that transformational leadership affects directly and significantly affects nurses' innovative work behavior. Furthermore, creative self-efficacy, trust in the supervisor, and uncertainty avoidance played a significant role in explaining the relationship between transformational leadership and innovative work behavior. In the banking industry, Ariyani & Hidayati (2018) studied the impact of transformational leadership and employee engagement on innovative work behavior. The study adopted a survey questionnaire to collect the required data. There were approximately 378 responses. The study revealed that transformational leadership positively impacted employees' innovative work behavior. Also, it revealed that employee engagement significantly mediates the relationship between transformational leadership and innovative work behavior. Afsar et al. (2019) conducted a study to examine the influence of transformational leadership on innovative work behavior through job crafting as a mediator and knowledge sharing as a moderator variable. The study used a questionnaire survey to collect data from 325 subordinates and 126 supervisors working in the hotel industry. The study confirmed that transformational leadership and job crafting significantly influenced employees' innovative work behavior.

Li et al. (2019) conducted a study among 281 multinational organizations in China to investigate the impact of transformational leadership on subordinates' s innovative work behavior through trust in a leader, empowerment, and engagement. The study adopted a survey questionnaire to collect t the data. The study confirmed a significant impact of transformational leadership on followers' innovative work behavior. Both trust in a leader and work engagement played a significant moderator role. Moreover, knowledge sharing significantly moderates the relationship between transformational leadership and innovative work behavior.

In the manufacturing industry, Pradhan & Jena (2019) conducted a study to investigate the effect of transformational leadership on followers' innovative work behavior. The study utilized a survey questionnaire to collect data among two samples working in two different

manufacturing organizations in India. Sample I had 349 responses, and Sample II had 539 responses. The study findings from both samples found a significant relationship between transformational leadership and innovative work behavior.

Khan et al. (2020) had an investigation to examine the effect of leadership styles on innovative work behavior with the mediating and moderating roles of organizational culture and organizational citizenship behavior. The study adopted and distributed a survey questionnaire among heads of departments in HEIs in Pakistan. The study collected about 160 responses. The study confirmed that transformational, transactional, and Laisser-Faire leadership had a positive influence on innovative work behavior. Additionally, the study highlighted mediating and moderating effects of organizational culture and organizational citizenship behavior on such a relationship. A. F. Alheet et al. (2021) investigated the influence of transformational, transactional, and Laisser-Faire leadership on innovative work behavior.

Additionally, the study found that meaningful work played a significant mediator role between transformational leadership and innovative work behavior. The study collected 461 responses by distributing a survey questionnaire among employees of Al-Ahliyya Amman University. The study found that transformational leadership positively and significantly affected employees' innovative work behavior. On the other hand, the study found that transactional leadership and Laisser-Faire leadership negatively impact employees' innovative work behavior. Based on above mentioned empirical studies that examined the relationship between transformational leadership and innovative work behavior within different contexts, the proposed research hypothesis is:

- **H1:** *There is a significant impact of transformational leadership on employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).*

2.8 Relationship between Transformational Leadership and Innovative Work Behavior with Mediating Role of Knowledge Sharing

Knowledge sharing is the practice of employees in an organization sharing knowledge to develop new and valuable knowledge for each other(Van Den Hooff & Ridder, 2004). Knowledge sharing is a critical aspect that has an evident and significant effect on an organization's success and performance(Z. Wang & Wang, 2012a). On the other hand, promoting knowledge sharing processes in an organization is problematic because it only arises and performs well under proper conditions(Bartol & Srivastava, 2002). Accordingly,

Lee et al. (2010) confirmed that leadership has overt effects on the level of knowledge sharing in an organization. Specifically, by building a set of values, assumptions, and beliefs relating to knowledge, transformational leaders create a supportive culture of knowledge that shapes employee behavior toward practicing knowledge activities and participating in knowledge management processes(Ribiere & Sitar, 2003).

Since transformational leadership plays a significant role in promoting knowledge sharing, this topic has attracted the attention of many researchers. Al-husseini & Elbeltagi (2018) investigated the effect of transformational leadership on knowledge sharing. The study adopted a survey questionnaire to collect the required data. Two hundred and fifty usable responses were collected from employees in HEIs in Iraq. The study confirmed that there was a significant and positive effect of transformational leadership on knowledge sharing process. Son et al. (2020) conducted a study to examine the relationship between transformational leadership and knowledge sharing and their role in the performance of Chinees organizations. They adopted a survey questionnaire to collect the required data and confirmed through their analysis and study findings that transformational leadership significantly impacted knowledge sharing.

Furthermore, researchers conducted studies in manufacturing, services, and business context and confirmed transformational leadership's significant impact on knowledge sharing(E.-J. Kim & Park, 2020; Phong & Son, 2020). The research has extended by Al-Husseini et al. (2021) to investigate the associations between transformational leadership, knowledge sharing, and innovation HEIS. The study adopted a survey questionnaire to collect the data; approximately, there were 251 usable responses. The study findings found that transformational leadership significantly and positively impacted innovation. Interestingly, the study found that knowledge sharing play positively mediates the relationship between transformational leadership and innovation.

The knowledge-based view recognizes knowledge as a significant organizational resource and a critical component of organizational innovation(Okoronkwo & Grant, 1996). Employee knowledge, skills, and experiences in value creation are essential in order to innovate (Z. Wang & Wang, 2012b). Because knowledge is embedded in individuals, it is vital to share it across organizational members to build new routines to assist in problem-solving (von Krogh et al., 2012). Accordingly, knowledge sharing is considered to be a vital determinant for innovative work behavior(Kuo et al., 2014). W. Kim & Park (2017) and T. Nguyen et al.

(2019) reported and confirmed that knowledge sharing had a significant relationship with innovative work behavior. In the telecommunication industry, Akram et al. (2020) conducted a study in China and revealed a significant relationship between knowledge sharing and innovative work behavior. Nguyen et al. (2020) investigate the impact of knowledge sharing on innovative work behavior among employees in Pakistan. The study confirmed that knowledge sharing had a direct and significant influence on employees' innovative work behavior. In sum, the following research hypothesis proposed are:

- **H2:** *There is a significant impact of transformational leadership on knowledge sharing of employees in Omani HEIs at level (α≤0.05).*
- **H5:** *Knowledge sharing directly and positively affects employees' innovative work behavior in Omani HEIs at level (α≤0.05).*
- **H8:** *There is a significant mediation impact of knowledge sharing on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level (α≤0.05).*

2.9 Relationship between Transformational Leadership and Innovative Work Behavior with Mediating Role of Motivation to Learn

Motivation to learn is a significant determinant of numerous indicators of training effectiveness, such as improved training satisfaction, higher self-efficacy, higher willingness to impart learned and trained skills, and improved declarative knowledge(Colquitt et al., 2000). Likewise, transformational leadership augments employee attitudes and performance, primarily through its motivating impacts(Avolio et al., 1999). Subsequently, Smy et al., (2016) conducted a study in military context to examine the influence of perceived transformational leadership on trainee motivation to learn. The study adopted a survey questionnaire to gather the required data. The study findings found that perceived transformational leadership significantly affects the trainee's motivation to learn. In the education context, a review for research papers on the effect of transformational leadership on teacher job satisfaction, motivation to learn, trust in leader, and commitment. The scholars confirmed that transformational leaders positively impacted teachers' willingness and motivation to learn(Menon & Ioannou, 2016). The scholars extended the research and confirmed that transformational leaders are raising intrinsic motivation of employees, and thereby, employee motivation affects their decision to engage or not in innovative activities(Zuraik & Kelly, 2019). Employee engagement in innovative activities results in

innovative behavior in which employees go beyond individual tasks to interact with colleagues, make suggestions to improve the organization and work to augment the organization's position in the external environment(Venkoba, 2016).

Employees' innovative behavior is a significant factor in determining organizational competitive advantage(Liu, 2017). Psychological drivers that permit and promote individual innovative behavior are of major interest to scholars and practitioners(Amabile, 1988; Scott & Bruce, 1994). Researchers have consistently believed that motivation to learn is a significant driver of innovative behavior(Montani et al., 2014). Employees motivated to learn are keener to put in an effort based on their curiosity and desire to learn(Ryan & Deci, 2000). Hence, motivation to learn is viewed as one of the key determinants for innovative work behavior(Shalley et al., 2004). Accordingly, different empirical studies conducted to examine the relationship between innovative work behavior and learning motivation. Yu et al. (2018) investigate the effect of motivation to learn on innovative work behavior by highlighting the moderator effect of transfer climate and motivation to transfer. The study adopted a survey questionnaire and collected about 606 usable responses. The study confirmed that motivation to learn and transfer climate significantly impacted innovative work behavior. Afsar & Umrani (2019) conducted a study to examine the influence of transformational leadership on employees' innovative work behavior by highlighting the mediation role of motivation to learn and the moderating role of task complexity and innovation climate. The study collected about 338 responses by distributing a questionnaire among service and manufacturing firms employees. The study confirmed the significant relationship between innovative work behavior and motivation to learn. Furthermore, it confirmed the positive mediation role of motivation to learn on the relationship between transformational leadership and innovative work behavior. Therefore, this study proposes the following hypothesis based on theoretical assumptions and previous research evidence:

- **H3:** *There is a significant impact of transformational leadership on employees' motivation to learn in Omani HEIs at level ($\alpha \leq 0.05$).*
- **H6:** *Motivation to learn significantly influences employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).*
- **H9:** *There is a significant mediation effect of motivation to learn on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).*

2.10 Relationship between Transformational Leadership and Innovative Work Behavior with Mediating Role of High-Performance Work System

Any organization's primary concern is to provide a safe working environment through employee inspiration, encouragement, incentives, and sharing. From an organizational perspective, managing employees and their expertise is vital in attaining the organization's strategic goals(Salampasis et al., 2015; Salman et al., 2020). Thus, leadership and human capital are important for the organization(Cillo et al., 2019; Del Giudice et al., 2018). Leroy et al. (2018) revealed that HRM practices and leadership interact from various perspectives when it comes to managing people at work. In particular, leadership is responsible for understanding, predicting, and controlling the personal and interpersonal dynamics of the organization's employees and how they influence each other (Peter G Northouse, 2021). In contrast, HRM practices focus on how the firm's system and processes affect the employees on a larger scale(Lievens, 2015). Specifically, transformational leaders motivate their followers, build trust, and improve the information and knowledge sharing process, making it the most recommended approach among firms looking for higher performance mechanisms(Boehm et al., 2015). Also, such leaders need HR practices to support their leadership; those transformational leaders positively influence the HR practices adoption and implementation(Pemula, 2017).

In line with above, different scholars investigate the relationship between HPWS and transformational leadership. Imran et al. (2020) investigated the influence of transformational leadership and HPWS on job performance. By distributing a survey questionnaire among a purposive sample of employees working in service organizations, the study collected about 400 responses. The study findings revealed that transformational leadership significantly affects HPWS and job performance. Ehrnrooth et al., (2021) conducted a study to examine how transformational leadership and HPWS influence employees' attitudes. The scholars distributed a survey questionnaire among five multinational companies. The study confirmed that transformational leadership affects employees' attitudes once it interacts with HPWS.

HPWS influences organizational performance by three main mechanisms: a raise in employees' knowledge and skills, an increase in employees' actions and attitudes, and an increase in employees' motivation for such behaviors. Implementing three mechanisms

significantly affects behavior and creativity(Spratt, 1997). It is considered one of the vital factors that are more conducive to the stimulus of employee behavior and innovative work behavior(Boxall, 2012). Escribá-Carda, Balbastre-Benavent, & Teresa Canet-Giner (2017) conducted a study intended to investigate the relationship between employee perceived HPWS and innovative behavior with mediating role of exploratory learning. The study findings demonstrated that HPWS has a significant role in promoting exploratory learning and employee innovative behavior. In the Omani context, Imran & Al-Ansi (2019) conducted a study investigating the effect of HPWS and job engagement on innovative work behavior. The study adopted a survey questionnaire to collect the required data; there were about 260 responses. The study results showed both HPWS and job engagement had a positive and significant impact on employees' innovative work behavior. Husin et al. (2021) examined the impact of HPWS on innovative work behavior through the mediation role of work engagement. The study found through their literature that HPWS significantly affects employees' innovative work behavior and specifically increases when work engagement mediating the relationship. Based on the above literature studies, the following hypothesis are proposed;

- **H4:** *Transformational leadership significantly affects high-performance work system in Omani HEIs at level ($\alpha \leq 0.05$).*
- **H7:** *High-performance work system significantly affects employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).*
- **H10:** *There is a significant mediation impact of a high-performance work system on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level ($\alpha \leq 0.05$).*

2.11 Summary

After critically reviewing the literature, the researcher intends to discuss and investigate the influence of transformational leadership on employees' innovative work behavior by highlighting the mediation role of multiple factors, namely, knowledge sharing, motivation to learn, and high-performance work system. Table 2.11-1 presented all studies discussed investigating the relationship between research variables.

Table 2.11-1: Empirical Studies

Reference	**Publishing year**	**Country**	**Context**	**Research Problem**	**Independent Variable**	**Dependent Variable**	**Meditator Variable**	**Moderator Variable**	**Data Collection Methodology**	**Data Analysis**
(Afsar & Masood, 2018)	2018	Pakistan	Health	To examine the influence of transformational leadership on innovative work behavior through creative self-efficacy, trust in supervisor, and uncertainty avoidance.	Transformational leadership	Innovative work behavior	creative self-efficacy	trust in supervisor, and uncertainty avoidance.	A survey questionnaire	Correlation and hierarchical moderator regression
(Ariyani & Hidayati, 2018)	2018	Indonesia	Bank	To examine the effect of transformational leadership and employee engagement on innovative work behavior.	Transformational leadership	Innovative work behavior	Employee engagement	Not Mentioned	A survey questionnaire	multiple linear regression analysis
(Afsar et al., 2019)	2019	Pakistan	Hospitality	To examine the impact of	Transformational leadership	Innovative work behavior	Job crafting	Knowledge sharing	A survey questionnaire	partial least square-

				transformational leadership on innovative employee's innovative work behavior through mediating role of job crafting and moderato role of knowledge sharing						structure equation modeling (PLS-SEM)
(Li et al., 2019)	2019	China	Pharmaceutical, electronics, and automobile manufacturing industry	To investigate the effect of transformational leadership on innovative work behavior through trust in a leader, empowerment, and work engagement.	Transformational leadership	Innovative Work behavior	Trust in leader and work engagement	Empowerment	A survey questionnaire	SPSS macro process and bootstrapping
(Pradhan & Jena, 2019)	2019	India	Manufacturing industry	To test the effect of transformational leadership on innovative work behavior with mediating role of meaningful work.	Transformational leadership	Innovative work behavior	Meaningful work	Not Mentioned	A survey questionnaire	Confirmatory factor analysis, hierarchical regression analysis, and Sobel test.

