LEADERS' IDEALISED INFLUENCE, INTELLECTUAL STIMULATION AND INNOVATION TOWARDS ACADEMICS PERFORMANCE IN MALAYSIAN PUBLIC RESEARCH UNIVERSITIES

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DECLARATION

We hereby declare that:

(1) This undergraduate FYP is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this FYP has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the FYP.

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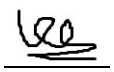
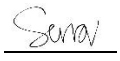
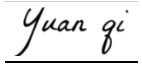
2. LEE KA ZEN	18ABB07195	
3. LEE SOOK QI	18ABB03819	
4. TANG YUAN QI	19ABB06863	
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This dissertation is dedicated to:

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Dr. Gopalan a/l Raman

For guiding us throughout the way of completion in this research project.

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University Tunku Abdul Rahman (UTAR)

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LIST OF ABBREVATIONS

AP	Academic Performance
I	Innovation
IDT	Innovation Diffusion Theory
II	Idealised Influence
IS	Intellectual Stimulation
KPIs	Key Performance Indicators
MOHE	Ministry of Higher Education
RU	Research University
SPSS	Statistical Package for Social Sciences
THE	Times Higher Education World University Rankings
TL	Transformational Leadership
UKM	Universiti Kebangsaan Malaysia
UM	Universiti Malaya
UPM	Universiti Putra Malaysia
USM	Universiti Sains Malaysia
UTM	Universiti Teknologi Malaysia
U21	Universitas 21

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PREFACE

This research project is submitted as a partial fulfilment of the requirement for the graduate student of Bachelor of Business Administration (Hons) in Universiti Tunku Abdul Rahman (UTAR). The research paper is supervised Dr Gopalan a/l Raman. The research is entitled "Leaders' Idealised Influence, Intellectual Stimulation and Innovation towards Academics Performance in Malaysian Public Research Universities". The final year project is completed solely by the authors based on others' researches and resources quoted as in the references. The primary purpose of this study is to investigate the impact of leaders' idealised influence, intellectual stimulation, and innovation on the academic's performance of public research universities in Malaysia. This is also one of the reasons why the authors wish to engage in this topic of study. The independent variables selected are leaders' idealised influence, intellectual stimulation, innovation and the dependent variable is academic performance. The study would like to generate a substantial contribution to public to have better understanding on the variables affecting academics performance in Malaysian Public Research Universities.

ABSTRACT

This paper aims to identify and understand Leaders' Idealised Influence, Intellectual Stimulation and Innovation towards Academic Performance in Malaysian Public Research University. This study was conducted among 272 academic staffs from five public research universities in Malaysia, namely Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia, (UPM), Universiti Sains Malaysia (USM) and Universiti Teknologi Malaysia (UTM). Statistical Package for the Social Sciences tool was used, and several statistical methods were involved in the data and statistical analysis including the maximum likelihood estimate. Rogers' Innovation Diffusion Theory was used in our research. In this study, 272 copies of survey questionnaires were handed out to Public Research Universities in Malaysia and IBM SPSS Statistics was used to analyse and interpret the collected data. The data was analysed using descriptive analysis, reliability test, normality test, Pearson Correlation Coefficient Analysis and Multiple Linear Regression. The results showed that the independent variables Leaders' Idealised Influence, Intellectual Stimulation have positive effect on academic performance. Nonetheless, there were some limitations and recommendations in this study that will be further discussed in later chapters.

Chapter 1: Research Overview

1.0 Chapter Overview

The principle of idealised influence, intellectual stimulation and innovation will influence academic performance in Malaysian public research universities. The background study, research problem, objectives and contributions will all be briefly covered in chapter one.

1.1 Background of the Study

In Malaysia, education is among the most crucial institutions for developing high-quality human capital and a first-class mentality. The Ministry of Higher Education has published the 11th Malaysia Plan Malaysia, Higher Education Blueprint, as well as the National Strategic Plan for Higher Education for 2010–2020 (2015-2025). These strategic plans at the ministry level prioritize improving teaching and learning quality, enhancing educational accessibility while also raising standards, encouraging research and innovation, embracing technology, and enhancing the effectiveness of service delivery. To usher in this new era, Malaysia's higher education, particularly public institutions, should concentrate on policies that encourage increased sustainability, visible management, and talent development in the direction of education 4.0. In the 2019 budget, the Malaysian government allocate RM 400 million to support five research universities (Zahrom, 2018). The budget 2022 states that the higher education sector will be allocated RM14.5 Billion and RM450 Million for 600,000 tablets for university students (Dharshini, 2021). Hence, it was to ensure the university could provide high-quality human capital and high-quality invention (Raman et al., 2021).

Moreover, academics have to put in much effort to advance in higher education institutions. Idealised influence, intellectual stimulation, and innovation are critical for performance responsiveness. Furthermore, according to Fernandez (2008), leadership styles can significantly influence employees' satisfaction and performance. Academic leaders are academic members with administrative responsibilities, including department chairmen, deputy deans, and deans (Flowers & Moore, 2008; Siddique et al., 2011).

Malaysia's Government had paid attention to improving the academic performance, such as allocating money to the universities to ensure there are improvements in the universities ranking in Malaysia. As a result, the academics will be facing stress when obtaining research funding, finishing post-doctoral publication projects, and performing consulting work, or obtaining corporate collaboration (Azman & Kutty, 2016; Ghasemy et al., 2018), as the performance is based on KPIs for teaching, research, supervision, publication, and consulting (Masron et al., 2012). Thus, the position of academic staff has been more challenging and diversified today, resulting in a new workaholic issue (Torp et al., 2017). Therefore, leaders play an essential role in motivating academics, yet the organisation also plays a fundamental role as there will face difficulty achieving goals without productive and committed employees (Darus et al., 2016). However, most past research has focused on employee performance in business organisations, and just a minority have studied academics performance at universities (Ghabban et al., 2018; Muda et al., 2017). Hence, this study aims to examine leaders' idealised influences, leaders' intellectual stimulation, and leaders' innovation toward academic's performance in Malaysian public research universities.

Institutions of Higher Learning are regarded as the foundation for newly innovated development in Malaysia. The government have made an important decision which is to allocate RM5.3 Billion to stimulate innovation and research commercialization in higher education (Ninth Malaysian Plan (2006-2010), pp.279-280.) As a few institutions in Malaysia have been given the designation of Research University (RU) to emphasise their research, development, and commercialization (R&D&C) efforts. As a result, RUs must focus on innovation performance and management in order to achieve the country's aim of being an innovation-rich nation by 2020 (Kowang et al., 2015). In addition, according to the QS Top Universities (2022), Universiti Malaya (UM) was ranked 65th, Universiti Putra Malaysia (UPM) was rated 143rd, Universiti Kebangsaan Malaysia (UKM) was placed 144th, Universiti Sains Malaysia (USM) was classified 147th, and Universiti Teknologi Malaysia (UTM) was categorised 191st in the world ranking. Academic standing, employer reputation, faculty to student ratio, amount of citations per faculty, international faculty to student ratio, and international student to faculty ratio make up the six factors that contribute to this ranking (StudyMalaysia.com, 2021).

Employees are the driving force behind the success of an organization. As a result, a company's success or failure is significantly influenced by daily employee performance. Employee performance refers to how a staff member completes essential tasks, acts, and performs their job obligations in the working environment. Performance is influenced by the quantity, quality, and effectiveness of the work. Leaders can obtain a sense of how their organization is operating by monitoring employee performance. However, it also gets ready for upcoming growth strategies (Employee performance: How to measure, evaluate & improve, 2022). In addition, any institution regularly assesses academic performance using key performance indicators (KPIs)

such as research, teaching, supervising, publication, and consulting. These signs are therefore crucial in defending the performance of academic personnel (Masron et al., 2012).

In addition, putting a premium on employee performance can benefit the organization. It enables the employee to reach their full potential and boost the whole performance of the business. Furthermore, it can increase morale and work quality (Employee performance: How to measure, evaluate & improve, 2022). Academics of high calibre can conduct courses well while also committing fully to their jobs. In order to become the centre of top-notch higher education, public institutions must make sure their academic staff performs well and is deeply committed to the organisation. Academics are supposed to do research and publish their findings in addition to teaching. Additionally, they are expected to assist with administrative and secretarial tasks, which increases their burden. As a result, academics must be passionate about their work as instructors to perform efficiently (Hashim & Shawkataly, 2017).

Therefore, leaders play an essential role in the workplace. This is because leaders can influence members' behaviour as they have the power to assess members' performance and make decisions about their promotion because they are viewed as an example of the firm. Therefore, a leader's activities may have an impact on what their followers do. At all organisational levels, transformational leadership is a common form of leadership. (Fuller et al., 1996; Judge & Piccolo, 2004). Yeh and Hong (2012) indicated that suitable leadership styles must be implemented to improve academics' performance in the higher education sector. Four behaviors: inspirational motivation, idealized influence, individualized consideration transformational, and intellectual stimulation, may be used to motivate their members to go above and beyond their expectations (Bass, 1985). The ability to collaborate and be inspired are essential components of transformative leadership. There is a strong focus on cooperation when working in this approach, including delegating responsibilities to others as appropriate. This sort of leadership style is concerned with assisting others in their development while also motivating members to collaborate and establish relationships of trust.

1.2 Research Problem

Transformational leadership (TL) is defined as leadership that focuses on the problem of bringing about alterations in values, beliefs, attitudes, behaviour, emotions, and the requirements of subordinates for better transformation in the future. Transformational leadership practitioners are change agents who alter their organisation and their stakeholders to perform at the best and highest level possible (Hambali & Idris, 2020;

Idris & Adi, 2019). Also, transformational leadership practitioners are leaders who motivate their followers to put the organization's needs ahead of their own and have a powerful impact on their followers. They concentrate on their followers' self-development requirements, change the awareness of the followers of extant issues by assisting others in seeing old issues in new ways, and may gratify and encourage followers to strive to accomplish objectives (Bass & Avolio, 1994).

Innovation allows organisations to react and adjust to technological and environmental change (Al-Husseini et al., 2021). Creation can entail creating, putting into practise, generating, and adopting fresh concepts, strategies, plans, and guidelines to accomplish organisational objectives. Leaders who instruct, advice, and train their subordinates will improve the employees' abilities and inspire them to explore new process innovation techniques (Chang, 2012). Transformational leadership catalyses innovation. Leaders with idealised influence, for instance, may increase respect and trust among staff, show confidence in the organization's vision, and highlight the significance of a shared understanding of the organization's goal. Hence, these traits motivate subordinates to work hard and innovate. Also, Transformational leaders encourage their followers' imagination and creativity by stimulating their minds, which prompts them to reevaluate presumptions and conventional ways of doing things (Northouse, 2012). People are more likely to develop new ideas when encouraged to rethink and feel that their opinions are valued. Previously, Soliman (2014) stated that transformational leadership is the ideal option because it allows leaders to foster a favourable environment for developing innovations. Therefore, transformational leadership is critical in coordinating knowledge owned by each academic, which is then leveraged to create innovations.

Education is always important in developing talent and individuals for the country building. In recent years, Malaysia has expanded enormously in the number of private and public higher education institutions (Raman et al., 2020). It is valuable to do the research in the higher education industry since it is rapidly becoming a vital sector, playing a crucial role in enhancing productivity and occupational skills, engrossing a lot of academics and students. Moreover, higher education institutions were also connected to countries' prosperity and development (Ibrahim Mahmood & Bakar, 2018; Prakash, 2018). To achieve the objective, it must continuously learn from, react to, and adapt to the quickly changing global environment.

The effort to achieve the task done by employees in the company is known as performance. Job performance is becoming an increasingly important aspect influencing an organisation's success. As argued by Viswesvaran and Ones (2000), job performance is the core construct of the 21st century's workplace. Job performance may be defined as the behaviours or activities carried out to achieve the organisation's goals and objectives (Motowidlo et al., 1999). It is undeniable that good job performance is critical for both the

business and the individual employee, contributing to organisational success. In addition, educational problems faced by the university are related to the need to enhance academic performance. Universities have implemented various efforts to enhance the standard of education to support the university's excellent achievement, which would then reflect academic performance (Suwanda, 2018).