(M. A. Khan et al., 2020)	2020	Pakistan	Education	To test the effect of transformational, transactional, and Laisser-Faire leadership on innovative work behavior by highlighting the moderator and mediator role of organizational culture and organizational citizenship behavior.	Transformational, transactional and Laisser-Faire leadership	Innovative work behavior	Organizational culture	Organizational citizenship behavior	A survey questionnaire	partial least square-structure equation modeling (PLS-SEM)
(A. F. Alheet et al., 2021)	2021	Jordan	Education	To examine leadership styles' impact on employee's innovative work behavior	Transformational, transactional and Laisser-Faire leadership	Innovative work behavior	Not Mentioned	Not Mentioned	A survey questionnaire	Factor analysis, Pearson correlation, and multiple regression
(Al-husseini & Elbeltagi, 2018)	2018	Iraq	Education	To examine the influence of transformational leadership on knowledge sharing	Transformational leadership	Knowledge sharing	Not Mentioned	Not Mentioned	A survey questionnaire	Structural equation modeling (SEM)

				in Iraqi HEIs.						
(Son et al., 2020)	2020	China	Manufacturing and services	To explore the impact of transformational leadership and knowledge sharing on performance of manufacturing and services organizations in China	Transformational leadership	Performance	Knowledge Sharing	Not Mentioned	A survey questionnaire	Analysis of Moment Structures (AMOS)
(Phong & Son, 2020)	2020	Vietnam	Manufacturing and services	To examine the effect of transformational leadership and certain parts of justice on employee knowledge sharing behaviors.	Transformational leadership	Knowledge sharing	Justice on employees	Not Mentioned	A survey questionnaire	Structural equations modeling (SEM)
(E.-J. Kim & Park, 2020)	2020	Korea	Business	The relationships between transformational leadership, organizational environment,	Transformational leadership	Organizational learning	Organizational climate and knowledge sharing	Not Mentioned	A survey questionnaire	Structural equations modeling (SEM)

				employees' knowledge-sharing behavior, and organizational learning were investigated in this study.						
(Al-Husseini et al., 2021)	2021	Iraq	Education	To examine the relationship between transformational leadership, knowledge sharing, and innovation.	Transformational leadership	Innovation	Knowledge sharing	Not Mentioned	A survey questionnaire	Structural equations modeling (SEM)
(W. Kim & Park, 2017)	2017	Korea	Not specified	The current study's primary goal is to analyze employee work engagement and its structural links with organizational, procedural justice, employee knowledge sharing, and employee innovative work	Organizational, procedural justice	Innovative work behavior	Knowledge sharing and work engagement	Not Mentioned	A survey questionnaire	Structural equations modeling (SEM)

				behavior in depth.						
(T. Nguyen et al., 2019)	2019	Vietnam	Telecommunication industry	The study investigates the impact of various factors on knowledge sharing processes, such as trust, enjoyment in helping others, knowledge self-efficacy, management support, and use of information and technology	Trust, enjoyment in helping others, knowledge of self-efficacy, management support, and using information and communication technology	Innovative work behavior	Knowledge sharing	Not Mentioned	A survey questionnaire	Exploration factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM)
(Akram et al., 2020)	2020	China	Telecommunication industry	This study seeks to determine the impact of organizational justice on employees' innovative work behavior in the Chinese telecommunications	organizational justice	Innovative work behavior	Knowledge sharing	Not Mentioned	A survey questionnaire	Conformity factor analysis and structural equation modeling (SEM)

				sector, while also investigating the mediating role of information sharing between the study's independent and dependent variables.						
(T. P. L. Nguyen et al., 2020)	2020	Pakistan	Not specified	To examine the impact of knowledge sharing on employees' innovative work behavior.	Knowledge sharing	Innovative work behavior	Not Mentioned	Not Mentioned	A survey questionnaire	Ordinary least squares (OLS) regression
(Smy et al., 2016)	2016	United Kingdom	Military	To examine the influence of perceived transformational leadership on trainee motivation to learn	Transformational leadership	Motivation to learn	Valence and instrumentality	Not Mentioned	A survey questionnaire	Structural equation modeling (SEM)
(Menon & Ioannou, 2016)	2016	Not specified	Education	To examine the influence of transformational leadership on teachers' job	Transformational leadership	Job satisfaction, commitment, motivation to learn, and	Not Mentioned	Not Mentioned	Review paper	

				satisfaction, commitment, motivation to learn, and trust in leaders.		trust in a leader.				
(Yu et al., 2018)	2018	China	Business	Examine the interactive effect of motivation to learn, transfer climate, and motivation to transfer on innovative work behavior.	Motivation to learn	Innovative work behavior	Not Mentioned	Transfer climate and motivation to transfer	A survey questionnaire	Multiple regression and bootstrapping
(Afsar & Umrani, 2019)	2019	Pakistan	Services and manufacturing industry	To examine the effect of transformational leadership on innovative work behavior by testing mediation and moderation role of motivation to learn, task complexity, and innovation climate.	Transformational leadership	Innovative work behavior	Motivation to learn	Task complexity and innovation climate	A survey questionnaire	Structural equation modeling (SEM)
(Imran et al., 2020)	2020	Oman	Services industry	To test the impact of transformational	Transformational leadership	Job performance	HPWS	Not Mentioned	A survey questionnaire	Structural equation

				leadership on job performance with the mediation effect of HPWS.						modeling (SEM)
(Ehrnrooth et al., 2021)	2021			Examine the influence of transformational leadership and HPWS on employees' s attitudes.	Transformational leadership	Employee's attitude	Not Mentioned	HPWS	A survey questionnaire	Multilevel regression and moderation analyses
(Escribá-Carda, Balbastre-Benavent, & Teresa Canet-Giner, 2017)	2017	Spain	Public sector	To examine the effect of perceived HPWS on innovative employee behavior and exploratory learning.	HPWS	Innovative behavior	Exploratory learning	Not Mentioned	A survey questionnaire	partial least square-structure equation modeling (PLS-SEM)
(Imran & Al-Ansi, 2019)	2019	Oman	Services industry	To examine the impact of HPWS and job engagement on employees' innovative work behavior.	HPWS	Innovative work behavior	Job engagement	Not Mentioned	A survey questionnaire	partial least square-structure equation modeling (PLS-SEM)

(Husin et al., 2021)	2021	Not specified	Not specified	This research aims to investigate the relationship between HPWS and innovative work behavior. This study will also examine the function of job engagement in mediating the relationship between HPWS and innovative work behavior.	HPWS	Work engagement	Innovative work behavior	Not Mentioned	A conceptual paper	

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The objective of this chapter is to explain and demonstrate the research methodology of this research. This chapter entails a description of the methods that will be implemented in this study: research design, research strategy, population and sampling, data collection, validity and reliability of instrumentation, and statistical methods to be implemented for data analysis. It is essential to highlight here that the key objective of this research is to examine the proposed theoretical research model of transformational leadership's influence on employees' innovative work behavior and to enlighten the mediation effect of knowledge sharing, motivation to learn, and high-performance work system. Hence, this chapter will discuss the methodology implemented to answer the research questions outlined in chapter one. The research design is then elaborated, the instrumentation is stated, validity and reliability are discussed, and data analysis methodologies are explained.

3.2 Research Design

This research intends to examine the impact of transformational leadership on employees' innovative work behavior through the mediation role of knowledge sharing, motivation to learn, and HPWS in HEIs in the Sultanate of Oman. The research design describes the procedures the researcher follows when conducting a study and the entire process of data collection, analysis, and interpretation(Richey & Klein, 2014). Research design assists investigators in developing research boundaries by outlining and describing the study setting, examination, context, and other pertinent issues(Plomp, 2013). Accordingly, this research is conceptualized based on a literature review, and thereby, the research hypothesis is developed to support the relationship between research constructs.

Following Sekaran & Bougie (2016), the research design for this study is based on hypothetic-deductive methodologies, which begin with a literature review, theoretical framework development, hypotheses formulation, and data collection procedures analysis. The process starts with an extensive review of different students, specifically on main research on transformational leadership, innovative work behavior, knowledge sharing, motivation to learn, and HPWS. Through reviewing the literature, a theoretical research framework developed to connect and build a relationship between research constructs and the

research hypothesis developed accordingly. Since this study is co-relational, the research setting is non-contrived. The research model is designed based on the positivist approach, in which the data collected is analyzed, and then research hypotheses are tested(Y. S. Park et al., 2020). The data was collected by distributing self-administrative questionnaire among employees working in Omani HEIs. Because this study is based on predictive variables, it invites individuals to participate as units of analysis(Sekaran & Bougie, 2016). In research, the selected unit is crucial in determining data collection policies. Finally, the study time is chosen as a cross-sectional that only needs to be conducted once to collect data. Table 3.2-1 summarizes the steps followed in research design.

Table 3.2-1: Research Design

The purpose of research	Research hypothesis
Type of investigation	Correlational investigation
Study setting	Non- contrived
Units of Analysis	Individual
Time horizon	Cross-sectional

3.3 Research Strategy

Research strategy refers to guidelines and procedures to be followed and implemented to accomplish research objectives. The most prevalent research methodologies are experiments, surveys, case studies, grounded theory, action research, and archival research (Bell et al., 2022). Saunders et al. (2009) contended that the survey is the most extensively utilized method of data collecting in business and management research of all of these research strategies. Thus, since this research is quantitative and hypothetic deductive, a survey is selected as a research strategy.

Survey strategy is selected for different reasons. The survey strategy allows to gather of quantitative data, and thereby data will be analyzed more statistically (Larsson, 1993). Additionally, when the research selected sample is rational, the survey is the most lower-cost strategy used to make general inferences for the entire population(McLafferty, 2003). The survey is quite simple to grasp from an operational perspective and gives the researcher a simple method of dealing with quantitative data(Kumar, 2018). Self-administered and interviewer-completed questionnaire are the two most common survey data-gathering methods (Saunders et al., 2009). For this research, an online self-administrative questionnaire is selected as a data collection strategy.

3.4 Data Collection

There are two main data sources in research: primary and secondary (Sekaran & Bougie, 2016). This research used both data collections to understand comprehensively and prove the relationship between transformational leadership and employees' innovative work behavior.

3.4.1 Secondary Data

This research collects and reviews different papers conducted within different contexts to gain a comprehensive picture and knowledge of the research problem and expand and develop a theoretical framework. The research papers reviewed in the literature review chapter were found in the following databases: Google Scholar, IEEE, Emerald, and ScienceDirect. The research in the databases mentioned above was based on keywords such as leadership, transformational leadership, knowledge sharing, motivation to learn, human resources management, high-performance work system, and higher education institutions. The papers were reviewed firstly for each variable specifically. Then papers were reviewed to identify a relationship between research constructs, and thereby theoretical framework and research hypothesis were developed.

3.4.2 Primary Data

An online self-administrative questionnaire was selected to gather the primary data. To ensure the reliability and validity of survey questionnaire, some principles in questionnaire development must be followed(De Vaus & de Vaus, 2013).

3.4.2.1 Development of Survey Questionnaire

In terms of the questionnaire form, a closed-ended questionnaire was developed. Then, numerical rating scales were adopted for participants to rate and reflect their perspectives. All responses were made using a seven-point Likert scale (1= ‘strongly disagree’ and 7 = ‘strongly agree’). In terms of questionnaire content, items from past studies have been adopted in the research questionnaire. While in term of wording, both English and Arabic were used to develop the questionnaire items. Following that, the Arabic version of the questionnaire was distributed to the participants. As demonstrated in Table 3.4-1, the measurement items for transformational leadership and innovative work behavior consist of seven and nine items, respectively. Knowledge sharing, motivation to learn, and HPWS include four, four, and twenty-one items, respectively. These items were adopted from Carless et al., (2000); Janssen, (2000); Noe & Schmitt, (1986); Takeuchi et al., (2007); VandeWalle, (1997) studies.

Table 3.4-1: Adopted measurements

Constructs	Statements	Reference
Transformational Leadership	TL1: Communicates a clear and positive vision of the future.	(Carless et al., 2000)
	TL2: Treats staff as individuals, supports and encourages their development.	
	TL3: Supportive Leadership gives encouragement and recognition to staff.	
	TL4: Fosters trust, involvement, and cooperation among team members.	
	TL5: Encourages thinking about problems in new ways and questions assumptions.	
	TL6: Is clear about his/her values and practices what he/she preaches.	
	TL7: Installs pride and respect in others and inspires me by being highly competent.	
Innovative Work Behavior	IWB1: I try to create new ideas for difficult issues and find the e-learning system to be useful in my learning.	(Janssen, 2000)
	IWB2: I search out new working methods, techniques, or instruments.	
	IWB3: I try to generate original solutions for problems.	
	IWB4: I try to mobilize support for innovative ideas.	
	IWB5: I acquire approval for innovative ideas.	
	IWB6: I try making important organizational members enthusiastic about innovative ideas.	
	IWB7: I try transforming innovative ideas into useful applications.	
	IWB8: I introduce innovative ideas into the work environment in a systematic way.	
	IWB9: I evaluate the utility of innovative ideas.	
Knowledge Sharing	KS1: My university has processes for transferring organizational knowledge to employees.	(Nielsen et al., 2011)
	KS2: My university has processes for distributing knowledge	

	among our business partners.	
	KS3: My university has a standardized reward system for sharing knowledge.	
	KS4: My university has processes for distributing knowledge throughout the organization.	
Motivation to Learn	MTL1: I am motivated to learn the skills emphasized in the job.	(R. A. Noe & Schmitt, 1986; VandeWalle & Cummings, 1997)
	MTL2: I will try to learn as much as I can from my job.	
	MTL3: I am willing to exert considerable effort in my job to improve my skills.	
	MTL4: I often look for opportunities to develop new skills and knowledge.	
High-Performance Work System	HPWS1: Employees are involved in job rotation.	(Takeuchi et al., 2007)
	HPWS2: Employees are empowered to make decisions.	
	HPWS3: Jobs are designed around their individual skills and capabilities.	
	HPWS4: Selection is comprehensive (uses interviews, tests, etc.).	
	HPWS5: Selection emphasizes their ability to collaborate and work in teams**.**	
	HPWS6: Selection involves screening many job candidates.	
	HPWS7: Selection focuses on selecting the best all-around candidate, regardless of the specific job.	
	HPWS8: Selection emphasizes promotion from within.	
	HPWS9: Selection places priority on their potential to learn (e.g., aptitude.	
	HPWS10: Training is continuous.	
	HPWS11: Training programs are comprehensive.	
	HPWS12: Training programs strive to develop firm-specific skills and knowledge.	
	HPWS13: The training programs emphasize on-the-job experiences.	
	HPWS14: Performance is based on objective, quantifiable results.	
	HPWS15: Performance appraisals include management by objective with mutual goal setting.	
	HPWS16: Performance appraisals include developmental feedback.	

	HPWS17: Incentives are based on team performance.	
	HPWS18: Compensation packages include an extensive benefits package.	
	HPWS19: Our compensations include high wages.	
	HPWS20: The incentive system is tied to skill-based pay.	
	HPWS21: Our compensation is contingent on performance.	

3.5 Population and Sampling

The population is a collection of all individuals, whereas the sample is defined as a population subset. Because the researcher could not cover the entire population in a positivist approach, sampling is critical for an empirical investigation(Sekaran & Bougie, 2016). These samples have the potential to be representative of the entire target population. In this research, the target population is employees working in Oman's HEIs. The targeted sample in this study indicates the individuality of each HEIs employee as a unit of analysis. A Non-random sampling technique was adopted in this research. Specifically, convenience sampling is employed where individuals from the target population who meets specific criteria, such as easy accessibility, availability at a particular time, or willingness to engage and participate, are included in the research(Etikan et al., 2016).

3.6 Instrumentation

An instrument is a tool used to collect data from participants. It is conducted via which individuals' opinions are communicated. In more precise term, an instrument is a tool used to collect information from individuals. To be credible, the instrument must be assured that it measures the phenomenon it is designed to measure(Kimberlin & Winterstein, 2008). To design the questionnaire, Saunders et al. (2003) proposed three approaches to designing target questions; adopt, adapt questions from existing questionnaires, and develop new questions. They recommend adopting or adapting questions from other questionnaires to test reliability. Adopting and adapting questions increases the likelihood that the terms used in the questions will be known, easy to comprehend, understand, and respond to.

Furthermore, this would help to increase the questionnaire's validity too. Three criteria should be examined and reflected in the final form of the questionnaire to be a good measurement instrument. They are as follows: sensitivity, reliability, and validity.

The instrument of this research is a survey questionnaire. The questionnaire items of this research were adopted from Carless et al., (2000); Janssen, (2000); Noe & Schmitt, (1986);

Takeuchi et al., (2007); VandeWalle, (1997) studies. In terms of sensitivity criteria, the survey questionnaire of this research used the Likert scale, which helped to capture the variety of replies more accurately, making it more sensitive to response(Wong et al., 2012).

3.6.1 Reliability and Validity of Instrument

Reliability of a questionnaire refers to the ability of the questionnaire to collect data that produce consistent results. Cronbach's alpha is a measure of an instrument's internal consistency. The Cronbach's alpha value ranges from 0 (lack of internal consistency) to 1 (perfect internal consistency). As a result, the closer the value is to one, the greater the item's reliability coefficient and the lower the impact of measurement error on test scores(Heale & Twycross, 2015). While validity is “the extent to which a concept is accurately measured in a quantitative study” (Kimberlin & Winterstein, 2008).

3.6.1.1 Construct Validity of Instrument

Construct validity emphasizes the degree of fit between conceptual and operational definitions. As a result, it assesses the instrument's ability to measure the hypothesis(Smith, 2005). Thus, a Pearson correlation test was employed to test each research construct. According to Tables 3.6-1, 3.6-2, 3.6-3, 3.6-4, and 3.6-5, all correlation significance level is all below 0.01, which indicate a strong and positive correlation between research items of each construct. The below table demonstrates a Pearson correlation test for transformational leadership, innovative work behavior, knowledge sharing, motivation to learn, and HPWS.

Table 3.6-1: Pearson Correlation Coefficient and Significance for Transformational Leadership

		TL1	TL2	TL3	TL4	TL5	TL6	TL7
TL1	**Pearson Correlation**	1						
	Sig. (2-tailed)							
	N	283						
TL2	**Pearson Correlation**	.769**	1					
	Sig. (2-tailed)	.000						
	N	283	283					
TL3	**Pearson Correlation**	.786**	.812**	1				
	Sig. (2-tailed)	.000	.000					
	N	283	283	283				
TL4	**Pearson Correlation**	.783**	.799**	.807**	1			
	Sig. (2-tailed)	.000	.000	.000				
	N	283	283	283	283			
TL5	**Pearson Correlation**	.755**	.762**	.789**	.806**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	283	283	283	283	283		
TL6	**Pearson Correlation**	.689**	.727**	.737**	.733**	.745**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000		
	N	283	283	283	283	283	283	
TL7	**Pearson Correlation**	.717**	.730**	.732**	.801**	.746**	.780**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	
	N	283	283	283	283	283	283	283
**. Correlation is significant at the 0.01 level (2-tailed).								

Table 3.6-2: Pearson Correlation Coefficient and Significance for Innovative Work Behavior

		IWB1	IWB2	IWB3	IWB4	IWB5	IWB6	IWB7	IWB8	IWB9
IWB1	**Pearson Correlation**	1								
	Sig. (2-tailed)									
	N	283								
IWB2	**Pearson Correlation**	.742**	1							
	Sig. (2-tailed)	.000								
	N	283	283							
IWB3	**Pearson Correlation**	.704**	.730**	1						
	Sig. (2-tailed)	.000	.000							
	N	283	283	283						
IWB4	**Pearson Correlation**	.674**	.719**	.709**	1					

	Sig. (2-tailed)	.000	.000	.000						
	N	283	283	283	283					
IWB5	**Pearson Correlation**	.690**	.678**	.654**	.760**	1				
	Sig. (2-tailed)	.000	.000	.000	.000					
	N	283	283	283	283	283				
IWB6	**Pearson Correlation**	.666**	.706**	.669**	.767**	.749**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000				
	N	283	283	283	283	283	283			
IWB7	**Pearson Correlation**	.681**	.700**	.652**	.755**	.730**	.768**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000			
	N	283	283	283	283	283	283	283		
IWB8	**Pearson Correlation**	.628**	.650**	.627**	.703**	.730**	.753**	.816**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000		
	N	283	283	283	283	283	283	283	283	
IWB9	**Pearson Correlation**	.615**	.614**	.609**	.691**	.756**	.721**	.749**	.750**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	
	N	283	283	283	283	283	283	283	283	283
**. Correlation is significant at the 0.01 level (2-tailed).										

Table *3.6-3*: Pearson Correlation Coefficient and Significance for Knowledge Sharing

		KS1	**KS2**	**KS3**	**KS4**
KS1	**Pearson Correlation**	1			
	Sig. (2-tailed)				
	N	283			
KS2	**Pearson Correlation**	.696**	1		
	Sig. (2-tailed)	.000			
	N	283	283		
KS3	**Pearson Correlation**	.712**	.647**	1	
	Sig. (2-tailed)	.000	.000		
	N	283	283	283	
KS4	**Pearson Correlation**	.648**	.767**	.670**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	283	283	283	283
**. Correlation is significant at the 0.01 level (2-tailed).					

Table 3.6-4: Pearson Correlation Coefficient and Significance for Motivation to Learn

		MTL1	MTL2	MTL3	MTL4
MTL1	**Pearson Correlation**	1			
	Sig. (2-tailed)				
	N	283			
MTL2	**Pearson Correlation**	.800**	1		
	Sig. (2-tailed)	.000			
	N	283	283		
MTL3	**Pearson Correlation**	.779**	.848**	1	
	Sig. (2-tailed)	.000	.000		
	N	283	283	283	
MTL4	**Pearson Correlation**	.707**	.788**	.813**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	283	283	283	283
**. Correlation is significant at the 0.01 level (2-tailed).					

Table 3.6-5: Pearson's Correlation Coefficient and Significance for HPWS

		HPWS1	HPWS2	HPWS3	HPWS4	HPWS5	HPWS6	HPWS7	HPWS8	HPWS9	HPWS10	HPWS11	HPWS12	HPWS13	HPWS14	HPWS15	HPWS16	HPWS17	HPWS18	HPWS19	HPWS20	HPWS21
HPWS1	**Pearson Correlation**	1																				
	Sig. (2-tailed)																					
	N	283																				
HPWS2	**Pearson Correlation**	.673**	1																			
	Sig. (2-tailed)	.000																				
	N	283	283																			
HPWS3	**Pearson Correlation**	.639**	.633**	1																		
	Sig. (2-tailed)	.000	.000																			
	N	283	283	283																		
HPWS4	**Pearson Correlation**	.421**	.591**	.527**	1																	
	Sig. (2-tailed)	.000	.000	.000																		
	N	283	283	283	283																	

HPWS5	**Pearson Correlation**	.532**	.625**	.683**	.667**	1																
	Sig. (2-tailed)	.000	.000	.000	.000																	
	N	283	283	283	283	283																
HPWS6	**Pearson Correlation**	.499**	.546**	.578**	.634**	.704**	1															
	Sig. (2-tailed)	.000	.000	.000	.000	.000																
	N	283	283	283	283	283	283															
HPWS7	**Pearson Correlation**	.436**	.531**	.564**	.647**	.758**	.675**	1														
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000															
	N	283	283	283	283	283	283	283														
HPWS8	**Pearson Correlation**	.507**	.569**	.611**	.535**	.609**	.587**	.586**	1													
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000														
	N	283	283	283	283	283	283	283	283													
HPWS9	**Pearson Correlation**	.540**	.585**	.613**	.615**	.699**	.597**	.738**	.729**	1												

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000													
	N	283	283	283	283	283	283	283	283	283												
HPWS10	**Pearson Correlation**	.562**	.515**	.529**	.475**	.523**	.546**	.454**	.555**	.564**	1											
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000												
	N	283	283	283	283	283	283	283	283	283	283											
HPWS11	**Pearson Correlation**	.572**	.503**	.537**	.457**	.476**	.532**	.394**	.556**	.507**	.852**	1										
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000											
	N	283	283	283	283	283	283	283	283	283	283	283										
HPWS12	**Pearson Correlation**	.542**	.546**	.528**	.516**	.520**	.512**	.500**	.614**	.583**	.795**	.820**	1									
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000										
	N	283	283	283	283	283	283	283	283	283	283	283	283									
HPWS13	**Pearson Correlation**	.496**	.512**	.512**	.544**	.538**	.567**	.481**	.620**	.604**	.760**	.759**	.823**	1								
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000									
	N	283	283	283	283	283	283	283	283	283	283	283	283	283								

HPWS14	**Pearson Correlation**	.446**	.520**	.496**	.490**	.569**	.507**	.484**	.578**	.564**	.642**	.631**	.728**	.723**	1						
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000							
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283						
HPWS15	**Pearson Correlation**	.419**	.519**	.531**	.546**	.606**	.517**	.526**	.641**	.617**	.620**	.590**	.688**	.710**	.779**	1					
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000						
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283					
HPWS16	**Pearson Correlation**	.449**	.538**	.524**	.510**	.561**	.493**	.496**	.608**	.542**	.627**	.649**	.677**	.698**	.725**	.762**	1				
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000					
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283				
HPWS17	**Pearson Correlation**	.567**	.571**	.542**	.423**	.537**	.485**	.500**	.576**	.547**	.602**	.598**	.638**	.627**	.688**	.625**	.752**	1			
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000				
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283			
HPWS18	**Pearson Correlation**	.544**	.593**	.597**	.443**	.584**	.464**	.478**	.623**	.558**	.580**	.615**	.665**	.650**	.703**	.678**	.744**	.784**	1		

	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000				
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283			
HPWS19	**Pearson Correlation**	.532**	.505**	.548**	.339**	.460**	.449**	.371**	.520**	.441**	.503**	.563**	.518**	.487**	.487**	.526**	.603**	.648**	.699**	1		
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000			
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283		
HPWS20	**Pearson Correlation**	.590**	.498**	.614**	.381**	.530**	.485**	.428**	.612**	.545**	.605**	.621**	.572**	.567**	.529**	.578**	.627**	.702**	.716**	.765**	1	
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	
HPWS21	**Pearson Correlation**	.542**	.471**	.580**	.359**	.494**	.445**	.372**	.567**	.497**	.591**	.642**	.566**	.549**	.530**	.524**	.640**	.681**	.710**	.720**	.860**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283
**. Correlation is significant at the 0.01 level (2-tailed).																						

3.6.1.2 Content Validity of Instrument

The content validity evaluates how well the variable represents and reflects the contents it attempts to measure. This form of validity assures variable validity and provides readers and researchers confidence in instruments. It measures the degree to which the instrument covers the content it is designed to measure(Lynn, 1986). The survey questionnaire was distributed to the specialists for their review, and then the comments were collected and evaluated.

3.6.1.3 Reliability of Pilot Study

According to the researchers, performing a pilot study would help the researcher in various ways before collecting the final data. It would aid in the modification of the survey if necessary. As a result, the pilot study was utilized to determine the feasibility of a full-scale investigation, determine whether the sample frame and methodologies are effective, and identify logistical issues that may arise when implementing the proposed methods(In, 2017).

According to Browne (1995), the most common sample size used for a pilot study is 30. In this research, a pilot study was conducted on 30 participants selected from the population. Then, a reliability test was executed to examine the reliability of questionnaire items of each research variable. Table 3.6-6 demonstrates the Cronbach alpha results. According to Hair et al., (2006), for the research's instrument to be reliable, it should meet a minimum Cronbach's alpha point of .70 and above. Therefore, Table 3.6-6 shows that the Cronbach's alpha of all research contracts is above 0.70. Hence, the reliability test of all research constructs is significant. Also, Table 3.6-6 shows that the results presented a value of (0.959) for all 45 items, which is a good indicator because it is greater than the accepted percent.

Table 3.6-6: Cronbach's Coefficient (α) of Transformational Leadership, Innovative Work Behavior, Knowledge Sharing, Motivation to Learn, and HPWS where N= 30

Research construct	Cronbach's alpha	Number of items
Transformational leadership	0.962	7 items
Innovative work behavior	0.885	9 items
Knowledge sharing	0.881	4 items
Motivation to learn	0.877	4 items
High-performance work system	0.959	21 items
Overall reliability	0.959	45 items

3.7 Statistical Analysis

SPSS ver. 26 was adopted for data analysis. It was employed to determine the demographic profile of the research's participants. As well, it was applied to measure and assess the reliability and validity of the research variables, and after that, it was used to test the research hypotheses using multiple linear regression and Sobel test. For instance, the collected data is statistically analyzed to test and examine the hypotheses, so the research's objectives are accomplished.

3.8 Ethical Consideration

Because social science and business studies deal with human subjects, ethical issues are crucial. Throughout all phases of the research, ethical considerations needed privacy and confidentiality, accuracy, and informed consent(Bell & Bryman, 2007). All ethical requirements would be fulfilled throughout the study stages for this research. All participants would be ensured that their responses would be kept anonymous and confidential. Finally, anonymity and confidentiality are maintained by not writing their names on the questionnaires, and the data is coded.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS PRESENTATION

4.1 Introduction

This study aimed to investigate the impact of transformational leadership on employees' innovative work behavior in HEIs in the Sultanate of Oman. More precisely, the study attempted to investigate the mediation influence of knowledge sharing, motivation to learn, and HPWS on the relationship between transformational leadership and innovative work behavior. Consequently, this chapter presents the results of the analysis of the data collected from 283 participants.

Different statistical analyses are conducted to attain the research's objectives and to answer the research's questions. A demographic profile of the research profile presented, and a descriptive analysis was conducted on the research sample, followed by a normality test. After that, regression analysis with Sobel test was conducted to examine the research hypothesis. Then, the researcher conducted correlation analysis and required multiple linear regression analysis assumptions.

4.2 Data Collection Process

A theoretical framework was developed after reviewing a wide variety of literature. The relationship between variables including transformational leadership, knowledge sharing, motivation to learn, and HPWS relationship on employee's innovative work behavior has been proposed as research hypotheses in this study. The researchers adopted measurement scales to test these hypotheses and developed a survey form (See Appendix1). After the development of the survey questionnaire, a pilot study was conducted.

For data collection, the researcher distributed survey questionnaires via internet to employees of HEIs of the Sultanate of Oman. The main reason for selecting the context of the study in HEIs is to investigate the influence of transformational leadership on the employee's innovative work behavior in a different culture like Arab and specifically Gulf culture. Convenience sampling was used to gather data. Before sending out the survey questionnaire, the researcher followed the proper procedure, which included confirming the participants' willingness to participate in the study. All participants were advised that participation was voluntary and might withdraw at any moment. After completing the questionnaire, the researcher created coding for entering the data into the SPSS spreadsheet of the Statistical

Package for Social Science (SPSS) 26.0 software. The researcher developed a column with all of the questionnaire items coded with numbers and in an abbreviated format. Question items were similarly written in the label column. The column's value section was constructed on a scale of "1 to 7", with seven-point choices ranging from strongly disagree to strongly agree.

4.3 Data Screening

One of the most critical processes in obtaining reliable findings is data screening. The key objective is to ensure that all data is input correctly and that any errors can be dealt. In the study's quantitative procedures, the researcher also questioned if the data were normally distributed because data accuracy is essential for analyzing sample responses(Hair et al., 2006). Scholars proposed screening the data for missing data, outliers, linearity, normality, and homoscedasticity(Osborne & Waters, 2002). This research followed the above scholars and started with screening out the data.

4.4 Handling of Missing Data

Because of persistent problems in data analysis, missing data is one of the most pervasive concerns that should be addressed first. It frequently happens due to factors such as having a long questionnaire or participants who accidentally leave out questions, as well as error or data operator failure in data entry(Enders, 2010). Dealing with missing data in social science research is vital and essential for researchers since it provides substantial variance due to biases and results generalization(McKnight et al., 2007).

This research conducts missing value analysis through SPSS V.26. Based on test results demonstrates in Table 4.4-1, there is no missing data which in turn doesn't cause any problem for research findings.