Performance indicators are evaluations that might be quantitative or qualitative which exhibit the accomplishment of a goal or goal that has been established (Wibowo et al., 2020). Hence, a performance indicator must be something that can be computed and quantified and used to judge or examine the level of performance. Besides, the achievement of academic performance indicators cannot be separated from the process of processing input into output or the compilation process of lecture activities that are deemed significant and affect achievement. Employee performance appraisals must ensure better university management and facilitate knowledge development services. Therefore, good individual performance indicates that the academic has accomplished work-related responsibilities satisfactorily or to the extent expected by university management.

Malaysia's Ministry of Higher Education (MOHE) is aggressively restructuring and encouraging the implementation of institutional policies and strategies that optimise its global ranking, particularly in the Times Higher Education World University Rankings (THE), and QS World University Rankings, which are presently thought the most influential university rankings (Azman & Kutty, 2016). According to QS World University Rankings, the top university in Malaysia, University Malaya, ranked 65 (QS World University Rankings, 2022). Compared to the year 2021, University Malaya had dropped from 59 (QS World University Rankings, 2021) to 65 in the list of QS World University Rankings, 2022.

Equally important, Universitas 21 (U21) published a report on the ranking of 50 countries' universities based on the education budget and resources, including grants allocated for research with expected outcomes such as publication, citation, research and employability among university leavers in March 2020. According to the report, Malaysia's resources were ranked 12th, 17th, and 15th in 2018, 2019, and 2020. Malaysia invests more in resources than several other developed countries, like Germany, Japan, and Korea. On the contrary, Malaysia has seen a constant drop in university outcomes, ranking 42nd, 45th, and 45th simultaneously. The decrease in Malaysian universities' U21 rankings contradicts the QS World University Ranking and THE International Rankings indicators. Thus, the Malaysian public research universities' ranking does not merely reflect the academic performance in actual reality as the output stated is not correlated with the ranking. As a result, with the gap between ranking and performance and research into higher education being limited,

this research intends to access further antecedents that will improve overall ranking and performance, ideally through leaders' idealised influence, intellectual stimulation, and innovation.

1.3 Research Questions

The researchers developed the following questions regarding the leaders' idealised influence, intellectual stimulation and innovation on the academics performance in Malaysian public research universities based on the research goals.

- Does leaders' idealised influence has a positive effect on academics performance in Malaysian public research universities?
- Does leaders' intellectual stimulation has a positive effect on academics performance in Malaysian public research universities?
- Does leaders' innovation has a positive effect on academics performance in Malaysian public research universities?

1.4 Research Objectives

1.4.1 General Research Objective

The primary purpose of this study is to investigate the impact of leaders' idealised influence, intellectual stimulation, and innovation on the academics performance of public research institutions in Malaysia.

1.4.2 Specific Research Objective

- To examine the relationship between leaders' idealised influence and academics performance in Malaysian public research universities.

- To examine the relationship between leaders' intellectual stimulation and academics performance in Malaysian public research universities

- To examine the relationship between leaders' innovation and academics performance in Malaysian public research universities.

1.5 Significance of the Study

There is an argument that leadership is crucial to the success of all organisations, including educational institutions (Ahamad & Saad, 2020). The purpose of this study is to ascertain the impact of leaders' idealised influence, intellectual stimulation and innovation on academic performance in Malaysian public research universities.

For the Malaysian Ministry of Higher Education (MOHE), the variables in this study that have an impact on academic achievement which assist MOHE in establishing future programs and policies for leaders in educational institutions. Hence, it can improve the effectiveness and efficiency of the education system in order to achieve a higher ranking of universities. For the human resource department of universities, this research will assist university administrators in determining which leadership style they should employ in a university. It is significant to recruit suitable talents and provide training to university leaders. For academics' immediate leaders, this study is useful for reference in improving academic performance in the long term. It can increase the performance of academics when the leaders perform with idealised influence, intellectual stimulation and innovation.

This study would be useful for future researchers, particularly those who investigate transformational leadership among academics in Malaysia. Malaysian universities may also use the study's findings to evaluate their existing leadership styles. Besides, comprehensive research of idealised influence, intellectual stimulation, and innovation involved in this study might act as a starting point for others on improving academic performance in Malaysian public research universities.

1.6 Chapter Layout

The introduction, literature review, research methods, design instrument, discussion and conclusion are the five chapters that comprise this research.

Chapter 1

It includes a summary of the research's context, a description of the issue statement, research goals, research questions, the hypothesis, and the importance of the study.

Chapter 2

Theories and hypotheses are included in this section of the paper. In the literature review, idealised impact, intellectual stimulation, and innovation on employee performance will be thoroughly examined.

Chapter 3

It includes the study design, data collecting techniques, data sources, sampling strategy, research instrument, data processing, and data analysis. Consequently, it contributes to the general validity and reliability of research.

Chapter 4

This chapter comprises the SPSS-generated study outcomes and research hypotheses. It is a crucial investigation component since it summarises the gathered data. It is the process of evaluating data gathered using analytical and logical reasoning to validate the study's connection.

Chapter 5

It evaluates the arguments, potential implications, limits of the study, and recommendation for further research. The complete research will be summarised as a result.

1.7 Chapter Summary

A public university's success relies on how good its employees perform. Several circumstances motivate employees to build more on work performance and environment besides fulfilling their usual job scope. Current pandemic conditions have ushered academics into a new employment period in which they must adjust their job via innovation and leadership. This study will examine the impact of leaders' idealised

influence, leaders' intellectual stimulation and leader's innovation on academic performance in Malaysian public research universities.

Chapter 2: Literature Review

2.0 Introduction

In chapter 2, we will provide the relevant kinds of literature related to leader idealised influence, intellectual stimulation, and innovation towards academics performance in Malaysian public research universities. Academics have a significant and varied role in these studies. They have a vital role in determining the graduates' quality. Education's success is inextricably linked to the institution's academic faculty's brilliance and quality.

2.1 Underlying Theories

2.1.1 Transformational Leadership Theory

A leadership approach known as transformational leadership attempts to exceed the expectations of subordinates by delivering their beliefs, emotions, values and thoughts. It is composed of four parts which are inspirational motivation, idealised influence, individualised consideration, and intellectual stimulation (Bass, 1985). A transformational leader would affect the values, behaviours, self-definitions, and beliefs according to the theory of self-centred justifications (Shamir et al., 1993; Sosik & Cameron, 2010) and change-oriented leadership theory (Bass, 1985; Bose & Patnaik, 2015).

Transformational leadership had considered one of the theories that need to investigate in organizational behavior, which is similar to the understanding of leadership effectiveness over the last two decades (Piccolo & Colquitt, 2006; Barling et al., 2008). At the organizational level, transformational leadership has a favourable effect on worker attitudes and performance, according to the research. (Lowe et al., 1996). Some reviews found a positive relationship between organizationally relevant outcomes of the work, like job satisfaction and organizational commitment, and transformational leadership (Judge & Piccolo, 2004; Lowe et al., 1996; Bose & Patnaik, 2015).

Transformational leadership has gained popularity and become an important and conspicuous place in the leadership philosophy during the past 20 years. (Sosik JJ & Jung D, 2018). It has attracted the interest of researchers in the current evolution (Sahu et al., 2018; Udin U, 2020). Therefore, transformational leadership is also related to the context of management. As mentioned, it can help the performance of the employees to act beyond their expectations, and help and benefit to improve the ability of the people to motivate them intrinsically. In addition, it also can enhance psychological empowerment (Thomas KW & Velthouse BA, 1990). Transformational leaders expect the employees to require transformational leadership when the task is significant and more complicated (Tepper BJ et al., 2018; Khan et al., 2020).

Furthermore, transformational leadership can enhance the level of work performance. According to studies, organizations of all kinds depend substantially on their employees' success. Next, previous research has empirically proven a favourable correlation between transformative leadership and work productivity (Barling J et al., 1996; Khan et al., 2020).

2.1.2 Rogers' Innovation Diffusion Theory

The Innovation Diffusion Theory (IDT), which was first presented by Everett Rogers in 1962, has been often cited in case studies. It lays the foundation for understanding how innovations are adopted and the factors that might affect a decision of an individual to accept innovation. Rogers' Innovation Diffusion Theory is wide in scope, and becomes adaptable in different circumstances, but it is also difficult to use as a process model for organizing organizational change as a result of innovation adoption (Straub, 2009; Correia, n.d.).

There are some unique factors that are specific to the spread of innovation in the organisation, such as some structural variables that determine the innovation of an organisation (Marak et al., 2019). Rogers (2003) defined the process of innovation's diffusion as "an unexpected reduction process", he provides traits of inventions that aid in reducing the unexpected regarding the innovation. The characteristics of innovation include compatibility, complexity, relative advantage, observability, and trainability.

Apparently, Rogers (2003) had said that "compatibility is the degree to which an innovation is viewed

as consistent with potential adopters' existing values, past experiences, and needs." A lack of IT compatibility with individual demands may have a negative impact on IT use for an individual (McKenzie, 2001; Sherry, 1997). Hoerup (2001) outlined how each innovation affects views, attitudes, values, and beliefs about education. When innovation is compatible with the demands of an individual, then there will be less ambiguity, and the rate of acceptance of the invention will accelerate. As a result, even the critical component of compatibility is innovation. The name of the creation should be significant to the potential adopter. It should also be clear what the invention entails because this is a property of complexity (Sahin & Ismail, 2006).

The innovation in employee performance is relative in terms of compatibility. It might impact the employee's work if the individual believes the innovation can be observable. Therefore, the individual is more likely to adopt the innovation (Bakkabulindi, 2014).

2.2 Review of the Literature

2.2.1 Academics Performance

Academics performance is defined as how employees accomplish the educational outcomes expected of them (Alfagira et al., 2017; Onoyase, 2017). Academics job performance is defined as how academics fulfil their teaching obligations, including lecture preparation, community service and research (Victor & Babatunde, 2014). Hashim and Shawkately (2017) stated that performance is a consequence of three variables: their skill or expertise to accomplish different activities that contribute to performance, their desire to perform these jobs, and their labour attempts to complete their respective duties.

Academics performance is part of lecture planning that concentrates on discovering and selecting relevant topics for a particular lecturer depending on the content outline that provided course units and the learning goal it aims to achieve (Bennett et al., 2018). However, the demographic of subject information is divided into subsections and relevant content sections, while some decide to cover the subject information within the allocated time. As a result, the author demonstrated the planning that involved the importance and relevance of educational methods and learning materials to effectively

conduct subject information to foster and sustain students' attention. At the same time, participation is required for achieving a set of academic goals (McCarthy, 2015).

Additionally, academic job performance involved delivering lectures to students as scheduled in the timetable and grading students through coursework marking and providing final assessment for grading and accreditation (Igbojekwe et al., 2015). Academic performance includes mentoring research students by allocating sufficient time to assist them with their research ideas and projects (Ddungu, 2017). However, the performance involves doing research and publishing studies in prominent academic publications and utilising the data to produce textbooks, articles in media sources, and documentaries (Kakulu, 2016).

The academic performance involves lecturers contributing to the community via participatory research, scholarship and public knowledge network (Ddungu, 2018). There are three requirements for a university's academics to achieve. First, good academics reflect on their actions to better understand themselves and their students. Secondly, academics should engage students in discussion driven by a desire to learn. Thirdly, academics must be highly qualified for the role and possess specialised knowledge in the subject area they teach (Su & Wood, 2012). Thus, evaluating academic performance is critical for increasing their dedication to learning activities, developing relationships with students, and creating an atmosphere both demanding and supportive for students (Bain, 2004; Yousefi & Abdullah, 2019). However, when recruiting academics, it is not sufficient to rely just on the number of publications in top-tier journals; various other factors contribute significantly to an academic's performance portfolio. This is particularly true given the increased expectations of institutions during the previous decade (Hanappi-Egger, 2022).

2.2.2 Leaders' Idealised Influence

Bass and Avolio (1996) defined idealised influence as referring to the leader's behaviour and the followers' perceptions of the leader. Tajsaom et al. (2015) explained that a leader motivates their followers with an exhilarating feeling of purpose. Hence, it fosters confidence and respect for their defined vision and mission. It prioritises the group's interests above the leader's own. Leaders demonstrate strong ethical and moral standards, which motivates others to follow them in order to improve their work performance and quality. When followers observe their leader accomplishing a

goal, they are encouraged to follow their leader (Ndlovu et al., 2018). In this approach, followers experience the leader's confidence and pleasant environment.