Table 4.4-1: Univariate Statistics

Univariate Statistics							
	N	Mean	Std. Deviation	Missing		No. of Extremes [a]	
				Count	Percent	Low	High
Gender	283	1.51	.501	0	.0	0	0
Social Status	283	1.72	.487	0	.0	0	0
Educational level	283	2.73	.861	0	.0	0	3
Age	283	2.39	.836	0	.0	0	0

Experience	283	2.70	1.114	0	.0	0	0
Current Job	283	4.39	1.477	0	.0	0	0
TL1	283	4.95	1.562	0	.0	11	0
TL2	283	4.97	1.692	0	.0	14	0
TL3	283	4.96	1.694	0	.0	16	0
TL4	283	5.07	1.719	0	.0	13	0
TL5	283	5.06	1.668	0	.0	13	0
TL6	283	4.84	1.735	0	.0	15	0
TL7	283	5.10	1.704	0	.0	11	0
IWB1	283	5.61	1.360	0	.0	11	0
IWB2	283	5.72	1.313	0	.0	9	0
IWB3	283	5.57	1.406	0	.0	10	0
IWB4	283	5.53	1.374	0	.0	13	0
IWB5	283	5.51	1.369	0	.0	10	0
IWB6	283	5.66	1.312	0	.0	11	0
IWB7	283	5.61	1.380	0	.0	13	0
IWB8	283	5.57	1.262	0	.0	8	0
IWB9	283	5.47	1.324	0	.0	23	0
KS1	283	4.70	1.448	0	.0	9	0
KS2	283	4.81	1.476	0	.0	11	0
KS3	283	4.23	1.716	0	.0	0	0
KS4	283	4.71	1.523	0	.0	10	0
MTL1	283	5.79	1.385	0	.0	14	0
MTL2	283	6.06	1.306	0	.0	30	0
MTL3	283	6.05	1.358	0	.0	31	0
MTL4	283	6.01	1.354	0	.0	32	0
HPWS1	283	4.66	1.741	0	.0	21	0
HPWS2	283	4.72	1.621	0	.0	15	0
HPWS3	283	4.68	1.582	0	.0	12	0
HPWS4	283	5.17	1.589	0	.0	12	0
HPWS5	283	4.90	1.537	0	.0	10	0
HPWS6	283	5.11	1.464	0	.0	9	0
HPWS7	283	5.10	1.528	0	.0	8	0
HPWS8	283	4.63	1.734	0	.0	24	0
HPWS9	283	4.84	1.666	0	.0	14	0
HPWS10	283	4.65	1.732	0	.0	0	0
HPWS11	283	4.45	1.760	0	.0	0	0
HPWS12	283	4.71	1.683	0	.0	16	0
HPWS13	283	4.85	1.676	0	.0	17	0

HPWS14	283	4.75	1.599	0	.0	14	0
HPWS15	283	4.78	1.580	0	.0	13	0
HPWS16	283	4.66	1.666	0	.0	20	0
HPWS17	283	4.49	1.809	0	.0	0	0
HPWS18	283	4.38	1.767	0	.0	0	0
HPWS19	283	4.31	1.749	0	.0	0	0
HPWS20	283	4.08	1.881	0	.0	0	0
HPWS21	283	4.18	1.905	0	.0	0	0
a. a number of cases outside the range (Q1 - 1.5*IQR, Q3 + 1.5*IQR).							

4.5 Outliers

Outliers are data points that are extremely distant from most of the other data points. As a result, they usually have a negative impact on substantive interpretations of variable relationships(Osborne & Overbay, 2004). The data were converted to z scores, which in turn helps to identify the outliers that score above 3.29(Tabachnick et al., 2007). Then, descriptive analysis was conducted for z scores, to check the data points that are above 3.29. According to the results demonstrated below in Table 4.5-1, there are no univariates outliers.

Table 4.5-1: Univariates Outliers

Descriptive Statistics			
	N	**Minimum**	**Maximum**
Zscore(TL1) Communicates a clear and positive vision of the future.	283	-2.52658	1.31418
Zscore(TL2) Treats staff as individuals and supports and encourages their development.	283	-2.34671	1.19841
Zscore(TL3) Supportive Leadership gives encouragement and recognition to staff.	283	-2.33588	1.20548
Zscore(TL4) Fosters trust, involvement, and cooperation among team members.	283	-2.36539	1.12412
Zscore(TL5) Encourages thinking about problems in new ways and questions assumptions.	283	-2.43580	1.16071
Zscore(TL6) Is clear about his/her values and practices what he/she preaches.	283	-2.21550	1.24215
Zscore(TL7) Instills pride and respect in others and inspires me by being highly competent.	283	-2.40488	1.11537

Zscore(IWB1) I try to Create new ideas for difficult issues and find the e-learning system to be useful in my learning.	283	-3.39178	1.02143
Zscore(IWB2) I search out new working methods, techniques, or instruments.	283	-3.59689	.97119
Zscore(IWB3) I try to generate original solutions for problems.	283	-3.24976	1.01790
Zscore(IWB4) I try to mobilize support for innovative ideas.	283	-3.29387	1.07224
Zscore(IWB5) I acquire approval for innovative ideas.	283	-3.29286	1.08902
Zscore(IWB6) I try making important organizational members enthusiastic for innovative ideas.	283	-3.55625	1.01838
Zscore(IWB7) I try transforming innovative ideas into useful applications.	283	-3.34090	1.00611
Zscore(IWB8) I introduce innovative ideas into the work environment in a systematic way.	283	-3.62261	1.13101
Zscore(IWB9) I evaluate the utility of innovative ideas.	283	-3.37805	1.15270
Zscore(KS1) My university has processes for transferring organizational knowledge to employees.	283	-2.55457	1.58837
Zscore(KS2) My university has processes for distributing knowledge among our business partners.	283	-2.57846	1.48674
Zscore(KS3) My university has a standardized reward system for sharing knowledge.	283	-1.88391	1.61214
Zscore(KS4) My university has processes for distributing knowledge throughout the organization.	283	-2.43901	1.50146
Zscore(MTL1) I am motivated to learn the skills emphasized in the job.	283	-3.46035	.87274
Zscore(MTL2) I will try to learn as much as I can from my job.	283	-3.87773	.71710
Zscore(MTL3) I am willing to exert considerable effort in my job to improve my	283	-3.72038	.69725

skills.			
Zscore(MTL4) I often look for opportunities to develop new skills and knowledge.	283	-3.70069	.73074
Zscore(HPWS1) Employees are involved in job rotation.	283	-2.10429	1.34131
Zscore(HPWS2) Employees are empowered to make decisions.	283	-2.29548	1.40606
Zscore(HPWS3) Jobs are designed around their individual skills and capabilities.	283	-2.32524	1.46751
Zscore(HPWS4) Selection is comprehensive (uses interviews, tests, etc.).	283	-2.62436	1.15205
Zscore(HPWS5) Selection emphasizes their ability to collaborate and work in teams.	283	-2.53995	1.36307
Zscore(HPWS6) Selection involves screening many job candidates.	283	-2.80370	1.29327
Zscore(HPWS7) Selection focuses on selecting the best all-around candidate, regardless of the specific job.	283	-2.68564	1.24220
Zscore(HPWS8) Selection emphasizes promotion from within.	283	-2.09503	1.36544
Zscore(HPWS9) Selection places priority on their potential to learn (e.g., aptitude.	283	-2.30367	1.29820
Zscore(HPWS10) Training is continuous.	283	-2.10939	1.35458
Zscore(HPWS11) Training programs are comprehensive.	283	-1.95898	1.44917
Zscore(HPWS12) Training programs strive to develop firm-specific skills and knowledge.	283	-2.20259	1.36271
Zscore(HPWS13) The training programs emphasize on-the-job experiences.	283	-2.29549	1.28370
Zscore(HPWS14) Performance is based on objective, quantifiable results.	283	-2.34439	1.40752
Zscore(HPWS15) Performance appraisals include management by objective with mutual goal setting.	283	-2.39225	1.40405
Zscore(HPWS16) Performance appraisals include developmental feedback.	283	-2.19890	1.40161
Zscore(HPWS17) Incentives are based on	283	-1.92807	1.38892

team performance.			
Zscore(HPWS18) Compensation packages include an extensive benefits package.	283	-1.91344	1.48157
Zscore(HPWS19) Our compensations include high wages.	283	-1.89467	1.53512
Zscore(HPWS20) The incentive system is tied to skill-based pay.	283	-1.63579	1.55316
Zscore(HPWS21) Our compensation is contingent on performance.	283	-1.66773	1.48222
Valid N (listwise)	283		

4.6 Reliability and Validity of Research Instruments

The reliability of an instrument, including Cronbach's alpha, which ensures that research measurements are free from error and hence provide consistent results, can be used to assess the content validity of a questionnaire(Mohajan, 2017). The researcher used Cronbach's alpha to examine the instrument's reliability. According to the analysis' outputs illustrated in Table 4.6-1, the overall Cronbach's alpha is above the recommended threshold ($\alpha = 0.70$). Accordingly, the research variable are valid and reliable(Kimberlin & Winterstein, 2008).

Table 4.6-1: Cronbach's Coefficient (α) of Transformational Leadership, Innovative Work Behavior, Knowledge Sharing, Motivation to Learn, and HPWS where N= 283

Research construct	Cronbach's alpha	Number of items
Transformational leadership	0.957	7 items
Innovative work behavior	0.955	9 items
Knowledge sharing	0.897	4 items
Motivation to learn	0.937	4 items
High-performance work system	0.966	21 items
Overall reliability	0.973	45 items

4.7 Descriptive Analysis

Table 4.7-1 illustrates the category frequencies of demographic characteristics, including gender, social status, education level, age, experience, and current employment for a sample of 283 employees from Oman's HEIs.

Table 4.7-1: Descriptive Analysis of Research Respondents

Variable	Category	Frequency	Percentage
Gender	Female	143	50.5%
	Male	140	49.5%
Social Status	Single	84	29.7%
	Married	194	68.6%
	Other	5	1.8%
Education Level	PhD or above	27	9.5%
	Master	68	24.0%
	Bachelor	144	50.9%
	Diploma	41	14.5%
	High School	3	1.1%
Age	Less than 25 years	32	11.3%
	From 25 years to 35 years	143	50.5%
	From 35 years to 45 years	75	26.5%
	45 years or above	33	11.7%
Experience	Less than 1 year	57	20.1%
	From 1 year to 5 years	60	21.2%
	From 5 years to 10 years	78	27.6%
	10 years or above	88	31.1%
Current Job	General director/ General assistant director	5	1.8%
	Director/ Assistant director	19	6.7%
	Administrator	86	30.4%
	Head of department	26	9.2%
	Engineer/ Technician	46	16.3%
	Academic	101	35.7%

According to the above table, female respondents made up 50.5 % of the overall sample size (n = 143) while 49.5 % (n = 140) of the respondents were male. As for the participants' social status, it was presented that the majority of them (68.6%, n = 194) were marrieds,

followed by 29.7% (n = 84) who have been single. Moreover, the table for respondents' education level reveals that slightly more than half (50.9 %, n = 144) of respondents had a bachelor's degree, while 24.0 % (n = 68) and 14.5 % (n = 41) had their master's and diploma, respectively. A further 9.5 % (n = 27) had holds a PhD, whereas 1.1 % (n = 3) only had a high school qualification. As for the respondents' age, Table 4.7-1 shows that the vast majority of them (50.5 %, n = 143) were between the ages of 25 to 30 years, and 26.5 %, n = 75, were between the ages of 35 to 45 years. Additionally, the findings indicate that 11.7 % (n = 33) were 45 years of age at least and 11.3 % (n = 32) were under 25 years. Regarding the participants' experience level, the majority (31.1 %, n = 88) have at least 10 years of work experience, followed by 27.6 % (n = 78) who have between 5 and 10 years of experience. In addition, the analysis's findings showed that 21.2 % (n = 60) had experience ranging from 1 to 5 years, while 20.1% (n = 57) had experienced less than a year. As for the respondents' occupations, Table 4.7-1 shows that an overwhelming majority of the participants (35.1%, n = 101) were academics, while 30.4% (n = 86) were administrators. Furthermore, the analysis indicated that 16.3% of the participants (n = 46) were engineer or technicians, 9.2% (n = 26) were head of department, while 6.7% (n = 19) were assistant director or director. Nonetheless, only 1.8% of the participants (n = 5) were general directors or general assistant directors.

4.8 Normality Test

It is common practice to use normality tests to analyze the distribution of a data collection and determine the likelihood that a random variable underlying the data set is normally distributed. Skewness and kurtosis analysis were used to determine whether the used data were normal. The values for skewness and kurtosis can be either positive, negative, or undefinable. However, it argued that a value of +1.96 or -1.96 is sufficiently close to zero to be considered when considering data to be normally distributed. If the sample size is large, it is a good idea to look at the shape of the distribution rather than using formal inference tests to assess the significance of skewness and kurtosis. Conventional but conservative (.01 or.001) alpha levels are employed with small to intermediate samples(Lumley et al., 2002).

Furthermore, Kolmogorov-Smirnov and Shapiro-Wilk tests can be performed to determine whether the data is normal. These tests compare the sample's scores to a set of scores that have the same mean and standard deviation and are normally distributed. (Razali & Wah, 2011).

This research examined the normality test for each research constructs numerically. Table 4.8-1 demonstrates that Kolmogorov-Smirnov and Shapiro-Wilk's significance α of transformational leadership, innovative work behavior, knowledge sharing, motivation to learn, and HPWS are significant. Thus, the data distribution is normal.

Table 4.8-1: Normality Assessment

Research construct	**Mean**	**Standard Deviation**	**Kurtosis**	**Skewness**	**Kolmogorov-Smirnov significance α**	**Shapiro-Wilk significance α**
Transformational leadership	4.9929	1.50118	-0.005	-0.797	0.000	0.0000
Innovative work behavior	5.5846	1.15346	1.584	-1.218	0.000	0.0000
Knowledge sharing	4.6131	1.34942	-0.217	-0.377	0.000	0.0000
Motivation to learn	5.9797	1.23888	3.537	-1.848	0.000	0.0000
High-performance work system	4.6717	1.29937	-0.613	-0.370	0.009	0.0000

4.9 Correlation Analysis

A common statistical method used to assess how closely the variables are related to one another is correlation analysis. The Pearson's correlation, Kendall correlation, and Spearman correlation are three methods that are frequently used for correlation analysis. The correlation analysis frequently evaluates three factors: significance, strength, and level. The p-value, which must be less than 0.05 in this situation, is used to determine significance in which the p-value is less than 0.05 and so there is a significant relationship between the variables. The degree determines whether connections are positive or negative. Lastly, the coefficient value which ranges from 0 to 1 is used to calculate the strength. Values between 0.1 and 0.4 show a low level of correlation, whereas 0.5 and 0.7 show a medium level of correlation. Values exceeding 0.7, on the other hand, show a more significant correlation(Ezekiel, 1930). The bivariate correlation was conducted in order to examine at the relationships between the independent variable, mediators, and dependent variable(Gogtay & Thatte, 2017).

4.9.1 Correlation Between Transformational Leadership and Innovative Work Behavior

The findings of the correlation analysis are shown in the Table 4.9-1. The Pearson Correlation Coefficient between transformational leadership and employees' innovative work behaviors is r=0.458, indicating a positive correlation between the two. Additionally, this value shows a strong and positive relationship between transformational leadership and innovative work behavior. The P-value of correlation analysis is 0.000 which in turn indicates the significance of the correlation between the two variables. The strength of association is low, since it falls between 0.1 and 0/4.