Loan et al. (2012) identified that the aspect of idealised influence is separated into two perceptions: idealised influence behaviour and idealised influence attribution. For the idealised influence behaviour, transformational leaders are passionate and uncompromising in achieving the goals. They promote job accomplishment refers to a shared sense of mission, purpose, values, and beliefs. The leader explains their most fundamental principles and beliefs, emphasises the necessity for a strong sense of direction, and analyses the moral and ethical ramifications of their actions (Avolio & Bass, 2004; Loon et al., 2012). The acts of the leader influence follower behaviour. The moral and ethical consequences of actions are taken into consideration.

For the idealised influence attribution, transformational leaders show trust and inculcate in their followers' positive feelings for the idealised influence attribution. For example, respect and honesty. Leaders are respected and believed when they possess this aspect. In addition, leaders maintain themselves to a high degree of ethical and moral behaviour. Hence, this inspires followers' enthusiasm. Examples of attributions include looking out for the group's best interests, demonstrating a feeling of strength and determination, and creating pride in others for being connected with the leader (Avolio & Bass, 2004; Agyemang et al., 2017). Thus, the leaders command respect through actions. The followers are eager to adopt the ideals and characteristics of their leaders.

2.2.3 Leaders' Intellectual Stimulation

According to Bass (1990) intellectual stimulation refers to how often leaders inspire people to be creative in their issue solving and solution-finding. Intellectual stimulation is the leader's capacity to motivate followers to think differently while addressing challenges, leading to innovation and creativity. Avolia and Bass (2004) described that leaders encourage their followers to be imaginative and creative through, among other means, questioning their prejudices, reframing obstacles, and handling old situations in novel ways. Followers are encouraged to provide fresh ideas and innovative problem-solving approaches, and they are encouraged to participate in addressing issues and figuring out answers. Even if they disagree with the leaders, they are recommended to adopt new strategies,

and their perspectives are recognized. Intellectual stimulation is beneficial when the leader strives to maintain enthusiasm and strong motivation (Agyemang et al., 2017).

Kirkbride (2006) identified that the following characteristics of this approach are re-examining expectations, identifying difficult-to-imagine patterns, being prepared to propose or accept silly ideas, inspiring followers to explore difficulties, and cultivating a willingness for mindset shifts. Kelloway et al. (2003) explained that leaders demonstrate intellectual stimulation by assisting their followers in generating new ideas, inspiring them to consider alternate methods of issue resolution, and examining all exciting findings. Through intellectual stimulation, the leader encourages followers to challenge their assumptions, values, and views, as well as the ideas of the leader, which may be obsolete or unsuitable for tackling contemporary issues (Elkins & Keller, 2003; Sundi, 2013).

When job difficulties and decision-making are complicated and challenging, a two-way intellectual stimulation process may be essential. One example of intellectual stimulation is bottom-up influence. In some circumstances, a successful leader not only encourages subordinates' thoughts and yet is receptive to and excited by their ideas. These discussions are particularly beneficial when the leader lacks expertise or understanding about a particular issue (Alsayyed, 2020).

2.2.4 Leaders' Innovation

Innovation is the cycle of developing and commercialising innovations and revitalising existing concepts into better services and goods. Therefore, innovation is a crucial component of organisational expansion and development (Gupta & Barua, 2018). There are several facilitators of organisational innovativeness in small and medium-sized firms (SMEs): knowledge management, institutional support documents for innovation, and strategic partnership activities. Apart from my observation, a learning organisation is an affirmative relationship between the performance and innovativeness of the organisation. Thus, the public universities of Malaysia embrace a learning organisation culture to improve organisational performance and foster organisational innovation through long-term success (Hashim et al., 2019).

Innovation can be defined as a process comprising numerous patterns, phases and stages that introduce new ideas. Furthermore, the former includes all efforts from concept genesis through

development and distribution for others' use (Barnard & Van der Merwe, 2016). In addition to the perspective, the adoption process consists of three stages: conception, execution, and decision-making.

The strategies of innovation management practices at public universities struggle for university sustainability. The circumstances required to encourage innovation among higher education academic staff include outcome-oriented leadership and collaborative and effective planning to maintain progress by monitoring. Innovative techniques that involve a brand strategy and technology transfer facilities for student experiences have illustrated the effectiveness of changing public universities into sustainable employee performance in Malaysia (Barnard & Van der Merwe, 2016).

Innovation is a crucial component of success and competitive advantage by increasing innovation in organisations (Schilling, 2010; Tidd & Bessant, 2020). Innovative leaders can enhance organisational and personal performance by solving issues by constructing an opportunity and changes (Redmond et al., 1999). Leaders' innovative behaviour is necessary for an organisation to react and adapt to technological changes in the current context (Kellermanns et al., 2008). Innovation is the major factor contributing to a company's long-term advantage over competitors (De Jong & Hartog, 2007). These innovations may increase an organisation's effectiveness and open up new markets (Lagrosen, 2005).

Innovation can be obtained through exploration, and exploitation may produce creativity. A long-term investigation focuses on behaviours such as adaptability and research by covering a longer time. There are five innovations that service an organisation: system, process, strategy, product, and delivery. System innovation embraces development by applying methods of communication. However, process innovation is the development of new rules and organisational structures. There is a strategic innovation that alters the mission and strategy of an organisation (He & Wong, 2004).

2.3 Proposed Conceptual Framework

After researching the models we studied and other sources, we established a conceptual framework for our study. The study's dependent variable is academics performance. It is one of the most often utilised variables in organisational behaviour. In addition, there are three independent variables: leaders' idealised influence, leaders' intellectual stimulation, and leaders' innovation that will impact academics performance.

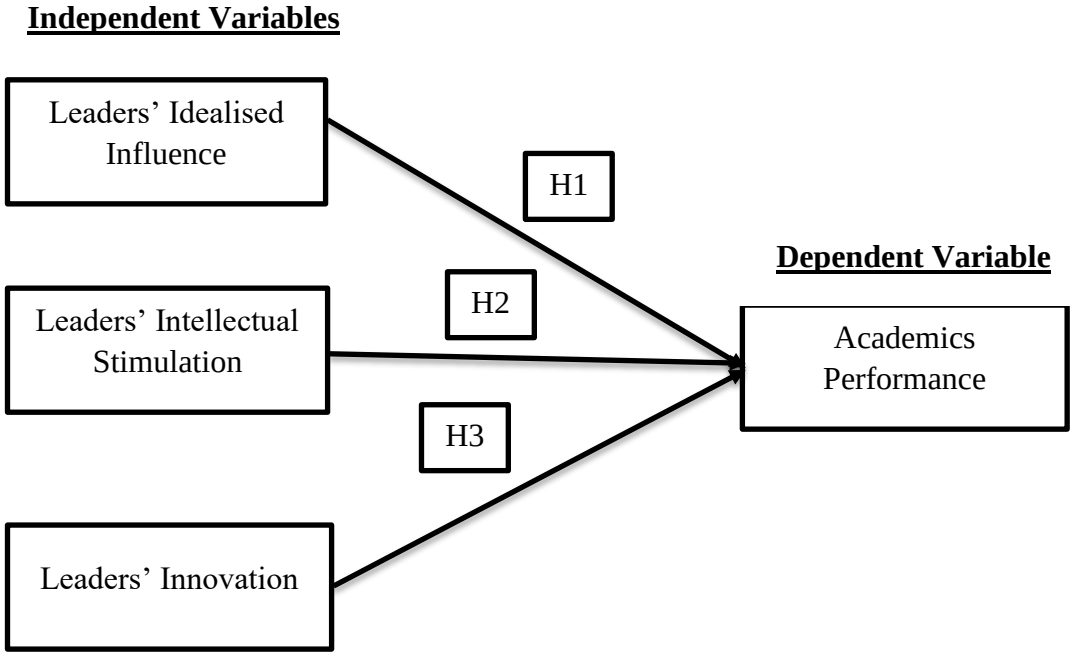


Figure 2.1

Conceptual Framework on Leaders' Idealised Influence, Intellectual Stimulation, and Innovation toward Academics Performance in Malaysian Public Research University

2.4 Hypotheses Development

2.4.1 Leaders' Idealised Influence and Academics Performance

For many years, management scholars have debated the relationship and linkage between idealised stimulation and academic performance. The leader can be defined as a mentor and serves as a role model for their staff. Leaders place the interests of their employees and organisation instead of their own (Khan et al., 2016). A leader's idealised impact is exemplified by leaders who position themselves as ideal leaders and instil in their employees a sense of passion and purpose while emphasising long-term objectives (Strukan et al., 2017). Leaders with idealised impact characteristics provide instances that are being embraced and observed by their employees. As a result, it was revealed that leaders inspire others to use critical thinking and initiative to solve problems. However, some apply an innovative approach to their job and tasks as employee performance improves (Ogola, 2017). The research of Haseeb (2021) showed that idealised influence is favourably correlated with

employee performance. Idealised influence significantly impacts employee performance, as shown by the findings.

According to Tajasom et al. (2015), an organisation's innovation performance is significantly impacted positively by idealised influence. Idealised influence is a set of positive behavioural characteristics recognised for enhancing performance and creativity among members of an organisation (Jung, 2001). Abbas et al. (2012) emphasised the significant relationship between idealised influence and employee productivity. Bass and Avolio (2014) showed that idealised influence directly affects an employee's performance. Leaders with idealised influence will have high ethics and ethical standards. Hence, the followers will be inspired to imitate the leader to increase their job performance level (Jandaghi et al., 2009). Consequently, the hypothesis is conceptualised as follows:

H1: Leaders' idealised influence has a positive effect on academics performance.

2.4.2 Leaders' Intellectual stimulation and Academics Performance

The influence of intellectual stimulation on the success of universities is also considerable. Stump et al. (2016) believed that the leader's intellectual stimulation should be directed at fostering staff innovation and creativity. When it comes to making critical decisions, employees are encouraged to create and develop innovative solutions. Hence, the leader encourages and supports the thinking of their followers, allowing them to speak and share their opinions and perspectives. Khalil et al. (2018) asserted that employee performance is improved when leaders stimulate and support employee creativity and invention and inspire them to think up great ideas. Based on Ogola's (2017) research, employee performance steadily improves when leaders encourage individuals to think independently to solve issues, make decisions on their own, and new ways to do their job. However, Hasseb et al. (2021) found out that intellectual stimulation was not significant in employee performance.

According to studies on intellectual stimulation leadership, Intellectual stimulation leadership and worker commitment and performance are strongly correlated. Leaders' intellectual stimulation leadership style increased employee commitment and decreased stress (Masi & Cooke, 2000). Muthimi's (2020) findings suggested that intellectual stimulation improved academic achievement

in a sample of Kenyan institutions. The research demonstrated these results using descriptive statistics derived from intellectual stimulation measures of transformational leadership. The research revealed that the leaders at the selected universities provided intellectual stimulation by enticing team members to take part in problem-solving, letting them assess the decision-making process, and encouraging them to ask questions, establishing a work environment that encourages the open exchange of knowledge, and employing a supervisory style that encourages freedom of expression. Consequently, this demonstrates the strong effect of intellectual stimulation on the academic performance of the selected institutions in Kenya. Thus, a hypothesis is conceptualised as follows:

H2: Leaders' intellectual stimulation has a positive effect on academic performance.

2.4.3 Leaders' Innovation and Academics Performance

According to Osman et al. (2016), there are positively correlated between innovation and employee performance. The company's performance or productivity would significantly increase with the occurrence of innovation, as Hashi and Stojcic (2013) mentioned (Wibowo et al., 2021). According to Awan and Khalid (2015), organisations that achieve a competitive advantage over their peers in the business sector must maintain it through innovation. The innovation can increase the organisation's adaptability to a changing environment. Next, innovation also can help organisations to improve their performance as well as it can help individuals enhance their productivity. As a result, innovation is the most influential determinant of improved employee performance (Hanif et al., 2021). According to Sadikoglu and Zehir (2010), innovation can deeply affect employee performance. The generation ideas of new products and services of employees would significantly increase the process of administration, enhance the competitiveness (Sadikoglu & Zehir, 2010), enhance the fitness of organisational (Choi et al., 2009), increase the performance quality (Sadikoglu & Zehir, 2010), enhance the productivity of the organization (Rostami & Branch, 2011), and lastly improve the quality, attendance of the job, timeliness to complete the job, effectiveness and efficiency of the work. Thus, a hypothesis is conceptualised as follows:

H3: Leaders' innovation has a positive effect on academics performance.

2.5 Chapter Summary

This study has thoroughly reviewed and explained the independent and dependent variables in the researchers' analysis. A theoretical framework was developed after studying the frameworks discovered by previous researchers. Finally, the study's hypotheses have been created to use in chapter three.

Chapter 3: Research Methodology

The procedures or strategies used to search, select, process, and analyse data on a topic are known as research methodology (Wilkinson, 2000). The research design, data collection method, sampling design, research instrument, constructions measurement, data processing, and data analysis are the seven main topics that will be covered in this chapter.

3.0 Introduction

Research methodology refers to the methods or tactics used to find, choose, collect, and analyse data on a topic. (Wilkinson, 2000). The seven primary topics that will be examined in this chapter are the research design, data collection method, sampling design, research instrument, constructions measurement, data processing, and data analysis.

3.1 Research Design

A research design is the framework for the methodologies and approaches the researcher selects for the study. Focusing on research techniques suited for the subject matter will help the researchers set up their studies for success. It can be divided into two types: quantitative research and qualitative research. Quantitative research highlights the population's statistical analysis results by analysing a sample representing the target population (Creswell, 2003). While qualitative research is usually used in social sciences, it refers to an analytical method used in a variety of other academic fields, including market research conducted by corporations and further framework by non-profit organisations (Denzin & Lincoln, 2011). Compared to qualitative methods, quantitative research methods need less time and money to implement. Therefore, we are using the quantitative data collection method in this research.

To look into the relationship between the independent variables (leaders' idealised influences, leaders' intellectual stimulation, and leaders' innovation) and the dependent variable (academic performance),

researchers utilized the quantitative research approach. Besides, all the data of the questionnaires were also adopted from the previous study. Moreover, causal research is used to investigate the cause-and-effect relationship between leaders' idealised influences, leaders' intellectual stimulation, and leaders' innovation in academics performances in Malaysian public research universities.

3.2 Data Collection Method

Data collection is the process of acquiring information from all relevant sources, test the hypothesis, and evaluate the outcomes. The two basic types of data collection methods are primary data collection methods and secondary data collection methods (Sajjad Kabir, 2016). In this research, we are using Google Survey Form to collect the data of academic staff in Malaysia public research universities.

3.2.1 Primary Data

Primary data are first hand findings made by the researcher themselves. The examples of primary data are surveys, observations and questionnaires (Ajayi, 2017). Questionnaires with closed-ended questions, correlation and regression methods, mean, mode, and median, and others are examples of quantitative data collecting and analysis approaches. Furthermore, due to the high standardisation of quantitative methods, it is simple to make comparisons (David Wilkinson, 2000). Surveys and questionnaires can be used to collect primary data. Researchers will conduct a survey to obtain primary data in this study by distributing questionnaires to the target population, academic staff in public research universities of Malaysia.

3.2.2 Secondary Data

Data that has previously been collected from primary sources and made accessible to researchers for use in their study is referred to as secondary data. It's a type of information that has already been acquired (Ajayi, 2017). It's possible that a researcher obtained information for a particular study and subsequently made it available for use by other researchers. Despite of being used for specialist study, the data collected may be for general use, similar to the case with the national census. For example,

secondary data sources are trade publications, government statistics, journals, and others. In this research, the questionnaire's question set was compiled from various journal articles. For example, we used the UTAR online database (OPAC) to obtain a majority of our journals, including ProQuest and EBSCOhost, ScienceDirect, Emerald insight, Oxford Journals, Google Scholar, and others. This data is collected for the study leaders' idealised influence, leaders' intellectual stimulation and leaders' innovation toward academics performance in Malaysia public research universities.

3.3 Sampling Design

The term "sampling designs" refers to the methods and procedures to be employed in selecting a sample from the target population as well as the estimation method applied to compute sample statistics. These are the projections used to calculate the population parameter (Sajjiad Kabir, 2016). Researchers need to figure out the target population, sampling location, sampling frame, sampling elements, sampling technique and the sampling size to do this research.

3.3.1. Target Population

The population with whom the intervention will conduct research and generate findings is the intervention's target population (Barnsbee & Nghiem, 2018). This study examines the leaders' idealised influences, intellectual stimulations and innovation toward academic performance in public research universities of Malaysia. Therefore, the academic staffs of Malaysia's public research universities constitute the study's target population. In accordance with Ministry of Higher Education Malaysia, there are total of 9737 academic staffs in public research universities of Malaysia in the year 2020. The data shows that there are 2045 academic staffs in Universiti of Malaya (UM), 2064 academic staff in Universiti Sains Malaysia (USM), 2094 academic staff in Universiti Kebangsaan Malaysia (UKM), 1837 academic staff in Universiti Putra Malaysia (UPM) and 1697 academic staff in Universiti Teknologi Malaysia (UTM) (Statistik Pendidikan Tinggi, 2020).

3.3.2 Sampling Frame and Sampling Location

The sampling frame is a list of actual circumstances from which a sample will be selected Taherdoost (2016), and the sampling location is the place where the research is conducted. Thus, the academic staff employed by Malaysia's public research universities serves as the sampling frame for this research.

Moreover, we are selected Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Putra Malaysia (UPM), Universiti Sains Malaysia (USM), Universiti Teknologi Malaysia (UTM) as our sampling locations. The university that we choose for sampling location are the top 3 universities in Malaysia (*Best universities in Malaysia 2022*, 2022).

Table 3.1

The World University Ranking 2022

World University Rank 2022	Malaysia Rank 2022	University	City/Area
301–350	1	University of Malaya	Kuala Lumpur
501-600	2	Universiti Teknologi Petronas	Seri Iskandar
601-800	=3	Universiti Kebangsaan Malaysia	Selangor
601–800	=3	Universiti Putra Malaysia	Selangor
601–800	=3	Universiti Sains Malaysia	Pulau Pinang
601–800	=3	Universiti Teknologi Malaysia	Johor
601-800	=3	Universiti Utara Malaysia	Kedah Darul Aman
801-1000	=8	Universiti Pendidikan Sultan Idris	Tanjong Malim
801-1000	=8	Universiti Tenaga Nasional (UNITEN)	Selangor
1001-1200	=10	Universiti Malaysia Perlis	Arau
1001-1200	=10	Universiti Tunku Abdul Rahman (UTAR)	Petaling Jaya

Note. Adopted from The World University Ranking (2022). Developed for the research.

3.3.3 Sampling Elements

An analysis or case within the population being measured is known as a sampling element. This study's sampling elements are academic staff in Malaysia public research universities, as the questionnaires are distributed. In addition, the questionnaire is sent to several groups of people based on their age, gender, education level, position and other. Consequently, various perspectives among respondents can be generated, resulting in reliable and accurate results.

3.3.4 Sampling Technique

The two most significant sampling techniques are probability and non-probability. According to the probability sampling method, each individual in the population of focus has an equal chance of being selected for the sample. Furthermore, non-probability sampling techniques relate to scenarios where the theory of probability is neglected. (Elfil & Negida, 2017). We would use the non-probability sampling method to conduct our study in this research. According to Taherdoost (2018), the convenience sampling method is a simple way for carrying out a questionnaire. This is because respondents are usually easily and readily available. 272 questionnaires will be distributed to academic staffs in public research universities of Malaysia.

3.3.5 Sampling Size

Sample size is the number of people that have been selected from a population. The sample size determination is based on the (Krejcie & Morgan,1970). Based on the table 3.2, the sample size of this research is about 370 with the target population of 9737 academics in public research universities of Malaysia.

Table 3.2

Krejcie & Morgan (1970)

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

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Note. Adopted from Krejcie & Morgan (1970). Developed for the research.

3.4 Research Instrument

3.4.1 Questionnaire Design

In the questionnaire design, fixed alternative questions will be used. The fixed alternative questions provide respondents a fixed range of specific alternative responses, and they are asked to select the option that most closely matches their point of view. The fixed alternative questions require less time to answer and do not require a high level of interviewer skill. Besides, it also makes the researcher easier to arrange and key in the data.

The questionnaire review's questions were embraced by Podsakoff et al. (1990), Bass & Avolio (1990), Bass & Avolio (1995), Bass & Avolio (2000) Choi, Jang & Hyun (2009), Gunday et al. (2011)

and Riyanto et al. (2021). The questionnaire consists of sections A, B, C, section D, and section E. Section A requires respondents to answer a demographic profile. The inquiries comprise of university, gender, age, ethnic group, highest qualification, job status, academic position, the position/post of your immediate superior and years of service in the current institution. Section B, C and D require respondents to answer a series of questions regarding the leaders' idealised influence, intellectual stimulation and innovation toward academic performance in Malaysian public research universities. Section E requires respondents to answer a series of questions on academic performance. The questions are designed on the Likert Scale, one of the most reliable ways to measure behaviour and feelings. In this study, we designed the questionnaire on a five-point scale from strongly disagree to strongly agree in this study.

3.4.2 Pilot Test

The pilot test is a preliminary small-scale test that the researcher conducts to assist them decide how to best conduct large-scale research (Christina, 2011). The purpose of the pilot test was to improve information accuracy and efficiency. It helps the researcher in identifying questionnaire errors before the real survey. In our research, 30 questionnaires were sent out to the targeted respondents at a Malaysian public research university to carry out the pilot test, which consists of 49 fixed alternative questions requiring the respondent to select the closest answer to their point of view from a limited number of options. To determine the feasibility of the questionnaire, we entered the collected results into the IBM Statistical Package for the Social Sciences (SPSS) software.

Table 3.3

Cronbach's Alpha Value

	Variables	**Alpha Value**
Independent Variable	Leaders' Idealised Influence	0.882
	Leaders' Intellectual Stimulation	0.859
	Leaders' Innovation	0.911
Dependent Variable	Academics Performance	0.866

Note. Develop for the research

Based on Table 3.3, the independent variables (leaders' idealized influence, leaders' intellectual stimulation, and leaders' innovation) and dependent variable (academic performance) have a

Cronbach's alpha value of more than 0.80. The result of the reliability test of 10 items evaluating leaders' idealized influence (0.882), leaders' intellectual stimulation (0.859), leaders' innovation (0.911), and academic performance (0.866) falls within the range of 0.80 to 0.95. As all of the variables' Cronbach's alpha values fall within the range of 0.80 to 0.95, the variables in the questionnaire were considered to have very good reliability.

3.5 Construct Measurement

3.5.1 Origin of Construct

Table 3.4

The Origins of Construct

Variables	No. of Items	Sources	Scales
IV1: Leaders' Idealised Influence	10	Podsakoff, MacKenzie, Moorman & Fetter (1990), Bass & Avolio (1990)	Interval (5-point Likert Scale)
IV2: Leaders' Intellectual Stimulation	10	Bass & Avolio (1995), Bass & Avolio (2000)	
IV3: Leaders' Innovation	10	Choi, Jang & Hyun (2009), Gunday, Ulusoy, Kilic & Alpkan (2011)	
DV: Academics Performance	10	Riyanto, Endri & Herlisha (2021)	

Note. Develop for the research

3.5.2 Operational Definition

Operational definition is the procedure the researchers are going to use to measure a particular variable. It is critical to understand operational definitions because researchers will employ various methods of measuring or manipulating the same variables.