4.9.2 Correlation Between Transformational Leadership and Knowledge Sharing

The correlation analysis results presented in the Table 4.9-1 show that Pearson Correlation Coefficient between transformational leadership and knowledge sharing is r = 0.563, which implies that the two variables are positively correlated. Further, this value indicates a positive and significant correlation between transformational leadership and knowledge sharing. The correlation is significant at a 1% significance level as the P-value is less than alpha, i.e., 0.000< 0.01. Since the r coefficient falls between 0.5 to 0.7, thereby the level of association strength is medium.

4.9.3 Correlation Between Transformational Leadership and Motivation to Learn

Table 4.9-1 demonstrates the corelation analysis results between transformational leadership and motivation to learn. The Pearson Correlation Coefficient between transformational leadership and motivation to learn is r = 0.494, which implies that the two variables are positively correlated. The correlation is significant at a 1% significance level as the P-value is 0.000. The strength of association between the two variables is low.

4.9.4 Correlation Between Transformational Leadership and High-Performance Work System

According to Table 4.9-1, the Pearson Correlation Coefficient between transformational leadership and high-performance work system is r = 0.576. It implies that correlation between the two variables is positive and significant. Also, it indicates that the level of strength of association is medium. Furthermore, the P-value is 0.000 which indicates and confirm the significance of correlation between them.

4.9.5 Correlation Between knowledge sharing and innovative work behavior

The Pearson Correlation Coefficient between knowledge sharing and innovative work behavior is r = 0.449 which in turn implies that the correlation between knowledge sharing

and innovative work behavior is positive. Moreover, the strength level of association is low Additionally, the correlation is significant since the P-value is 0.000.

4.9.6 Correlation Between Motivation to Learn and innovative work behavior

The below table indicates that the Pearson Correlation Coefficient between motivation to learn and innovative work behavior is r = 0.775. Thus, the results confirm that the correlation between motivation to learn and innovative work behavior is positive. It indicates also that there is high association between them. Since P-value is 0.000, then the correlation is significant.

4.9.7 Correlation Between High- Performance Work System and innovative work behavior

The results of correlation analysis demonstrated in Table 4.9-1, indicates that the Pearson Correlation Coefficient between high-performance work system and innovative work behavior is r = 0.459 . based on analysis findings, the level of strength is low. Furthermore, the P-value is 0.000 which signifies and confirm the significance of correlation between them.

Table 4.9-1: Pearson Correlation Analysis

Correlations						
		Transformational leadership	**Innovative work behavior**	**Motivation to learn**	**Knowledge sharing**	**High-performance work system**
Transformational leadership	**Pearson Correlation**	1				
	Sig. (2-tailed)					
	N	283				
Innovative work behavior	**Pearson Correlation**	.458**	1			
	Sig. (2-tailed)	.000				
	N	283	283			
Motivation to learn	**Pearson Correlation**	.494**	.775**	1		
	Sig. (2-tailed)	.000	.000			
	N	283	283	283		
Knowledge sharing	**Pearson Correlation**	.563**	.449**	.414**	1	
	Sig. (2-tailed)	.000	.000	.000		

	N	283	283	283	283	
High-performance work system	**Pearson Correlation**	.576**	.459**	.459**	.789**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	283	283	283	283	283
****. Correlation is significant at the 0.01 level (2-tailed).**						

4.10 Multicollinearity

Multicollinearity is an issue that must be addressed in multivariate analysis. It happens if any independent variable correlates highly with a group of other independent variables. Essentially, two different variables are measuring the same thing, which makes them potentially redundant when measuring a construct(Alin, 2010). Examining the correlation for the independent variables is the most straightforward technique to find collinearity in which a correlation of 0.90 and higher denotes significant collinearity(Hair et al., 2006). Concerning correlation analysis outcomes indicated in Table 4.9-1, there is no collinearity since all correlation values are less than 0.90. accordingly, the multicollinearity isn't violated.

Further analysis was conducted to check the multicollinearity in SPSS using Tolerance and Variance Inflation Factor (VIF) analysis. The variance inflation factor (VIF) and tolerance are two closely related statistics to detect collinearity in multiple regression. They are based on the R-squared result of regressing a single predictor against every other predictor in the study(O'brien, 2007). There is possible collinearity if the coefficients value of Tolerance is above 0.1 and the value of VIF is greater than 10(Midi et al., 2010). According to Table 4.10-1, the analysis displays that VIF values of research constructs are all below 10, and Tolerance values are all above the cut-off value of 0.100. Therefore, there is no collinearity between research constructs.

Table 4.10-1: Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	**VIF**
1	**(Constant)**		
	Transformational leadership	.578	1.729
	Motivation to learn	.710	1.409
	Knowledge sharing	.359	2.783
	High-performance work system	.342	2.921

4.11 Normality, Linearity, and Homoscedasticity of Residuals

The terms normality, linearity, and homoscedasticity describe the scoring distribution and the type of relationship that exists between the variables. It asks for a normalized residual plot in multiple regression where the residuals indicate the discrepancies between the measured and predicted scores for the dependent variable. The residuals ought to have a normal distribution. According to the definition of linearity, the residuals should have a linear relationship with the predicted scores for the dependent variable. When all predicted scores for the dependent variable's residuals had the same variance, homoscedasticity was present(Osborne & Waters, 2002).

Regression analysis was conducted to get a normal probability plot (P-P) of the Regression Standardised Residual and the Scatterplot. According to Figure 4.11-1, all points are all on a normal P-P plot as reasonably straight diagonal lines from the bottom left to the top right. Therefore, the residuals have a linear relationship. Additionally, with reference to Figure 4.11-2, the scatter plot displays that all residuals points are rectangularly distributed, with most of the scores concentrated in the center. Furthermore, the residuals are normally distributed according to Figure 4.11-3.

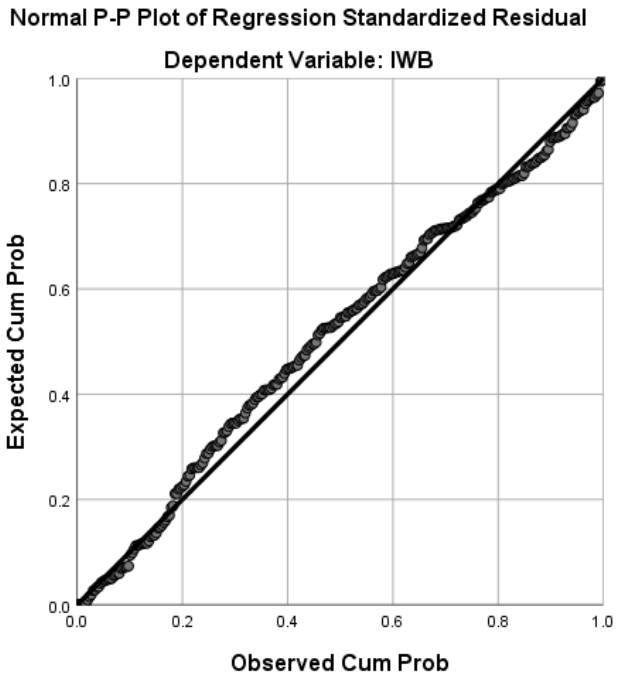


Figure 4.11-1: Normal P-P Plot of Regression Standardized Residual

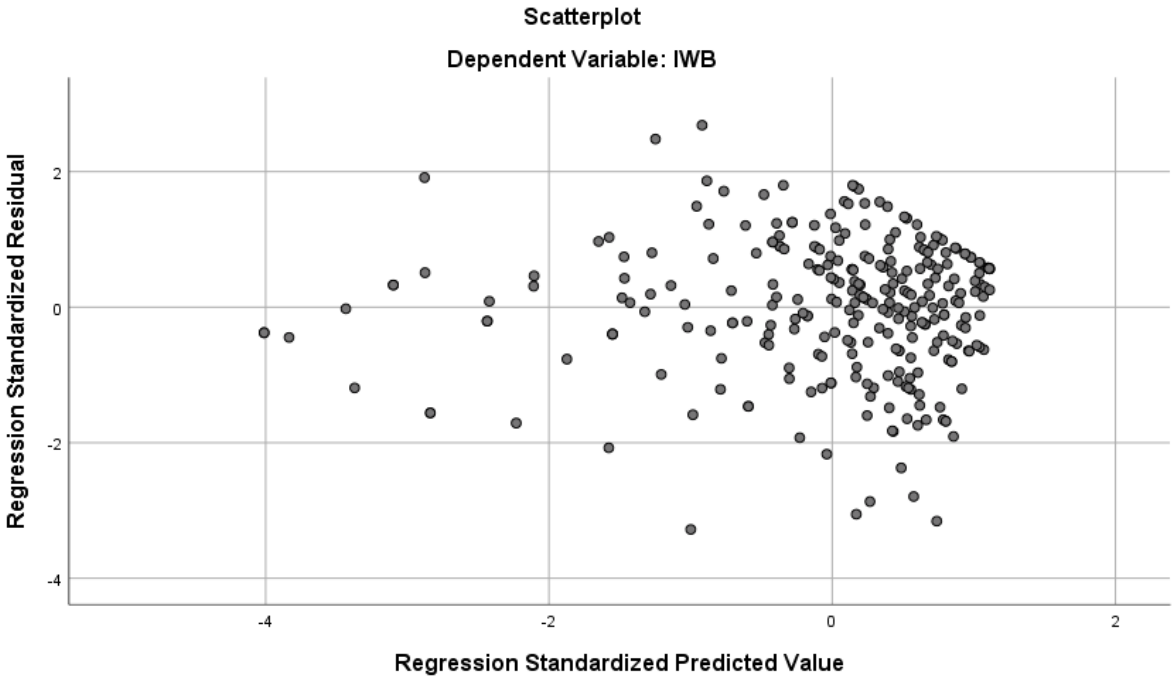


Figure 4.11-2: Scatter Plot

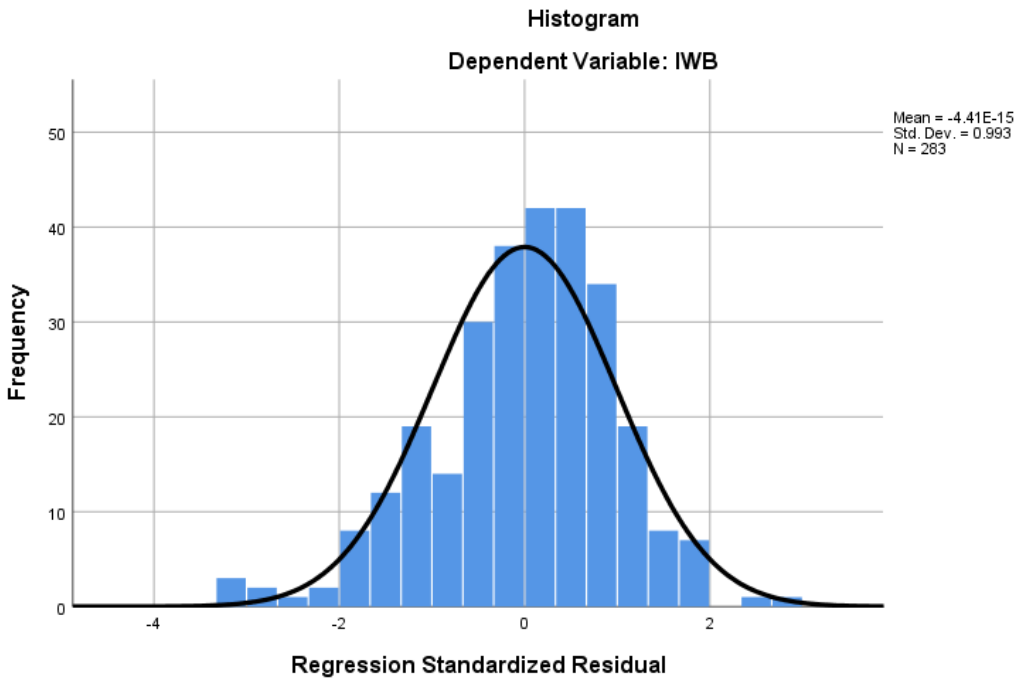


Figure 4.11-3: Normal Distribution of Standardized Residual

4.12 Multiple Regression Analysis

This research intends to investigate the influence of transformational leadership on employees' innovative work behavior. It proposed to know the relationships and significance between transformational leadership and employees' innovative work behavior through the mediation of knowledge sharing, motivation to learn, and HPWS factors. Multiple regression analysis was implemented to examine the influence of independent variables on the dependent variable to investigate the proposed hypothesis. To fully comprehend the statistical results regarding the proposed hypotheses, analysis was carried out independently for each hypothesis.

4.12.1 Direct Relationship Between Transformational Leadership and Innovative Work Behavior

Multiple regression analysis was carried out to investigate whether transformational leadership could significantly predict employees' innovative work behavior. According to Table 4.12-1 and 4.12-2, the model explained a statistically significant amount of variance in innovative work behavior , $F(1,281) = 74.796$, P-value = .000, $R^2 = 0.21$ and adjusted $R^2 = 0.207$. Furthermore, Table 4.12-3 demonstrates that the transformational leadership was

significant predictor for innovative work behavior with β = 0.352, t(281)= 8.648 and p-value = 0.000. Consequently, H1 is supported and proved.

Table 4.12-1: Model Summary of Regression Analysis for Transformational Leadership and Innovative Work Behavior

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.458[a]	.210	.207	1.02690	.210	74.796	1	281	.000
a. Predictors: (Constant), Transformational leadership									

Table 4.12-2: ANOVA Analysis of Transformational Leadership and Innovative Work Behavior

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	78.874	1	78.874	74.796	.000[b]
	Residual	296.320	281	1.055		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), Transformational leadership						

Table 4.12-3: Coefficients of Regression Analysis for Transformational Leadership and Innovative Work Behavior

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error (SE)	Beta			Lower Bound	Upper Bound
1	(Constant)	3.826	.212		18.015	.000	3.408	4.244
	Transformational leadership	.352	.041	.458	8.648	.000	.272	.432
a. Dependent Variable: Innovative work behavior								

4.12.2 Relationship Between Transformational Leadership and Knowledge Sharing

Multiple regression analysis was fitted to explain the knowledge sharing based transformational leadership. The overall model explains 31.7% variation of knowledge sharing, and it is significantly useful in explaining it with F(1,281) = 130.278, P-value = 0.000 and adjusted R^2 = 0.314. With the one-unit increase in transformational leadership, knowledge sharing factor increases by 0.506, which found to be a significant change, t(281)=11.414, and P-value =0.000. Therefore, H2 is supported. The results are all demonstrated in Table 4.12-4, Table 4.12-5, and Table 4.12-6.

Table 4.12-4: Model Summary of Regression Analysis for Transformational Leadership and Knowledge Sharing

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.563[a]	.317	.314	1.11739	.317	130.278	1	281	.000
a. Predictors: (Constant), Transformational leadership									

Table 4.12-5: ANOVA Analysis of Transformational Leadership and Knowledge Sharing

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	162.660	1	162.660	130.278	.000[b]
	Residual	350.846	281	1.249		
	Total	513.507	282			
a. Dependent Variable: Knowledge sharing						
b. Predictors: (Constant), Transformational leadership						

Table 4.12-6: Coefficients of Regression Analysis for Transformational Leadership and Knowledge Sharing

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error (SE)**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	2.087	.231		9.032	.000	1.632	2.542
	Transformational leadership	.506	.044	.563	11.414	.000	.419	.593
a. Dependent Variable: Knowledge sharing								

4.12.3 Relationship Between Transformational Leadership and Motivation to Learn

A multiple regression analysis was conducted to determine if transformational leadership could significantly predict employees' motivation to learn. Tables 4.12-7 and 4.12-8 show that the model adequately described the variance in motivation to learn, with $F(1,281) = 90.630$, $p = .000$, $R^2 = 0.244$ and adjusted $R^2 = 0.241$. As well, Table 4.12-9 demonstrates that the transformational leadership was significant predictor for motivation to learn with $\beta = 0.408$, $t(281) = 9.520$ and P-value = 0.000. Thus, H3 is supported and proved.