Table 3.5

Modified Operational Definition of Constructs for Leaders' Idealised Influence

II1	My immediate leader has a clear understanding of we are doing
II2	My immediate leader paints an interesting picture of the future for our group
II3	My immediate leader is always seeking new opportunities for the organization
II4	My immediate leader inspires others with his/her plans for the future
II5	My immediate leader is able to get others committed to his/her dream
II6	My immediate leader talks to us about his/her most important values and beliefs
II7	My immediate leader emphasizes the importance of having a collective sense of mission
II8	My immediate leader specifies the importance of having a strong sense of purpose
II9	My immediate leader displays conviction in his/her ideals, beliefs, and values
II10	My immediate leader takes a stand on difficult issues

Note. Develop for the research

Table 3.6

Modified Operational Definition of Constructs for Leaders' Intellectual Stimulation

IS1	My immediate leader re-examines critical assumptions for appropriateness
IS2	My immediate leader seeks differing perspectives when solving problems
IS3	My immediate leader gets others to look at problems from many different angles
IS4	My immediate leader suggests new ways of looking at how to complete assignments
IS5	My immediate leader allows me to have my own judgment in solving problems
IS6	My immediate leader challenges me to think of old problems in a new way
IS7	My immediate leader encourages me to think out of ability (out of the box)
IS8	My immediate leader encourages me to learn new things
IS9	My immediate leader encourages me to be creative at work
IS10	My immediate leader supports me whenever I do high risk task

Note. Develop for the research

Table 3.7

Modified Operational Definition of Constructs for Leaders' Innovation

I1	My immediate leader develops new innovation based on new technology is a strategic priority in my organisation
I2	My immediate leader emphasises technological innovation activities to improve teamwork among my colleague
I3	My immediate leaders support my competency (knowledge, skill and ability) to improves through technological innovation activities
I4	My immediate leader encourages self-discipline to improve through technological innovation activities
I5	My immediate leader motivates me to be involved in the technological innovation activities
I6	My immediate leader ensures my performance gets better through technological innovation activities
I7	My immediate leader focuses my competency (knowledge, skill and ability) through organisational innovation activities
I8	My immediate leader ensures my self-discipline will be improved through organizational innovation activities
I9	My immediate leader motivates me to be involve in the organizational innovation activities
I10	My immediate leader ensures my performance gets better through organizational innovation activities

Note. Develop for the research

Table 3.8

Modified Operational Definition of Constructs for Academic Performance

AP1	I am deft to work
AP2	I am thoroughly working
AP3	I am completing work according to company quality standards
AP4	My quantity of work is according to the expected standard
AP5	I am finishing the job faster than the specified time
AP6	I am not delaying work
AP7	I have skills in the field of work
AP8	I am able to use skills for the job
AP9	I understand the task that must be done
AP10	I can take responsibility for the result of work

Note. Develop for the research

Table 3.5 indicates 10 questions that are used to measure the leaders' idealised influence toward academic performance in Malaysian public research university. Table 3.6 indicates 10 questions that are used to measure the leaders' intellectual stimulation toward academic performance in Malaysian public research university. Table 3.7 indicates 10 questions that are used to measure the leaders' innovation toward academics performance in Malaysian public research universities. Table 3.8 indicates 10 questions that are used to measure the academic performance in Malaysian public research university. Respondents are required to answer on the 5-point Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5).

3.5.3 Scale of Measurement

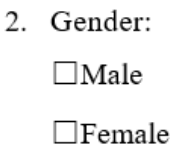
The scale of measurement is a measurement tool used to measure and allocate different variables into a range of values. The scale of measurement can be separated into two types, which are nonmetric scales and metric scales. The nonmetric scales include the nominal scale and ordinal scale, while the metric scales consist of the interval scale and the ratio scale. In this study, section A is measured on a nominal scale and an ordinal scale. Section B, C, D, and E are measured on the interval scale.

3.5.3.1 Nominal Scale

The nominal scale is used to identify and classify the object into discrete categories. Besides, it only deals with non-numerical variables. It also cannot be arranged by rank. In this study, a nominal scale was used in the demographic profile of Section A, where the respondent was requested to select their gender (male or female), ethnicity (Chinese, Malay, Indian, and others), and job status (permanent or contract). The picture below shows one of the examples given in this study's questionnaire:

Figure 3.1

Questionnaire Section A Question 2: Gender



3.5.3.2 Ordinal Scale

The ordinal scale has the properties of the nominal scale, but the difference is that it can be used to arrange objects in ranking order. Even though it can show the objects on a ranking scale, it cannot show the value of the interval between rankings. The ordinal scale was used in Section A's demographic profile, where respondents were requested to select their university (Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Sains Malaysia, Universiti Teknologi Malaysia or Universiti Putra Malaysia), their age (below 25 years old, 25 to 34 years old, 35 to 44 years old, 45 to 54 years old or 55 years old and above), their highest education completed (Diploma, Bachelor Degree, Master's Degree, PhD or Others) their academic position (Lecturer, Senior Lecturer, Assistant Professor, Associate Professor or Professor), the position/post of their immediate superior (Dean, Deputy Dean, Head of Department, Head of program, Cluster Head, Unit Head or Others) and their years of service in current institution (below 10 years, 11 to 20 years, 21 to 30 years or 31 years and above). The picture below shows one of the examples given in this study's questionnaire:

Figure 3.2

Questionnaire Section A Question 3: Age

3. Age:

☐ Below 25 years old

☐ 25 to 34 years old

☐ 35 to 44 years old

☐ 45 to 54 years old

☐ 55 years old and above

3.5.3.3 Interval Scale

The interval scale has both the nominal scale and ordinal scale properties, but it collects information on the concept of different quantities. The likert scale is a standout amongst those parts of the interval scale. It uses five-point scales for measuring. Starting with 1 identifies strongly disagree to 5 determines strongly agree. Its aides fortify the agreement of a statement. In this study, the likert scale needs to be connected to the variables of Section B till Section E where the respondent is obliged to select whichever starting with 1 (strongly disagree) to 5 (strongly agree) to find out the majority of the data on how independent variables affect academic performance in Malaysian public research university. The picture below shows one of the examples given in this study's questionnaire:

Figure 3.3

Questionnaire Section B: Leaders' Idealised Influence (II)

Section B: Idealised Influence (II)

Please circle the most appropriate option that best indicate your agreement level about the following statements.

Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
1	2	3	4	5

No.	Questions	SD	D	N	A	SA
1.	My immediate leader has a clear understanding of we are doing	1	2	3	4	5
2.	My immediate leader paints an interesting picture of the future for our group	1	2	3	4	5
3.	My immediate leader is always seeking new opportunities for the organization	1	2	3	4	5

3.6 Data Processing

After collecting the data from the respondents, the researcher must carry out the data processing before running the reliability test. Data processing is the description of the data preparation processes, including checking, editing, coding, as well as transcribing.

3.6.1 Data Checking

The first stage of data processing is data checking. Data checking's purpose is to make sure all the collected questionnaires are filled out completely and correctly. The researcher must ensure that there are no missing responses or inaccuracies in the questionnaire at this stage. Questionnaires that are incomplete, inconsistent, or containing errors are filtered out and are needed to make adjustments later (Saunders, Lewis & Thornhill, 2012). The researchers will double-check the questionnaires to ensure there is no mistake.

3.6.2 Data Editing

The second stage is data editing. Data editing involves adjusting the incomplete, inconsistent, and error data in the questionnaires (Saunders, Lewis & Thornhill, 2012). The purpose of data editing is to identify errors in the data to avoid invalidity outputs. Moreover, it can also detect inconsistent values and outliers. After data editing, all the answers on questionnaires should be reliable, consistent, and complete before the researchers proceed to data coding.

3.6.3 Data Coding

The third stage is data coding. Data coding is the process that transforms the collected data into a set of meaningful categories. Before keying in data in the SPSS software, the researchers assign numeric codes for each alternative answer to the questions. Data coding helps researchers to perform the data entry into the SPSS software efficiently and systematically (Saunders, Lewis & Thornhill, 2012). Section A is about demographic information. Table 3.9 shows the Section A coding system.

Table 3.9

Data Coding for Section A of Questionnaire

Questions	Items	As Coded in SPSS
1. University	Universiti Malaya	1
	Universiti Kebangsaan Malaysia	2
	Universiti Sains Malaysia	3
	Universiti Putra Malaysia	4
	Universiti Teknologi Malaysia	5
2. Gender	Male	1
	Female	2
3. Age	Below 25 years old	1
	25 to 34 years old	2
	35 to 44 years old	3
	45 to 54 years old	4
	55 years old and above	5
4. Ethnic group	Chinese	1
	Malay	2
	Indian	3
	Others	4
5. Highest qualification	Diploma	1
	Bachelor's degree	2
	Master's degree	3
	PhD	4

6. Job status	Permanent	1
	Contract	2
7. Academic position	Lecturer	1
	Senior Lecturer	2
	Assistant Professor	3
	Associate Professor	4
	Professor	5
8. The position/post of your immediate superior	Dean	1
	Deputy Dean	2
	Head of Department	3
	Head of program	4
	Cluster Head	5
	Unit Head	6
	Others	7
9. Years of service in current institution	Below 10 years	1
	11 to 20 years	2
	21 to 30 years	3
	31 years and above	4

Note. Develop for the research

Section B till Section E is about the independent and dependent variables. The feedback from the respondents will settle on a code beginning from 1 until 5 based on the respondent's level of agreement. For instance, "strongly disagree" will be coded with regard to illustration "1", while "strongly agree" might be coded with regard to illustration "5". Table 3.10 shows the coding system from Section B till Section E.

Table 3.10

Data Coding for Section B till Section E of Questionnaire

Questions	Items	As coded in SPSS
All Section B till E Question	Strongly Disagree	1
	Disagree	2
	Neutral	3
	Agree	4
	Strongly Agree	5

Note. Develop for the research

3.6.4 Data Transcribing

The last stage is data transcribing. The researchers transcribe the coded data into the SPSS software to further analyse the data (Saunders, Lewis & Thornhill, 2012).

3.7 Data Analysis

Data analysis is the process of combining facts and facts and figures to solve a research problem. The most important part of data analysis is finding the answers to research questions. Another vital aspect of the research is the interpretation of the data, which is obtained from the data analysis and makes inferences and conclusions. It is often difficult to deduce the raw data, thus the data need to be analysed, and the outcome of the analysis deduced (Ashirwadam, n.d.). In this study, SPSS software was employed for analysing the data.

3.7.1 Descriptive Analysis

Descriptive analysis is the process of transforming raw data into a format that is easy to understand, interpret, rearrange, order, and manipulate to obtain descriptive information (Zikmund, 2003). A descriptive statistic is a sort of data analysis that assists to describe, show, or summarise data in a simple way. It is vital because if we simply presented our raw data, it would be difficult to visualise what the data showed. Researchers use a variety of descriptive analysis tools to compare data, such

as bar charts, pie charts, line graphs, and histograms. In this study, we used descriptive analysis to compare data such as university, gender, age, ethnic group, highest qualification, job status, academic position, the position/post of your immediate superior and years of service in the current institution.

3.7.2 Reliability Analysis

The concept of reliability analysis refers to the fact that a scale should consistently reflect the construct being measured. Reliability of measures indicates that the research is without bias, which is error-free and hence ensures consistent measurement across time and various items in the instrument. Cronbach's alpha is used to measure a scale's internal consistency since it is the reliability coefficient that reveals how strongly the items in the questionnaire are positively correlated. It is the average of all possible split-half reliabilities for a given construct. The coefficient alpha ranges from 0 to 1, with 0 indicating no consistency and 1 indicating complete consistency. The higher the alpha value (α), the better the internal consistency and reliability. If α is less than 0.60, it means that the items measuring the variable have poor reliability. If α falls between 0.60 and 0.70, it indicates that the items measuring the variable have fair reliability. The α that falls within 0.70 to 0.80 indicates that the reliability is good, while 0.80 to 0.95 means the variable has very good reliability. Therefore, we must get at least a 0.60 alpha value to enhance the accuracy of the evaluations of the research.

3.7.3 Inferential Analysis

The inferential analysis is used to make inferences from our data to more general conditions based on the data we collected (William, n.d.). Inferential statistics are methods for using samples to make generalisations about the populations from which the samples were drawn. The process of achieving an accurate sample is known as sampling.

3.7.3.1 Pearson Correlation Coefficient

The correlation coefficient, also known as Pearson Correlation, is a statistical measure of the dependence or association of two numbers. The Pearson correlation coefficient (*r*) values are varied from -1 to +1. -1 indicates a perfect negative relationship between the variables, whereas +1 indicates a perfect positive relationship. 0 indicates there is no linear relationship between the two variables. A positive correlation exists when the two variables move in the same direction at the same time. However, a negative correlation exists when one set of numbers moves up whereas the other moves down. The Pearson Correlation is suitable only for metric variables. Thus, since all the variables in this study are measured with an interval scale, Pearson Correlation Coefficient is appropriate for this study. In this study, we correlated leaders' idealised influence, intellectual stimulation and innovation have a significant relationship effect on academics performance in Malaysian public research universities. Table 3.11 displays the interpretation of each coefficient range.

Table 3.11

Pearson Correlation Coefficient

Coefficient range	Strength of association
±0.91 to ±1.00	Very strong
±0.71 to ±0.90	High
±0.41 to ±0.70	Moderate
±0.21 to ±0.40	Small but definite relationship
±0.01 to ±0.20	Slight, almost negligible

Note. Jnr, Money, Samouel & Page (2007). *Research Methods for Business*, UK Edition.

3.7.3.2 Multiple Regression Analysis

Multiple regression is a simple linear regression extension that is employed to forecast the value of one variable based on the values of two or more other variables. It enables us to measure the overall fit of the model, the variance explained by the model, and the relative contributions of each predictor to the total variance explained. The variable we aim to anticipate is called the dependent variable, while the variables used to anticipate the dependent variable are called independent variables. Therefore, multiple regression analysis was used in this study. Leaders' idealised influence, leaders' intellectual stimulation and leaders' innovation are three independent variables used to predict

academics performance in Malaysian public research universities. The multiple regression equation constructed is as below:

$$\boldsymbol{y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon}$$

$\boldsymbol{y}$	Academic Performance
$\boldsymbol{\beta_0}$	Value of Y when all of the independent variables (x_1 through x_3) are equal to zero
$\boldsymbol{\beta_1, \beta_2, \beta_3}$	Slope of regression line
$\boldsymbol{x_1}$	Leaders' Idealised influence
$\boldsymbol{x_2}$	Leaders' Intellectual stimulation
$\boldsymbol{x_3}$	Leaders' Innovation
$\boldsymbol{\varepsilon}$	Error

3.8 Chapter Summary

In conclusion, this chapter briefly explained the research design, the methods we collected the data, sampling design and research instruments. Then, we explained the process of collecting data from 30 respondents. We also explained which computer programs were used by us to analyse the data and summarised the statistical techniques applied. Thus, we will discuss more detail about descriptive analysis, scale measurement and inferential analysis in the next chapter.

Chapter 4: Data Analysis

4.0 Introduction

The earlier chapter described how 30 sets of questionnaires were given to respondents at the Malaysian public research university, and the data from these questionnaires was utilised to conduct the pilot study. In this chapter, we will go through the results of the 272 questionnaire sets that were given to our target respondents at the Malaysian public research university in detail. We will be using the SPSS software as our analytical tool to analyse, interpret, and summarise the survey data. This chapter discusses the results of the data from the questionnaire that was analysed and described in the descriptive analysis, scale measurement, and inferential analysis. The data is displayed in the form of frequency distribution tables and pie charts.

4.1 Descriptive Analysis

This section presents data based on the respondents' personal information, such as university, gender, age, ethnic group, highest qualification, job status, academic position, the position/post of your immediate superior, and years of service in your current institution.

4.1.1 Respondent Demographic Profile

This section displayed the demographic profile gathered from the survey.

Table 4.1

The Summarized Respondent Demographic Profile

Demographic Profile	Categories	Frequency	Percentage (%)
University	Universiti Malaya	54	19.9
	Universiti Kebangsaan Malaysia	51	18.8
	Universiti Sains Malaysia	65	23.9
	Universiti Putra Malaysia	50	18.4
	Universiti Teknologi Malaysia	52	19.1
	Total	272	100.0
Gender	Male	122	44.9
	Female	150	55.1
	Total	272	100.0
Age	Below 25 years old	37	13.6
	25 to 34 years old	27	9.9
	35 to 44 years old	93	34.2
	45 to 54 years old	105	38.6
	55 years old and above	10	3.7
	Total	272	100.0
Ethnic Group	Chinese	90	33.1
	Malay	156	57.4
	Indian	25	9.2
	Other	1	0.4
	Total	272	100.0
Highest Qualification	Diploma	8	2.9
	Bachelor's degree	48	17.6
	Master's degree	70	25.7
	PhD	146	53.7
	Total	272	100.0
Job Status	Permanent	246	90.4
	Contract	26	9.6
	Total	272	100.0

Academic Position	Lecturer	62	22.8
	Senior Lecturer	64	23.5
	Assistant Professor	53	19.5
	Associate Professor	43	15.8
	Professor	50	18.4
	Total	272	100.0
The Position/Post of Your Immediate Superior	Dean	86	31.6
	Deputy Dean	50	18.4
	Head of Department	64	23.5
	Head of program	30	11.0
	Cluster Head	5	1.8
	Unit Head	20	7.4
	Other	17	6.2
	Total	272	100.0
Years of Service in Current Institution	Below 10 years	75	27.6
	11 to 20 years	129	47.4
	21 to 30 years	62	22.8
	31 years and above	6	2.2
	Total	272	100.0

Note. Develop for the research

4.1.1.1 University

Table 4.2

Frequency Table for Respondents' University

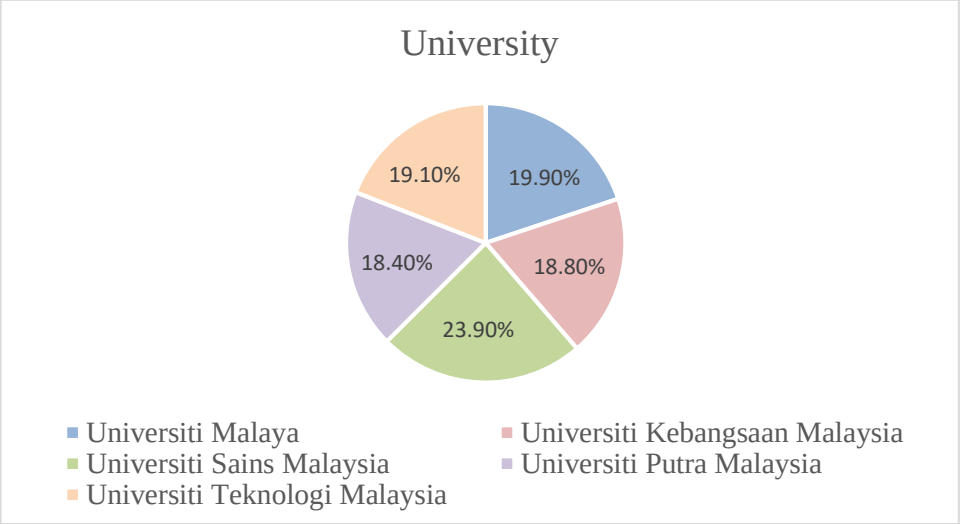
University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Universiti Malaya	54	19.9	19.9	19.9
	Universiti Kebangsaan Malaysia	51	18.8	18.8	38.6
	Universiti Sains Malaysia	65	23.9	23.9	62.5
	Universiti Putra Malaysia	50	18.4	18.4	80.9
	Universiti Teknologi Malaysia	52	19.1	19.1	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.1

Statistics of Respondents' University



There are five research universities in Malaysia, which are Universiti Malaya, Universiti Kebangsaan Malaysia, Universiti Sains Malaysia, Universiti Putra Malaysia, and Universiti Teknologi Malaysia. Table 4.2 shows that 19.9% (n=54) of respondents were Universiti Malaya, 18.8% (n=51) of respondents were Universiti Kebangsaan Malaysia, 23.9% (n=65) of respondents were Universiti Sains Malaysia, 18.4% (n=50) of respondents were Universiti Putra Malaysia, and 19.1% (n=52) of respondents were Universiti Teknologi Malaysia.

4.1.1.2 Gender

Table 4.3

Frequency Table for Respondents' Gender

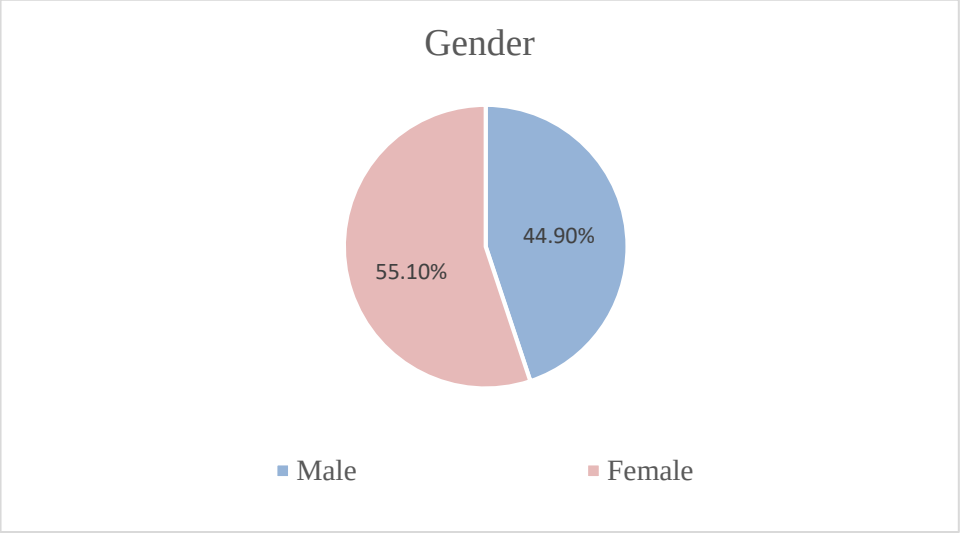
Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	122	44.9	44.9	44.9
	Female	150	55.1	55.1	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.2

Statistics of Respondents' Gender



The data on the gender of the respondents was analyzed. Table 4.3 is indicative of the results that were obtained, showing that 44.9% (n=122) of the respondents were male and 55.1% (n=150) of the respondents were female.

4.1.1.3 Age

Table 4.4

Frequency Table for Respondents' Age Group

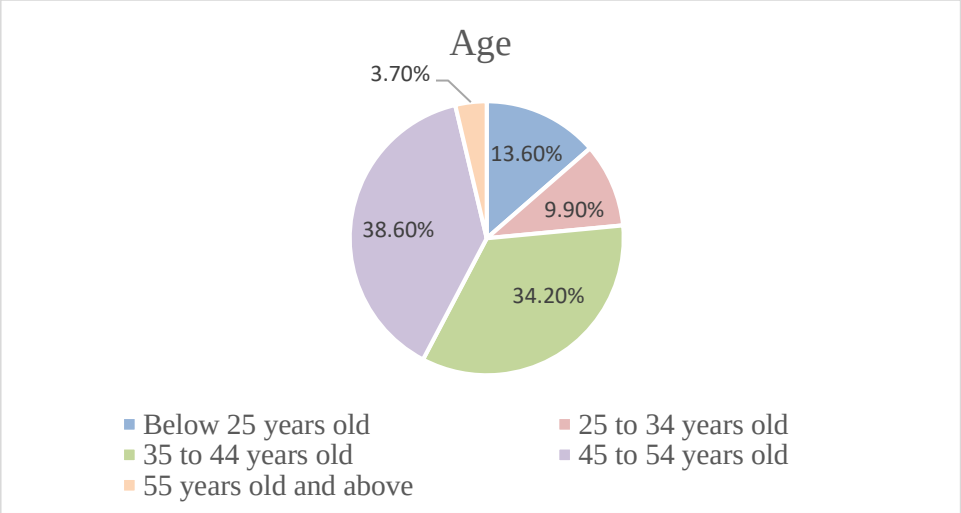
Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25 years old	37	13.6	13.6	13.6
	25 to 34 years old	27	9.9	9.9	23.5
	35 to 44 years old	93	34.2	34.2	57.7
	45 to 54 years old	105	38.6	38.6	96.3
	55 years old and above	10	3.7	3.7	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.3

Statistics of Respondents' Age Group



The respondents' age is classified into five groups, which are below 25 years old, 25 to 34 years old, 35 to 44 years old, 45 to 54 years old and above 55 years old. Table 4.4 shows that 13.6% (n=37) of respondents were below 25 years old, 9.9% (n=27) of respondents were between 25 to 34 years old, 34.2% (n=93) of respondents were between 35 to 44 years old, 38.6% (n=105) of respondents were between 45 to 54 years old, and 3.7% (n=10) of respondents were above 55 years old.