Table 4.12-7: Model Summary of Regression analysis for Transformational Leadership and Motivation to Learn

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.494[a]	.244	.241	1.07919	.244	90.630	1	281	.000
a. Predictors: (Constant), Transformational leadership									

Table 4.12-8: ANOVA Analysis of Transformational Leadership and Motivation to Learn

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	105.553	1	105.553	90.630	.000[b]
	Residual	327.268	281	1.165		
	Total	432.821	282			
a. Dependent Variable: Motivation to learn						
b. Predictors: (Constant), Transformational leadership						

Table 4.12-9: Coefficients of Regression Analysis for Transformational Leadership and Motivation to Learn

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error (SE)**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	3.945	.223		17.677	.000	3.506	4.384
	Transformational leadership	.408	.043	.494	9.520	.000	.323	.492
a. Dependent Variable: Motivation to learn								

4.12.4 Relationship Between Transformational Leadership and High-Performance Work System

To examine if transformational leadership carries a significant impact on HPWS, multiple linear regression is conducted. The dependent variable HPWS was regressed on predicting variable transformational leadership to test hypothesis H4. Transformational leadership significantly predicted HPWS, F (1, 281) = 139.601, P-value = 0.000, which indicates that the transformational leadership can play a significant role in shaping HPWS with (β = 0.499 , P-value =0.000). Moreover, the R^2 = 0.332 depicts that the model explains that 33.2% of the

variance in HPWS is explained by transformational leadership. Therefore, H4 is supported. The below Tables 4.12-10, 4.12-11, and 4.12-12 summarize the findings.

Table 4.12-10: Model Summary of Regression Analysis for Transformational Leadership and HPWS

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.576[a]	.332	.330	1.06395	.332	139.601	1	281	.000
a. Predictors: (Constant), Transformational leadership									

Table 4.12-11: ANOVA Analysis of Transformational Leadership and HPWS

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	158.028	1	158.028	139.601	.000[b]
	Residual	318.091	281	1.132		
	Total	476.120	282			
a. Dependent Variable: High-performance work system						
b. Predictors: (Constant), Transformational leadership						

Table 4.12-12: Coefficients of Regression Analysis for Transformational Leadership and HPWS

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error (SE)**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	2.182	.220		9.917	.000	1.749	2.615
	Transformational leadership	.499	.042	.576	11.815	.000	.416	.582
a. Dependent Variable: High-performance work system								

4.12.5 Relationship Between Knowledge Sharing and Innovative Work Behavior

An analysis using multiple regression analysis is conducted to identify whether knowledge sharing substantially affects innovative work behavior. Accordingly, the dependent variable innovative work behavior was regressed on the predictor variable knowledge sharing. Knowledge sharing predicted innovative work behavior with F(1, 281) = 70.794, P-value= 0.000, which indicates that knowledge sharing can play a substantial role in influencing innovative work behavior with (β = 0.383, P-value = 0.000). Furthermore, the R^2 = 0.201 illustrates that the model explains that 20.1% of the variance in innovative work behavior is explained by knowledge sharing. Based on the results mentioned above, H5 is supported. The below Tables 4.12-13, 4.12-14, and 4.12-15 display the summary of the results.

Table 4.12-13: Model Summary of Regression Analysis for Knowledge Sharing and Innovative Work Behavior

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.449[a]	.201	.198	1.03272	.201	70.794	1	281	.000
a. Predictors: (Constant), Knowledge sharing									

Table 4.12-14: ANOVA Analysis of Knowledge Sharing and Innovative Work Behavior

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	75.502	1	75.502	70.794	.000[b]
	Residual	299.691	281	1.067		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), Knowledge sharing						

Table 4.12-15: Coefficients of Regression Analysis for Knowledge Sharing and Innovative Work Behavior

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error (SE)**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	3.816	.219		17.422	.000	3.385	4.247
	Knowledge sharing	.383	.046	.449	8.414	.000	.294	.473
a. Dependent Variable: Innovative work behavior								

4.12.6 Relationship Between Motivation to Learn and Innovative Work Behavior

A multiple linear regression analysis is carried out to determine if the motivation to learn directly influences innovative work behavior. As a result, the predictor variable motivation to learn was regressed on the dependent variable inventive work behavior. Motivation to learn significantly predicted innovative work behavior with $F(1, 281) = 423.528$, P-value = 0.000, which in turn indicates that motivation to learn can play a significant role in influential innovative work behavior with ($\beta = 0.722$, P-value =0.000). Besides, the $R^2 = 0.601$ demonstrates that the model explains that the motivation to learn factor explains 60.1% of the variance in innovative work behavior. The findings as mentioned above support H6. The results are summarized below in Tables 4.12-16, 4.12-17, and 4.12-18.

Table 4.12-16: Model Summary of Regression Analysis for Motivation to Learn and Innovative Work Behavior

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.775[a]	.601	.600	.72976	.601	423.528	1	281	.000
a. Predictors: (Constant), Motivation to learn									

Table 4.12-17: ANOVA Analysis of Motivation to Learn and Innovative Work Behavior

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	225.548	1	225.548	423.528	.000[b]
	Residual	149.645	281	.533		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), Motivation to learn						

Table 4.12-18: Coefficients of Regression Analysis for Motivation to Learn and Innovative Work Behavior

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error (SE)**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	1.268	.214		5.920	.000	.846	1.690
	Motivation to learn	.722	.035	.775	20.580	.000	.653	.791
a. Dependent Variable: Innovative work behavior								

4.12.7 Relationship Between High-Performance Work System and Innovative Work Behavior

Multiple linear regression analysis performed to assess whether the HPWS directly influences innovative work behavior. As a result, the dependent variable innovative work behavior regressed on the predictor variable HPWS. With F(1, 281) = 94.748, P-value = 0.000, HPWS significantly predicted innovative work behavior, indicating that HPWS can play a significant role in influencing innovative work behavior with (β = 0.407, P-value =0.000). Moreover, the R^2 = 0.211 demonstrates that the model explains that 21.1% of the variance in innovative work behavior is explained by HPWS factor. According to the results, H7 is supported. Tables 4.12-19, 4.12-20, and 4.12-21 summarize the findings.

Table 4.12-19: Model Summary of Regression Analysis for HPWS and Innovative Work Behavior

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.459[a]	.211	.208	1.02668	.211	74.948	1	281	.000
a. Predictors: (Constant), High-performance work system									

Table 4.12-20: ANOVA Analysis of HPWS and Innovative Work Behavior

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	79.001	1	79.001	74.948	.000[b]
	Residual	296.193	281	1.054		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), High-performance work system						

Table 4.12-21: Coefficients of Regression Analysis for HPWS and Innovative Work Behavior

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error (SE)**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	3.682	.228		16.138	.000	3.233	4.131
	High-performance work system	.407	.047	.459	8.657	.000	.315	.500
a. Dependent Variable: Innovative work behavior								

4.13 Mediation Analysis

This research intends to test the mediation effects of knowledge sharing, motivation to learn, and HPWS in the relationship between transformational leadership and innovative work behavior. Mediation is identified as when the following four conditions are met: (1) the independent variable significantly affects the mediator; (2) the independent variable significantly affects the dependent variable without the mediator; (3) the mediator has a significantly unique effect on the dependent variable; and (4) the effect of the independent variable on the dependent variable decreases when the mediator is included in the model (MacKinnon & Dwyer, 1993). A mediation analysis was performed independently for each hypothesis to fully understand the statistical findings in relation to the proposed hypotheses. In particular, a Sobel test is used to examine the mediation effect of the hypothesis mentioned above. The test is a technique used in mediation analysis to determine the statistical significance of an indirect influence(Sobel, 1982).

4.13.1 The Mediation Effect of Knowledge Sharing on Transformational Leadership and Innovative Work Behavior Relationship

In order to test the mediation effect of knowledge sharing, a regression analysis was conducted to test and check the four conditions are met; (1) transformational leadership significantly influences knowledge sharing; (2) transformational leadership significantly

influences innovative work behavior without including knowledge sharing; (3) knowledge sharing has a significant impact on innovative work behavior; and (4) the effect of transformational leadership on the innovative work behavior decreases when the knowledge sharing is involved in the model.

Table 4.12-6 shows that transformational leadership influence significantly the employee's knowledge sharing with (β = 0.506, SE = 0.044, P-value =0.000), which indicates met the first condition. Furthermore, Table 4.12-3 reveals that the transformational leadership was significant influencer for innovative work behavior with (β = 0.352, SE = 0.041 P-value = 0.000) that proves condition two. With reference to Table 4.12-15, knowledge sharing significantly affects innovative work behavior with (β = .383, SE = 0.046, P-value = 0.000), which meets the third condition. For the fourth condition, both transformational leadership and transformational leadership examine as predictors of innovative work behavior. According to table 4.13-1 and Table 4.13-2, about 26.3% of the variation of innovative work behavior is explained by transformational leadership and knowledge sharing with P-value = 0.000. Table 4.13-3 demonstrates that both transformational leadership and knowledge sharing are considered as significant predictors for innovative work behavior with (β = 0.232, SE = 0.048, P-value = 0.000) and (β = .238, SE = 0.053 , P-value = 0.000) respectively. Therefore, the fourth condition is met since β coefficient of transformational leadership was 0.352 before mediation intervention, which reduced to be β = 0.232 in the presence of knowledge sharing.

Table 4.13-1: Model Summary of Regression Analysis for Transformational Leadership, Knowledge Sharing, and Innovative Work Behavior

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.513[a]	.263	.258	.99352	.263	50.052	2	280	.000
a. Predictors: (Constant), Knowledge sharing, Transformational leadership									

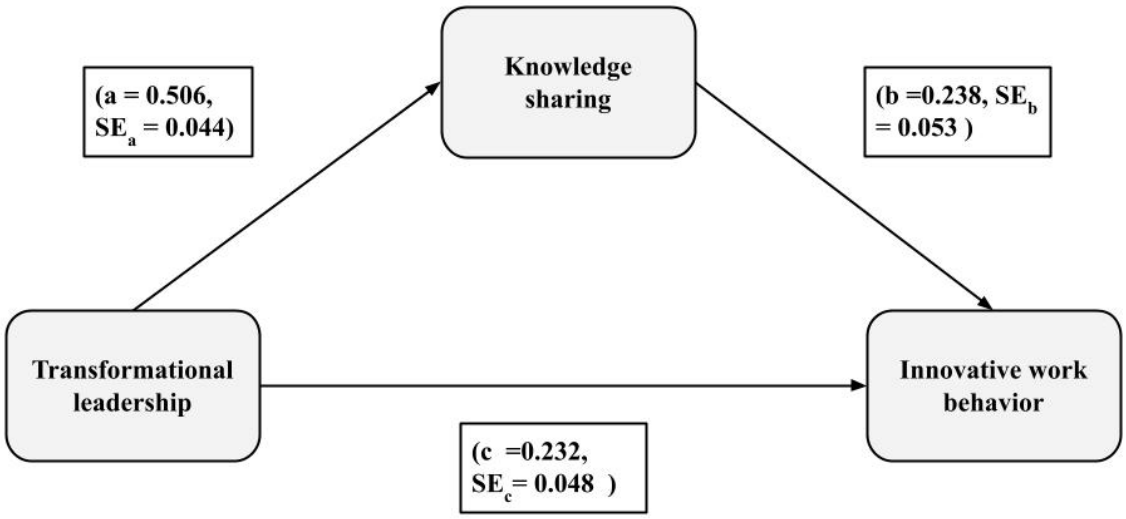
Table 4.13-2: ANOVA Analysis of Transformational Leadership, Knowledge Sharing, and Innovative Work Behavior

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	98.811	2	49.405	50.052	.000[b]
	Residual	276.382	280	.987		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), Knowledge sharing, Transformational leadership						

Table 4.13-3: Coefficients of Regression Analysis for Transformational Leadership, Knowledge Sharing, and Innovative Work Behavior

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	3.328	.233		14.261	.000	2.869	3.787
	Transformational leadership	.232	.048	.302	4.859	.000	.138	.326
	Knowledge sharing	.238	.053	.279	4.494	.000	.134	.343
a. Dependent Variable: Innovative work behavior								

A Sobel test was conducted to test the mediation impact of knowledge sharing on relationship between transformational leadership and innovative work behavior. The unstandardized regression coefficients β and standard errors are shown in Figure 4.13-1. The results of this test confirmed that knowledge sharing has a significant and positive mediation impact on the relationship between transformational leadership and innovative work behavior with (Z= 4.55315012, P-value = 0.00000528). Thus, H8 is supported.



Note: ***a*** *= (unstandardized) regression coefficient for the association between transformational leadership and knowledge sharing;* ***SE$_a$*** *= standard error of* ***a****;* ***b****=(unstandardized) regression coefficient for the association between knowledge sharing and innovative work behavior;* ***SE$_b$*** *= standard error of* ***b****;* ***c*** *=(unstandardized) regression coefficient for the association between transformational leadership and innovative work behavior;* ***SE$_c$*** *= standard error of* ***c***

Figure 4.13-1: Unstandardized Regression Coefficients and Standard Errors of Transformational Leadership, Knowledge Sharing, and Innovative Work Behavior

4.13.2 The Mediation Effect of Motivation To Learn on Transformational Leadership and Innovative Work Behavior Relationship

Four conditions must be examined to test the mediation influence of motivation to learn. Firstly, transformational leadership significantly influences motivation to learn. Secondly, transformational leadership significantly impacts innovative work behavior without including motivation to learn. Third, motivation to learn has a significant influence on innovative work behavior. Finally, the considerable influence of transformational leadership on innovative work behavior shrinkages when motivation to learn factor is included in the model.

Table 4.12-9 displays that transformational leadership has significant influence on motivation to learn factor with (β = 0.408, SE = 0.043, P-value =0.000), which met the first condition. Besides, Table 4.12-3 demonstrates that the transformational leadership was significantly influencing innovative work behavior with (β = 0.352, SE = 0.041 P-value = 0.000) that confirms the second condition. Table 4.12-18, motivation to learn factor has a considerable influence on innovative work behavior with (β =0.722, SE = 0.035, P-value = 0.000), and thereby the third condition met. Finally, to test and examine the fourth condition, transformational leadership and motivation to learn are all included in regression analysis as

predictors for innovative work behavior. The results are demonstrated below in Table 4.13-5, Table 4.13-6, and Table 4.13-7. Transformational leadership and motivation to learn explain about 60.9% of the variation of innovative work behavior with a P-value = 0.000. Table 4.13.2-3 proves that both transformational leadership and knowledge sharing are significant factors for innovative work behavior with (β = 0.77, SE = 0.033, P-value = 0.000) and (β = .676, SE = 0.040 , P-value = 0.000) respectively. Consequently, the fourth condition is met since the β coefficient of transformational leadership was 0.352 before mediation intervention, which declined to be β = 0.077 in the existence of knowledge sharing in the model.