4.1.1.4 Ethnic Group

Table 4.5

Frequency Table for Respondents' Ethnic Group

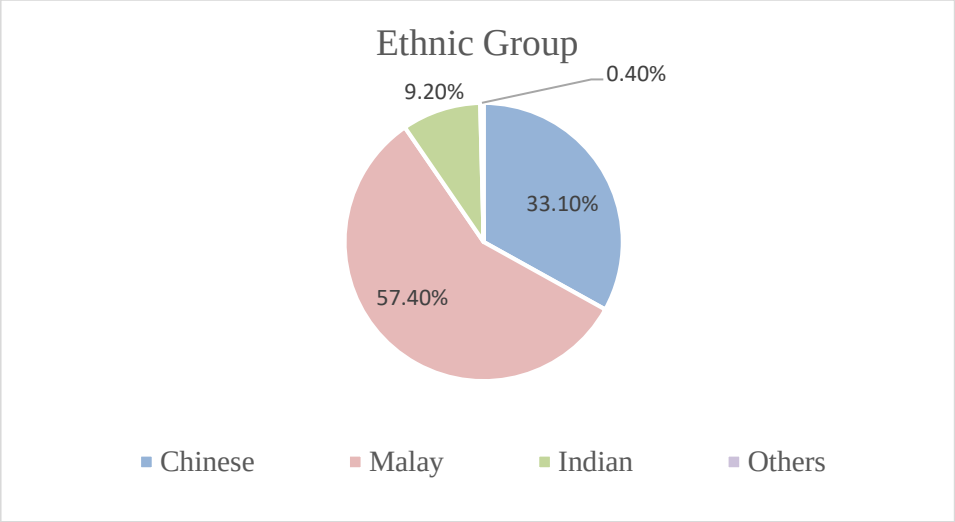
Ethnic Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinese	90	33.1	33.1	33.1
	Malay	156	57.4	57.4	90.4
	Indian	25	9.2	9.2	99.6
	Others	1	0.4	0.4	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.4

Statistics of Respondents' Ethnic Group



An ethnic group is classified into four groups, which are Chinese, Malay, Indian, and others. Table 4.5 shows that 33.1% (n=90) of respondents were Chinese, 57.4% (n=156) of respondents were Malay, 9.2% (n=25) of respondents were Indian, and 0.4% (n=1) of respondents were from other ethnic groups.

4.1.1.5 Highest Qualification

Table 4.6

Frequency Table for Respondents' Highest Qualification

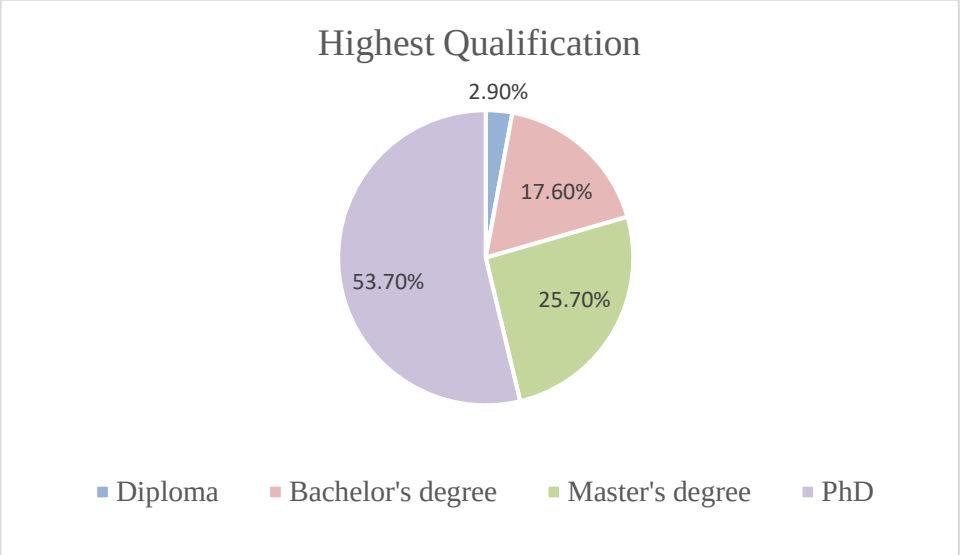
Highest Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	8	2.9	2.9	2.9
	Bachelor's degree	48	17.6	17.6	20.6
	Master's degree	70	25.7	25.7	46.3
	PhD	146	53.7	53.7	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.5

Statistics of Respondents' Highest Qualification



The highest qualification is classified into four groups, which are diploma, bachelor's degree, master's degree, and PhD. Table 4.6 shows that 2.9% (n=8) of respondents had a diploma, 17.6% (n=48) of respondents had a bachelor's degree, 25.7% (n=70) of respondents had a master's degree, and 53.7% (n=146) of respondents had a PhD.

4.1.1.6 Job Status

Table 4.7

Frequency Table for Respondents' Job Status

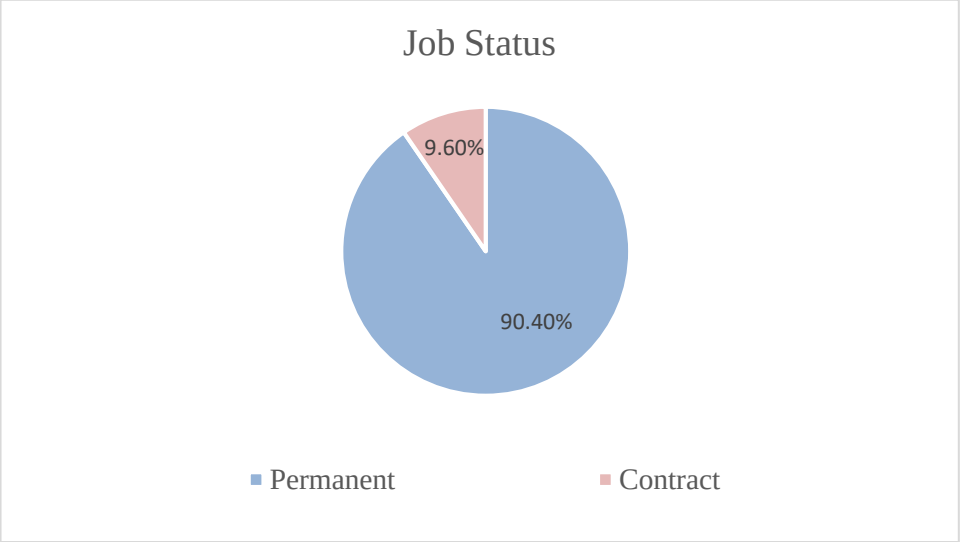
Job Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Permanent	246	90.4	90.4	90.4
	Contract	26	9.6	9.6	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.6

Statistics of Respondents' Job Status



Job status is classified into two groups, which are permanent and contract. According to Table 4.7, 90.4% (n=246) of respondents were permanent in their job status, while 9.6% (n=26) were contract in their job status.

4.1.1.7 Academic Position

Table 4.8

Frequency Table for Respondents' Academic Position

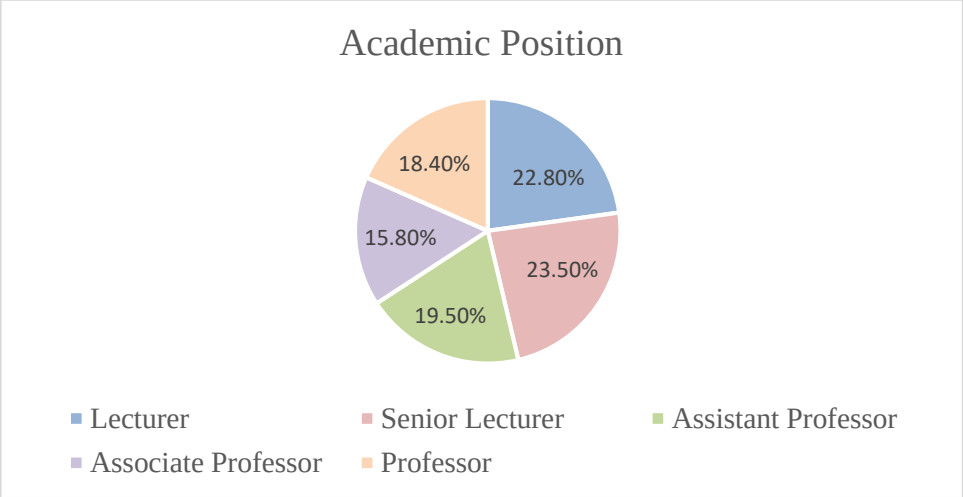
Academic Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lecturer	62	22.8	22.8	22.8
	Senior Lecturer	64	23.5	23.5	46.3
	Assistant Professor	53	19.5	19.5	65.8
	Associate Professor	43	15.8	15.8	81.6
	Professor	50	18.4	18.4	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.7

Statistics of Respondents' Academic Position



The academic position of respondents is classified into five groups, which are lecturer, senior lecturer, assistant professor, associate professor, and professor. Table 4.8 shows that 22.8% (n=62) of respondents were lecturer, 23.5% (n=64) of respondents were senior lecturer, 19.5% (n=53) of respondents were assistance professor, 15.8% (n=43) of respondents were associate professor, and 18.4% (n=50) of respondents were professor.

4.1.1.8 The Position/Post of Your Immediate Superior

Table 4.9

Frequency Table for Respondents' Immediate Superior's Position/Post

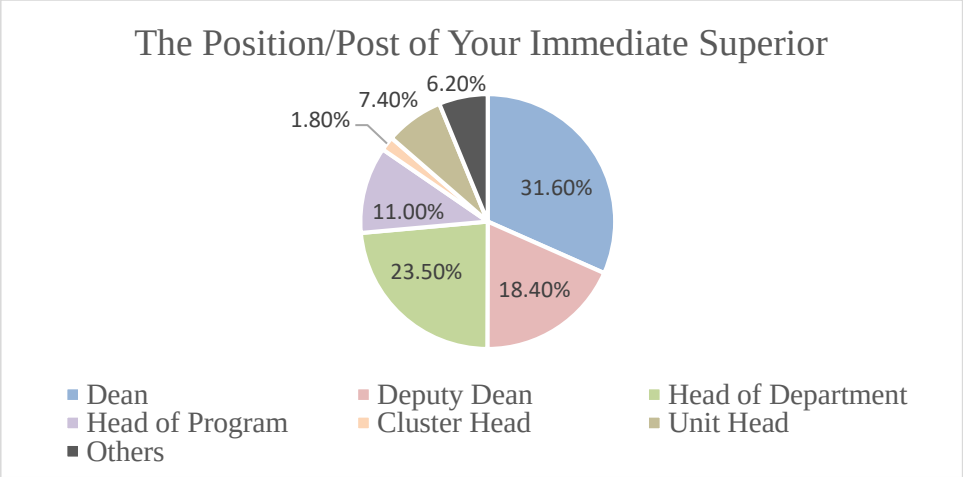
The Position/Post of Your Immediate Superior

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dean	86	31.6	31.6	31.6
	Deputy Dean	50	18.4	18.4	50.0
	Head of Department	64	23.5	23.5	73.5
	Head of Program	30	11.0	11.0	84.6
	Cluster Head	5	1.8	1.8	86.4
	Unit Head	20	7.4	7.4	93.8
	Others	17	6.2	6.2	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.8

Statistics of Respondents' Immediate Superior's Position/Post



The position/post of your immediate superior is classified into six groups, which are dean, deputy dean, head of department, head of program, cluster head, unit head, and others. Table 4.9 shows that 31.6% (n=86) of respondents immediate superior position were dean, 18.4% (n=50) of respondents immediate superior position were deputy dean, 23.5% (n=64) of respondents immediate superior position were head of department, 11.0% (n=30) of respondents immediate superior position were head of program, 1.8% (n=5) of respondents immediate superior position were cluster head, 7.4% (n=20) of respondents immediate superior position were unit head and 6.2% (n=17) of respondents immediate superior position were other.