Table 4.13-4: Model Summary of Regression Analysis for Transformational Leadership, Motivation to Learn, and Innovative Work Behavior

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.780[a]	.609	.606	.72410	.609	217.793	2	280	.000
a. Predictors: (Constant), Motivation to learn, Transformational leadership									

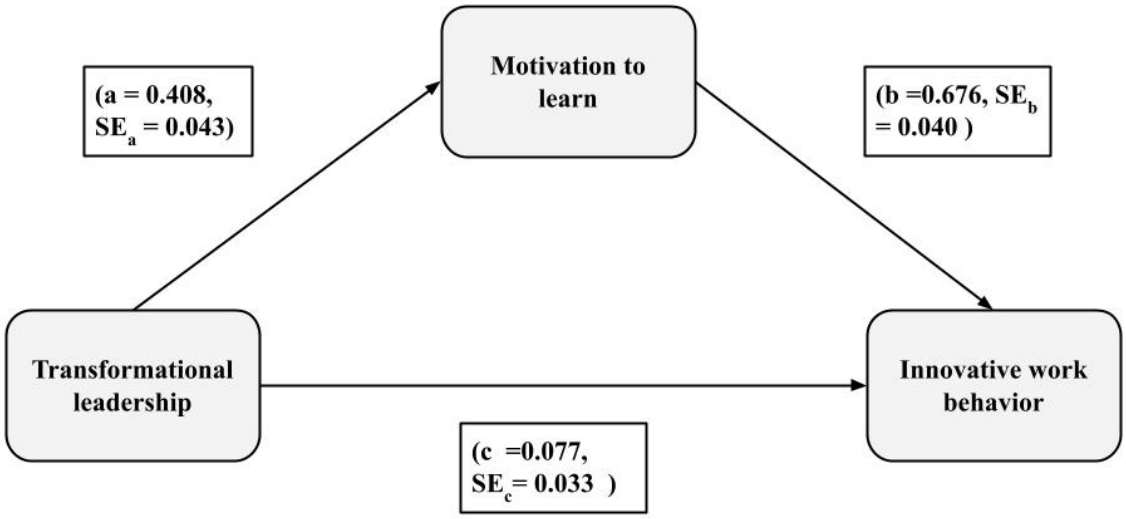
Table 4.13-5: ANOVA Analysis of Transformational Leadership, Motivation to Learn and Innovative Work Behavior

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	228.385	2	114.192	217.793	.000[b]
	Residual	146.809	280	.524		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), Motivation to learn, Transformational leadership						

Table 4.13-6: Coefficients of Regression Analysis for Transformational Leadership, Motivation to Learn and Innovative Work Behavior

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	1.159	.218		5.327	.000	.731	1.588
	Transformational leadership	.077	.033	.100	2.326	.021	.012	.142
	Motivation to learn	.676	.040	.726	16.887	.000	.597	.755
a. Dependent Variable: Innovative work behavior								

In order to test the significance of the mediation effect of motivation to learn on the relationship between transformational leadership and innovative work behavior, a Sobel test was implemented. Figure 4.13-2 demonstrates the unstandardized regression coefficients β and standard errors. The test proves that motivation to learn factor affects significantly transformational and innovative work behavior with (Z= 8.27357019, P-value = 0.03333603). Therefore, H9 is supported.



Note: ***a*** *= (unstandardized) regression coefficient for the association between transformational leadership and motivation to learn;* ***SE$_a$*** *= standard error of* ***a****;* ***b****=(unstandardized) regression coefficient for the association between motivation to learn and innovative work behavior;* ***SE$_b$*** *= standard error of* ***b****;* ***c*** *=(unstandardized) regression coefficient for the association between transformational leadership and innovative work behavior;* ***SE$_c$*** *= standard error of* ***c***

Figure4.13-2: Unstandardized Regression Coefficients and Standard Errors of Transformational Leadership, Motivation to Learn, and Innovative Work Behavior

4.13.3 The mediation effect of High-Performance Work System on Transformational Leadership and Innovative Work Behavior Relationship

To examine the mediation role played by HPWS on transformational leadership and innovative work behavior relationship, four conditions need to be examined and met. First, transformational leadership significantly influences HPWS factor. Second, transformational leadership significantly influences innovative work behavior without including HPWS as a mediator factor. Third, HPWS has a significant effect on innovative work behavior; lastly, transformational leadership's significant effect on innovative work behavior decreases when HPWS factor is included.

A multiple regression analysis was conducted to check the four conditions for the mediation test. Table 4.12-12 confirms that transformational leadership plays positive role in affecting HPWS with (β = 0.499, SE = 0.044, p-value = 0.000) and thereby the first condition is achieved. For the second condition, the results indicated in Table 4.12-3 confirm the

positive and significant influence of transformational leadership on innovative work behavior with (β = 0.352, SE = 0.041 P-value = 0.000) which in turn confirms the second condition. The third condition is achieved since the results indicated in Table 4.12-21 prove the positive relationship between HPWS and innovative work behavior with (β = 0.407, SE = 0.047, P-value = 0.000). For examining the fourth condition, HPWS is included as a predictor besides transformational leadership to examine their effect on innovative work behavior. The results are all indicated in Table 4.13-9, Table 4.13-10, and Table 4.13-11.

According to Table 4.13-9 and Table 4.13-10, about 26.7% of variation in innovative work behavior is explained by both predictors' transformational leadership and HPWS. According to Table 4.13-11, the results proves that both transformational leadership and HPWS are significant predictors for innovative work behavior with (β = 0.223, SE = 0.048, P-value = 0.000) and (β = .259, SE = 0.056, P-value = 0.000) . Accordingly, the fourth condition is met since β coefficient of transformational leadership was 0.352 before mediation involvement, which declined to be β = 0.223 in mediation intervention of HPWS.

Table 4.13-7: Model Summary of Regression Analysis for Transformational Leadership, HPWS, and Innovative Work Behavior

Model Summary									
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**	**Change Statistics**				
					R Square Change	**F Change**	**df1**	**df2**	**Sig. F Change**
1	.517[a]	.267	.262	.99108	.267	50.989	2	280	.000
a. Predictors: (Constant), High-performance work system, Transformational leadership									

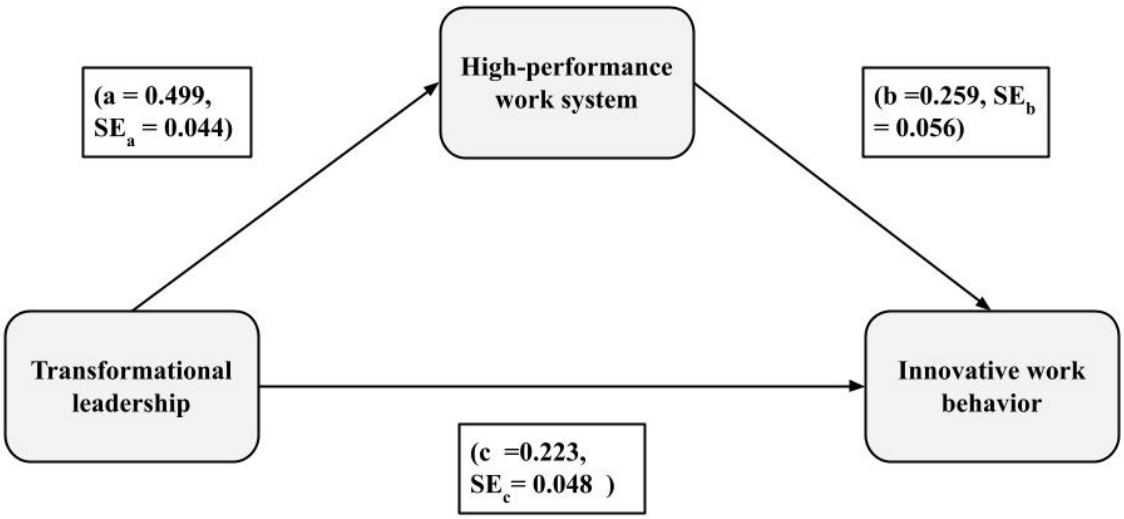
Table 4.13-8: ANOVA Analysis of Transformational Leadership, HPWS and Innovative Work Behavior

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	**Regression**	100.167	2	50.083	50.989	.000[b]
	Residual	275.027	280	.982		
	Total	375.193	282			
a. Dependent Variable: Innovative work behavior						
b. Predictors: (Constant), High-performance work system, Transformational leadership						

Table 4.13-9: Coefficients of Regression Analysis for Transformational Leadership, HPWS, and Innovative Work Behavior.

Coefficients								
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
		B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
1	**(Constant)**	3.261	.238		13.695	.000	2.792	3.730
	Transformational leadership	.223	.048	.291	4.642	.000	.129	.318
	High-performance work system	.259	.056	.291	4.656	.000	.149	.368
a. Dependent Variable: Innovative work behavior								

A Sobel test is conducted to examine the mediation influence of HPWS on the relationship between transformational leadership and innovative work behavior. Figure 4.13-3 displays the unstandardized regression coefficients β and standard errors. The Sobel test proves that HPWS factor significantly influences transformational and innovative work behavior with (Z= 4.28256604, p-value = 0.0301784). Hence, H10 is supported.



Note: ***a*** *= (unstandardized) regression coefficient for the association between transformational leadership and high-performance work system;* ***SE$_a$*** *= standard error of* ***a****;* ***b****=(unstandardized) regression coefficient for the association between high-performance work system and innovative work behavior;* ***SE$_b$*** *= standard error of* ***b****;* ***c*** *=(unstandardized) regression coefficient for the association between transformational leadership and innovative work behavior;* ***SE$_c$****= standard error of* ***c***

Figure 4.13-3: Unstandardized Regression Coefficients and Standard Errors of Transformational Leadership, High-Performance Work System, and Innovative Work Behavior

4.14 Summary

Chapter four describes the statistical analysis conducted for the collected data. The research performed statistical analysis to examine the reliability and validity of research instruments. Also, a normality test and Pearson correlation analysis were conducted. The study investigated the relationship between transformational leadership and innovative work behavior. Besides, it was attempted to examine the mediation role of knowledge sharing, motivation to learn, and HPWS in the linkage between transformational leadership and innovative work behavior. Accordingly, multiple linear regression analysis and Sobel test were implemented to test the research hypothesis. The researcher used the first method to test the direct effect between research constructs. Then, the researcher used the analysis results to examine the four conditions required for mediation analysis. The second method, the Sobel test, was employed to test the significance of the mediation role of mediators. The research findings summarize in Table 4.14-1 and Table 4.14-2.

Table 4.14-1: Summary of Results of Direct Effect Between Research Variables

Direct Effect						
Hypothesis Number	**Hypothesis**	**Unstandardized β coefficient**	**Standard Error**	**R^2**	**P-Value**	**Finding**
H1	There is a significant impact of transformational leadership on employees' innovative work behavior in Omani HEIs at level (α≤0.05).	0.352	0.041	0.210	0.000	Supported
H2	There is a significant impact of transformational leadership on knowledge sharing of employees in Omani HEIs at level (α≤0.05).	0.506	0.044	0.317	0.000	Supported
H3	There is a significant impact of transformational leadership on employees' motivation to learn in Omani HEIs at level (α≤0.05).	0.408	0.043	0.244	0.000	Supported
H4	Transformational leadership significantly affects high-performance work system in Omani HEIs at level (α≤0.05).	0.499	0.042	0.332	0.000	Supported
H5	Knowledge sharing directly and positively affects employees' innovative work behavior in Omani HEIs at level (α≤0.05).	0.383	0.046	0.201	0.000	Supported
H6	Motivation to learn significantly influences innovative work behavior in Omani HEIs at level (α≤0.05).	0.722	0.035	0.601	0.000	Supported
H7	A high-performance work system significantly affects employee's innovative work behavior in Omani HEIs at level (α≤0.05).	0.407	0.047	0.211	0.000	Supported

Table 4.14-2: Summary of Results of an Indirect Effect

Indirect Effect								
Hypothesis Number	**Hypothesis**	**Predict variables**	**Unstandardized β coefficient**	**Standard Error**	**R^2**	**Z-Sobel test**	**P-Value (Sobel Test)**	**Finding**
H8	There is a significant mediation impact of knowledge sharing on relationship between transformational leadership and employees' innovative work behavior in Omani HEIs at level (α≤0.05).	Transformational leadership	0.232	0.048	0.263	4.553 15012	0.000005 28	Supported
		Knowledge sharing	0.238	0.053				
H9	There is a significant mediation effect of motivation to learn on relationship between transformational leadership and employee's innovative work behavior in Omani HEIs at level (α≤0.05).	Transformational leadership	0.077	0.033	0.609	8.273 57019	0.033336 03	Supported
		Motivation to learn	0.676	0.04				
H10	There is a significant mediation impact of high-performance work system on relationship between transformational leadership and employee's innovative work behavior in Omani HEIs at level (α≤0.05).	Transformational leadership	0.223	0.048	0.267	4.282 56604	0.030178 4	Supported
		High-performance Work System	0.259	0.056				

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Ultimately, this study investigated the role of transformational leadership in innovative work behavior on HEIs in the Sultanate of Oman. Precisely, the study examined the mediation role of multiple factors, namely, knowledge sharing, motivation to learn, and HPWS, on the relationship between transformational leadership and innovative work behavior. Therefore, the research results are summarized and discussed in this final chapter. Their conclusion, theoretical and practical implications, and recommendations for future research are also included.

5.2 Discussion of Findings

The main goal of this study was to examine the relationship between transformational leadership and employees' innovative work behavior in the Sultanate of Oman. As previously highlighted, the research extends the investigation to examine the mediation effect of knowledge sharing, motivation to learn, and HPWS on the relationship between transformational leadership and innovative work behavior. The questionnaire was administered and distributed to collect data, and about 283 responses were collected. The collected data were then analyzed using descriptive statistics, correlation analysis, multiple linear regression, and Sobel test. The study findings were consistent with previous studies, which confirm the significant relationship between the factors mentioned earlier.

5.2.1 Relationship Between Transformational Leadership and Innovative Work Behavior

Transformational leaders improve employees' skills through encouragement and motivation inspiration. Besides that, they have a strong communications network which in turn helps and enable knowledge sharing and creative thinking which are considered to be the main component of innovation(B. M. Bass & Avolio, 1994; L. Chen et al., 2016). Accordingly, this research intended to investigate transformational leadership's direct and significant effect on employees' innovative work behavior. The results of the data analysis demonstrated a positive and significant effect of transformational leadership on employees' innovative work behavior. Hence, the researcher can affirm that transformational leadership is one of the key factors influencing and promoting employees' innovative work behavior.

This inference is consistent with different previous studies conducted and confirmed the significant relationship between transformational leadership and innovative work behavior(Afsar et al., 2014, 2019; Afsar & Masood, 2017, 2018; A. Alheet et al., 2021; Ariyani & Hidayati, 2018; A. M. Khan et al., 2019; Li et al., 2019; Pradhan & Jena, 2019).

5.2.2 Relationship Between Transformational Leadership, Knowledge Sharing, and Innovative Work Behavior

The knowledge-based view suggests that knowledge is a valuable and core organizational resource and a significant aspect of organizational innovation(Okoronkwo & Grant, 1996). Therefore, the scholars confirm that knowledge sharing is a critical aspect that has an evident and significant effect on an organization's success. So, to promote knowledge sharing, transformational leaders create a supportive culture of knowledge that shapes employee behavior accordingly(Lee et al., 2010; Ribiere & Sitar, 2003; Z. Wang & Wang, 2012b). Thus, this research investigates the mediation role played by knowledge sharing in the relationship between transformational leadership and innovative work behavior. The research results firstly reveal that transformational leadership significantly affects knowledge sharing. These results align with previous studies that confirmed their relationship (Al-Husseini et al., 2021; Al-husseini & Elbeltagi, 2018; Phong & Son, 2020; Son et al., 2020). Then, the results confirmed that knowledge sharing significantly influences employees' innovative work behavior. This result is consistent with previous studies that reported the positive effect of knowledge sharing on innovative work behavior(Akram et al., 2020; Kuo et al., 2014; T. P. L. Nguyen et al., 2019, 2020). Therefore, the previous results confirmed the mediation role of knowledge sharing in the relationship between transformational leadership and innovative work behavior. Therefore, transformational leaders encourage and inspire their subordinates to share their expertise, skills, and knowledge, which in turn helps to foster innovative behavior.

5.2.3 Relationship Between Transformational Leadership, Motivation To Learn, and Innovative Work Behavior

This research examined the mediation role of motivation to learn on the relationship between transformational leadership and innovative work behavior. Based on the results as mentioned above, the researcher approves firstly that transformational leadership affects significantly the employee's motivation to learn which comes in line with different previous studies that also confirmed the relationship between them too(Menon & Ioannou, 2016; Smy

et al., 2016; Zuraik & Kelly, 2019). Furthermore, the research findings confirm the positive and significant effect of employees' motivation to learn on their innovative work behavior. The findings are in line with earlier studies that prove the significant influence of motivation to learn on innovative work behavior, too(Shalley et al., 2004; Yu et al., 2018). Also, the research findings reveal that motivation to learn factor significantly affects the relationship between transformational leadership and innovative work behavior. This finding is consistent with previous studies examining and confirming the significant mediating role of motivation to learn in the relationship between transformational leadership and innovative work behavior(Afsar et al., 2019). Therefore, transformational leaders promote employees' intention and motivation to learn, which in turn helps to improve their engagement in innovative behavior.

5.2.4 Relationship Between Transformational Leadership, High-Performance Work System, and Innovative Work Behavior

Finally, the researchers examined the mediation role of HPWS on relationship between transformational leadership and innovative work behavior. Firstly, the research findings confirm that transformational leadership significantly impacts HPWS. These results come in line with previous studies that prove the positive relationship between them(Ehrnrooth et al., 2021; Imran et al., 2020). Then, the effect of HPWS on innovative work behavior was confirmed based on the results of the research data analysis. Accordingly, this outcome is consistent with studies that confirmed the relationship between HPWS and innovative work behavior(Husin et al., 2021; Imran & Al-Ansi, 2019). Accordingly, the research findings also confirm the mediation role played by HPWS on relationship between transformational leadership and innovative work behavior. It reveals that transformational leaders can improve employee innovation by adopting a high-performance work system as a supportive condition, owing to the important impact the high-performance work system played in enhancing staff skills and competencies.

5.3 Conclusion

The research investigates transformational leadership and its effect on employees' innovative work behavior. For the first objective, it was evident that the transformational leaders in HEIs in the Sultanate of Oman significantly influence employees' innovative work behavior. The second objective of the research is to examine the mediation role of multiple factors namely, knowledge sharing, motivation to learn, and HPWS on the relationship

between innovative work behavior. The research reveals that there was a direct and positive effect between transformational leadership with knowledge sharing, motivation to learn and HPWS. Furthermore, the direct and significant effect of knowledge sharing, motivation to learn, and HPWS on innovative work behavior proved. Finally, the research can affirm the mediation influence of knowledge sharing, motivation to learn, and HPWS on the relationship between transformational leadership and innovative work behavior.

Referring to the aforementioned research results proves that transformational leaders can promote their employee's innovative work behavior by encouraging their subordinates in HEIs to share their knowledge and experience with their colleagues and motivate them to continue to engage in learning. Moreover, they adopt HPWS in their institutional practices, which in turn helps to build and improve their employee's skills and competencies, thereby raising employee engagement in innovative behavior.

5.4 Theoretical And Practical Implications

Innovation has evolved into one of the most critical requirements for any organization worldwide. As a result, studying innovative behavior in research becomes increasingly relevant. This study focuses on studying more about the relationship between transformational leadership and innovative work behavior by investigating the significant mediation effect of three key factors: knowledge sharing, motivation to learn, and a high-performance work system. This study finds that employing knowledge sharing, motivation to learn, and a high-performance work system as mediators can reinforce and amplify the relationship between transformational leadership and innovative work behavior.

From a theoretical perspective, this study added to the existing knowledge of leadership and innovation in the context of education by providing scholars, managers, academic staff, and practitioners with an understanding of the critical determinants of an employee's innovative work behavior. Also, it contributed to expanding the existing knowledge and research of innovation, HRM, and leadership in the context of education. Additionally, it develops a valid and tested model that can understand employees' innovative work behavior. Precisely, it contributes to the development of theory concerning the relationship between transformational leadership and innovative work behavior. Most previous research focuses on the prevalent situations in developed countries, and thereby the study was conducted in Oman and the context of higher education. Accordingly, this investigation will significantly contribute to our understanding of the Omani setting. A high-performance work system,

knowledge sharing, and employee motivation to learn all play a mediation role in strengthening transformational leaders' influence and interactions on subordinates' innovative work behavior, contributing significantly to existing literature.

This study can provide policymakers and practitioners with vital and key practical insights and theoretical experience that could allow leaders to facilitate and promote the employee's innovative work behavior in Omani HEIs, which in turn results in improving HEIs performance success. From a practical perspective, the results proved and affirmed that transformational leadership can be employed as a strategy to boost and promote employees' innovative work behavior. However, HEIs should promote transformational leadership alone and emphasize other facilitating aspects such as knowledge sharing, motivation to learn, and a high-performance work system. The research outcomes proved that transformational leaders could promote the innovative work behavior of their subordinates through raising the knowledge sharing activities and motivating them to engage, communicate and participate effectively with their colleagues to gain new insights and knowledge. Besides, the management can develop high-performance work system practices to reinforce and strengthen innovative behavior in the HEIs.

5.5 Limitations and Recommendations

Although this effort adds to our understanding, there are a lot of limitations that need to be considered. This research aims to ascertain the linkages between transformational leadership, knowledge sharing, motivation to learn, HPWS, and innovative work behavior. There is a limitation with reference to the sampling due to the selection of HEIs of a gulf country. The selection of the HEIs may have been biased because other sectors were not selected. The context of this study is the Omani context for higher education. Conducting the same study in another industry in Oman or other developed countries with many different contexts, such as the health or business context, could be noteworthy. The sample size was another limitation. The study's sample size was small (n=283) although the questionnaire was given to various employees of higher education institutions in Oman. A large sample size would have allowed for a more accurate generalization of how innovative work behavior can be improved and expanded.

Future research can take a more comprehensive approach to include knowledge sharing dimensions and study their linkage with transformational leadership and innovative work behavior. Besides, other leadership styles like empowerment and transactional leadership can

be involved to examine their influence on the innovative work behavior of an organization. Moreover, socio-cultural factors related to workplace like educational level and work experience would be interesting to examine their influence. Additionally, it is important to encourage to employ mixed methods research so that qualitative and quantitative approaches can complement one another and aid in the deeper investigation. The researcher would be able to provide a more thorough explanation of the links between the constructs by conducting the study employing a mixed-method approach. The researcher suggests that future studies use mixed methods to describe how transformational leadership interacts holistically and thoroughly with innovative work behavior. Also, the research can be conducted in longitudinal research instead of cross-sectional research that might give more deep insights on the proposed research framework.

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APPENDICES

Appendix 1: Survey Questionnaire – الملحق الأول: الاستبيان

جامعة الشرقية
A'SHARQIYAH UNIVERSITY

استبيان

تأثير القيادة التحويلية على السلوك الإبتكاري في العمل من خلال مشاركة المعرفة والتشجيع على التعلم ونظام عمل عالي الأداء في مؤسسات التعليم العالي

تحية طيبة وبعد ..... **أخي المشارك / أختي المشاركة**

يعتبر هذا الاستبيان ضمن متطلبات ورقة بحثية في كلية إدارة الأعمال من جامعة الشرقية، حيث نجري بحث بعنوان: تأثير القيادة التحويلية على السلوك الإبتكاري في العمل من خلال مشاركة المعرفة والتشجيع على التعلم ونظام عمل عالي الأداء في مؤسسات التعليم العالي. لا توجد هناك إجابات صحيحة أو خاطئة ما دمت تفعل ذلك بكل أمانة، حيث سوف يتم التعامل مع إجاباتك على هذا الاستبيان بمنتهى من السريّة. سيتم تحليل نتيجة الاستطلاع للأغراض الأكاديمية والعلمية فقط. ستساهم ردودك بشكل فعال جداً في هذا البحث الأكاديمي. لا تستغرق مشاركتك في هذا الاستبيان أكثر من 3. دقائق فقط، ونتقدم لك بالشكر الجزيل على تعاونك في إجراء هذه الدراسة

القسم الأول: البيانات الشخصية

1. **الجنس** ذكر☐ أنثى☐

2. **الحالة الاجتماعية** أعزب☐ متزوج☐ مطلق☐

3. **المستوى التعليمي**
دكتوراه أو أعلى☐ ماجستير☐ بكالوريوس ☐
دبلوم☐ ثانوية عامة فأقل☐

4. **العمر** أقل من 25 عام☐ من 25 إلى أقل من 35 عام☐

		من 35 إلى أقل من 45 عام☐	45 عام فأكثر☐
5.	**سنوات الخبرة في المؤسسة**	أقل من سنة☐	من سنة إلى أقل من خمس سنوات☐
		من خمس إلى أقل من عشر سنوات☐	عشر سنوات فأكثر☐
6.	**عدد الوظائف التي شغلتها في المؤسسة**	الوظيفة الحالية فقط☐	وظيفتين فقط☐
		ثلاث وظائف فقط☐	أكثر من ثلاث وظائف☐
7.	**الوظيفة الحالية**	مدير عام / مساعد مدير ☐	
		مدير/ مساعد مدير☐	إداري☐
		عام	
		رئيس قسم☐	فني/ مهندس☐ أكاديمي ☐

القسم الثاني: تصف العناصر التالية القيادة التحويلية، يرجى الإشارة إلى مدى موافقتك على العبارة التالية من خلال تدوير الرقم المناسب على مقياس التصنيف المقدم.

البند	1	←	7

A. القيادة التحويلية

البند	**1**						**7**
1. يقوم المدير بتوصيل رؤية واضحة وإيجابية للمستقبل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. يبدي المدير اهتماما ملحوظا بكل فرد من العاملين ويدعمهم ويشجع تنميتهم وتطورهم.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. يتمتع المدير بنمط قيادي داعم مما يشجع الموظفين ويقدر إنجازاتهم.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. يعزز المدير الثقة والمشاركة والتعاون بين أعضاء فريق العمل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. يشجع المدير الموظفين على التفكير بطرق جديدة في حل المشكلات.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. يشجعني المدير على البحث عن الفرص في مشكلات العمل التي أوجهها.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7. يتمتع المدير بالوضوح فيما يتعلق بقيمه وممارساته وقناعاته الخاصة بالعمل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8. يغرس المدير الفخر والاحترام في الآخرين ويلهمني بكفاءته وقدراته في العمل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

القسم الثالث: تصف العناصر التالية السلوك الإبتكاري في العمل ، يرجى توضيح إلى أي مدى توافق على البيان التالي غير موافق بشدة.1-موافق بشدة، 7- :عن طريق تدوير الرقم المناسب على مقياس التصنيف المقدم.

B. السلوك الابتكاري في العمل

1. أسعى لإيجاد أفكار جديدة للقضايا المعقدة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. أبحث عن أساليب وتقنيات وآليات عمل جديدة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

البند	**1**						**7**
3. أسعى لإيجاد حلول جوهرية (أصيله) لمشكلات العمل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. أسعى لحشد الدعم للأفكار المبتكرة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
5. أسعى للحصول على الموافقة لتجسيد الأفكار المبتكرة على أرض الواقع.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6. أسعى إلى تحفير الأشخاص المهمين في المؤسسة وجعلهم أكثر حماسة لتقبل الفكرة والموافقة عليها.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7. أسعى إلى تحويل الأفكار المبتكرة إلى تطبيقات مفيدة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8. أسعى إلى إدخال ودمج الأفكار المبتكرة في بيئة العمل بطريقة منهجية.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9. أقوم بتقييم الفوائد والمنافع المرجوة من تطبيق الأفكار المبتكرة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

القسم الرابع: تصف العناصر التالية مشاركة المعرفة، يرجى توضيح إلى أي مدى توافق على البيان التالي عن طريق تدوير الرقم المناسب على مقياس التصنيف المقدم.: 7-موافق بشدة، 1-غير موافق بشدة.

C. مشاركة المعرفة

1. لدى جامعتي عمليات لنقل المعرفة التراكمية المؤسسية للموظفين.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2. لدى جامعتي عمليات لتوزيع ونشر المعرفة مع شركائنا.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3. لدى جامعتي نظام حوافز يكافئ الموظفين على مشاركة المعرفة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4. لدى جامعتي عمليات لنشر المعرفة في جميع أنحاء البيئة المؤسسية.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

البند	1	←	7

القسم الخامس: تصف العناصر التالية عامل التشجيع على التعلم ، يرجى توضيح إلى أي مدى توافق على البيان التالي غير موافق بشدة.1-موافق بشدة، 7- :اختيار الدرجة وفق المقياس من خلال

D. التشجيع على التعلم

1.	أنا متحمس/ متشجع لتعلم المهارات التي تم التأكيد عليها في وظيفتي.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2.	سأحاول التعلم قدر المستطاع من وظيفتي.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3.	أنا على استعداد لبذل جهد كبير في وظيفتي من أجل تحسين مهاراتي.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4.	غالبًا ، أبحث عن فرص لتطوير مهارات ومعارف جديدة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

القسم السادس: تصف العناصر التالية نظام العمل عالي الأداء ، يرجى الإشارة إلى مدى موافقتك على البيان التالي من غير موافق بشدة.1-موافق بشدة، 7- :خلال اختيار الدرجة وفق المقياس

E. نظام العمل عالي الأداء

1.	يتم إشراك الموظفين والتشاور معهم فيما يتعلق بالتناوب (التدوير) الوظيفي.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
2.	يتم تمكين الموظفين لدينا من اتخاذ القرارات الخاصة بالعمل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
3.	يتم تصميم و عرض الوظائف بما يتناسب مع مهارات وقدرات الموظفين الفردية.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
4.	يتم اختيار الموظفين وفق إجراءات شاملة تتضمن المقابلات والاختبارات وما إلى	**1**	**2**	**3**	**4**	**5**	**6**	**7**

	ذلك.							
5.	يتم التركيز عند اختيار الموظفين الجدد على قدرتهم في التعاون والعمل ضمن فريق.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
6.	تتضمن إجراءات التوظيف مراجعة طلبات العديد من المرشحين للوظيفة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
7.	يركز الاختيار في التوظيف على اختيار أفضل مرشح يتمتع بمعارف ومهارات تنسجم مع وصف ومتطلبات الوظيفة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
8.	يراعي الاختيار في التوظيف الترقيات من داخل المؤسسة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
9.	يعطي الاختيار في التوظيف الأولوية للمتقدمين الذين لديهم القدرة على التعلم والتطور.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
10.	التدريب مستمر في المؤسسة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
11.	برامج التدريب في المؤسسة شاملة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
12.	تسعى برامج التدريب إلى تطوير المعرفة والمهارات الخاصة بعمل المؤسسة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
13.	تركز برامج التدريب على بناء الخبرات أثناء العمل.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
14.	يعتمد نظام تقييم الأداء على نتائج موضوعية وقابلة للقياس الكمي.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
15.	يركز تقييم الأداء على الإدارة بالأهداف (مدى تحقق الأهداف المخطط لها)مع مراعاة الأهداف التشاركية.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
16.	تأخذ تقييمات الأداء بعين الاعتبار مدى مراعاة الموظفين للملاحظات على أدائهم وتطويرها,	**1**	**2**	**3**	**4**	**5**	**6**	**7**
17.	تستند الحوافز على أداء الفريق.	**1**	**2**	**3**	**4**	**5**	**6**	**7**

18	تتضمن حزمة التعويضات مجموعة متنوعة من المزايا والفوائد الوظيفية.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
19	تشمل التعويضات في المؤسسة الأجور المرتفعة.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
20	يتم ربط نظام الحوافز والأجور بمهارات الموظفين.	**1**	**2**	**3**	**4**	**5**	**6**	**7**
21	يتم ربط التعويضات والعلاوات لدينا بأداء الموظفين.	**1**	**2**	**3**	**4**	**5**	**6**	**7**