4.1.1.9 Years of Service in Current Institution

Table 4.10

Frequency Table for Respondents' Year of Service in Current Institution

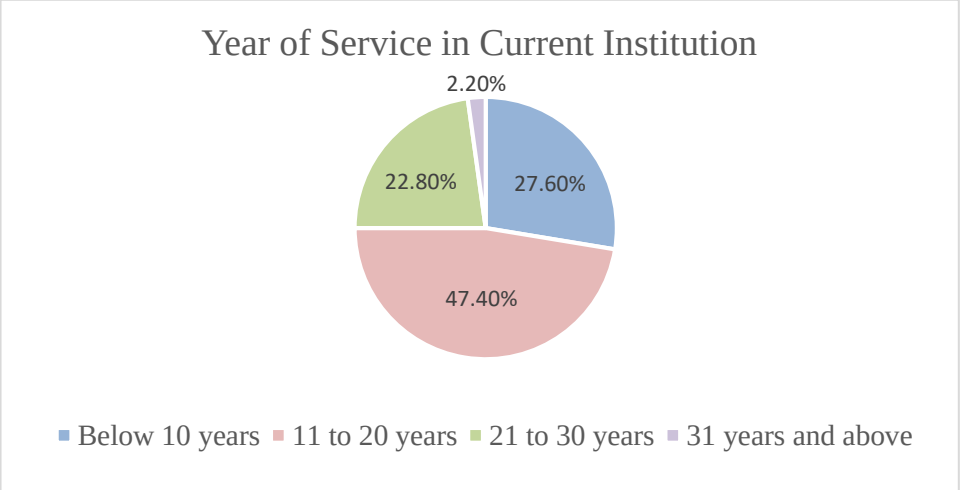
Years of Service in Current Institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10 years	75	27.6	27.6	27.6
	11 to 20 years	129	47.4	47.4	75.0
	21 to 30 years	62	22.8	22.8	97.8
	31 years and above	6	2.2	2.2	100.0
	Total	272	100.0	100.0	

Note. Develop for the research

Figure 4.9

Statistics of Respondents' Year of Service in Current Institution



Years of service in the current institution are classified in four groups ranging below 10 years, 11 to 20 years, 21 to 30 years and above 31 years. Table 4.10 shows that 27.6% (n=75) of respondents were below 10 years of service in their current institution, 47.4% (n=129) of respondents were between 11 to 20 years of service in their current institution, 22.8% (n=62) of respondents were between 21 to 30 years of service in their current institution, and 2.2% (n=6) of respondents were between 31 years and above of service in their current institution.

4.1.2 Central Tendencies Measurement of Constructs

Table 4.11

Statistics of Independent and Dependent Variables

		Leaders' Idealised Influence Average	Leaders' Intellectual Stimulation Average	Leaders' Innovation Average	Academic Performance Average
N	Valid	272	272	272	272
	Missing	0	0	0	0
Mean		42.51	43.61	42.92	44.00
Standard Deviation		4.322	4.694	4.921	4.209

Note. Develop for the research

This section presents the data based on the independent variables, which are leaders' idealized influence, leaders' intellectual stimulation, and leaders' innovation and the dependent variable, which is academic performance. Table 4.11 shows the mean and standard deviation of all variables. The highest mean of variable is academic performance (44.00), and the highest standard deviation variable

is leaders' innovation (4.921). Besides, the lowest mean of variable is leaders' idealised influence (42.51), and the lowest standard deviation variable is academic performance (4.209).

4.1.2.1 Leaders' Idealised Influence

Table 4.12

Central Tendencies Measurement Result of Leaders' Idealised Influence

		N	Mean	Std. Deviation	Ranking
II1	My immediate leader has a clear understanding of we are doing	272	4.35	.576	6
II2	My immediate leader paints an interesting picture of the future for our group	272	4.31	.538	10
II3	My immediate leader is always seeking new opportunities for the organization	272	4.31	.626	8
II4	My immediate leader inspires others with his/her plans for the future	272	4.33	.607	7
II5	My immediate leader is able to get others committed to his/her dream	272	4.31	.621	9
II6	My immediate leader talks to us about his/her most important values and beliefs	272	4.37	.653	4
II7	My immediate leader emphasizes the importance of having a collective sense of mission	272	4.39	.628	2
II8	My immediate leader specifies the importance of having a strong sense of purpose	272	4.38	.626	3
II9	My immediate leader displays conviction in his/her ideals, beliefs, and values	272	4.40	.606	1
II10	My immediate leader takes a stand on difficult issues	272	4.35	.718	5

Note. Develop for the research

Table 4.12 shows the ranking of means and standard deviation of leaders' idealised influence. Based on the result, the statement "My immediate leader displays conviction in his/her ideals, beliefs, and values" has the highest mean value score of 4.40. It indicates that the majority of the respondents agreed with this statement. The "My immediate leader paints an interesting picture of the future for our group" statement does have the lowest mean score of 4.31 as well as the standard deviation of

0.538. The "My immediate leader takes a stand on difficult issues" statement has the highest standard deviation of 0.718.

4.1.2.2 Leaders' Intellectual Stimulation

Table 4.13

Central Tendencies Measurement Result of Leaders' Intellectual Stimulation

		N	Mean	Std. Deviation	Ranking
IS1	My immediate leader re-examines critical assumptions for appropriateness	272	4.43	.634	1
IS2	My immediate leader seeks differing perspectives when solving problems	272	4.38	.608	4
IS3	My immediate leader gets others look at problems from many different angles	272	4.39	.628	2
IS4	My immediate leader suggests new ways of looking at how to complete assignments	272	4.32	.652	9
IS5	My immediate leader allowed me to have my own judgment in solving problems	272	4.38	.671	3
IS6	My immediate leader challenged me to think of old problems in a new way	272	4.35	.681	7
IS7	My immediate leader encouraged me to think out of ability (out of the box)	272	4.37	.587	5
IS8	My immediate leader encouraged me to learn new things	272	4.36	.667	6
IS9	My immediate leader encouraged me to be creative at work	272	4.35	.660	8
IS10	My immediate leader supports me whenever I do high risk task	272	4.28	.747	10

Note. Develop for the research

Table 4.13 shows the ranking of means and standard deviation of leaders' intellectual stimulation. Based on the result, the statement "My immediate leader re-examines critical assumptions for appropriateness" has the highest mean value score of 4.43. The highest mean value indicates that most of the respondents agreed with this statement. "My immediate leader supports me whenever I do high risk tasks," gets the lowest mean score of 4.28 however the highest standard deviation of 0.747. It shows that the response toward this statement has the highest dispersion rate. The statement "My immediate leader encouraged me to think out of ability (out of the box)" has the lowest standard deviation of 0.587.

4.1.2.3 Leaders' Innovation

Table 4.14

Central Tendencies Measurement Result of Leaders' Innovation

		N	Mean	Std. Deviation	Ranking
I1	My immediate leader developing new innovation based on new technology is a strategic priority in my organization	272	4.42	.632	1
I2	My immediate leader emphasizes technological innovation activities improve teamwork among my colleague	272	4.32	.628	2
I3	My immediate leader supports my competency (knowledge, skill and ability) to improves through technological innovation activities	272	4.30	.674	3
I4	My immediate leader encourages self-discipline to improves through technological innovation activities	272	4.28	.622	5
I5	My immediate leader motivates me to be involve in the technological innovation activities	272	4.30	.657	4
I6	My immediate leader ensures my performance gets better through technological innovation activities	272	4.26	.679	8
I7	My immediate leader focuses my competency (knowledge, skill and ability) through organizational innovation activities	272	4.27	.696	6
I8	My immediate leader ensures my self-discipline improved through organizational innovation activities	272	4.25	.641	9
I9	My immediate leader motivates me to be involve in the organizational innovation activities	272	4.24	.676	10
I10	My immediate leader ensures my performance gets better through organizational innovation activities	272	4.27	.648	7

Note. Develop for the research

Table 4.14 shows the ranking of means and standard deviation of leaders' innovation. Based on the result, the statement "My immediate leader developing new innovation based on new technology is a strategic priority in my organization" does have the highest mean value score of 4.42 which indicates that the majority of the respondents agreed with this statement. "My immediate leader

motivates me to be involved in the organizational innovation activities" gets the lowest mean score of 4.24. The "My immediate leader focuses my competency (knowledge, skill, and ability) through organizational innovation activities" statement does have the highest standard deviation of 0.696. While "My immediate leader encourages self-discipline to improve through technological innovation activities" gets the lowest standard deviation of 0.622.

4.1.2.4 Academic Performance

Table 4.15

Central Tendencies Measurement Result of Academic Performance

		N	Mean	Std. Deviation	Ranking
AP1	I am deft to work	272	4.37	.674	8
AP2	I am thoroughly working	272	4.35	.614	10
AP3	I am completing work according to company quality standards	272	4.42	.589	3
AP4	My quantity of work is according to the expected standard	272	4.41	.607	4
AP5	I am finishing the job faster than the specified time	272	4.36	.657	9
AP6	I am not delaying work	272	4.38	.608	7
AP7	I am having skills in the field of work	272	4.39	.586	6
AP8	I am able to use skills for the job	272	4.40	.580	5
AP9	I understand the task that must be done	272	4.48	.529	1
AP10	I can take responsibility for the result of work	272	4.43	.579	2

Note. Develop for the research

Table 4.15 shows the ranking of means and standard deviation of academic performance. Based on the result, the statement "I understand the task that must be done" gets the highest mean score as well as the lowest standard deviation, which are 4.48 and 0.529. The highest mean value indicates that the majority of the respondents agreed with this statement. "I am thoroughly working" gets the lowest mean score of 4.35. The "I am deft to work" statement gets the highest standard deviation of 0.674.

4.2 Scale Measurement

IBM Statistical SPSS software was used for reliability analysis to evaluate the dependent variable and independent variables. There are a total of 272 respondents included in this reliability analysis of this research project.

4.2.1 Reliability Analysis

The reliability test is concerned with whether a scale indicates that it is free from random errors. The reliability of the scale instruments was evaluated using Cronbach's Alpha coefficient analysis. It may be used to determine if the data gathered is dependable and how effectively the items are used to measure a variable.

Table 4.16

Cronbach's Alpha Reliability Test

Variables	Alpha Value	Number of items
Leaders' Idealised Influence	0.881	10
Leaders' Intellectual Stimulation	0.895	10
Leaders' Innovation	0.914	10
Academic Performance	0.883	10

Note. Develop for the research

Based on Table 4.16, the independent variables (leaders' idealized influence, leaders' intellectual stimulation, and leaders' innovation) and dependent variable (academic performance) have a Cronbach's alpha value of more than 0.80. The result of the reliability test of 10 items evaluating leaders' idealized influence (0.881), leaders' intellectual stimulation (0.895), leaders' innovation (0.914), and academic performance (0.883) falls within the range of 0.80 to 0.95. As all of the variables' Cronbach's alpha values fall within the range of 0.80 to 0.95, the variables in the questionnaire were considered to have very good reliability.

4.3 Inferential Analysis

Inferential analysis is focused on making estimates based on the analysis of a collection of sample data. Accordingly, in this study, multiple regression analysis and Pearson correlation coefficient analysis were both employed. The Pearson result will indicate the relationship between two variables, whereas the multiple regression result will indicate the most significant variables that influence academic performance in Malaysian public research universities.

4.3.1 Pearson Correlation Coefficient Analysis

Table 4.17

Pearson Correlation Coefficient

Coefficient range	Strength of association
±0.91 to ±1.00	Very strong
±0.71 to ±0.90	High
±0.41 to ±0.70	Moderate
±0.21 to ±0.40	Small but definite relationship
±0.01 to ±0.20	Slight, almost negligible

Note. Jnr, Money, Samouel & Page (2007). *Research Methods for Business*, UK Edition.

4.3.1.1 Pearson Correlation Coefficient between Leaders' Idealised Influence and Academic Performance

Table 4.18

Correlation between Idealised Influence and Academic Performance

Correlations

		Academic Performance average	Leaders' Idealized Influence average
Academic Performance average	Pearson Correlation	1	.646**
	Sig. (2-tailed)		<.001
	N	272	272
Leaders' Idealized Influence average	Pearson Correlation	.646**	1
	Sig. (2-tailed)	<.001	
	N	272	272

**. Correlation is significant at the 0.01 level (2-tailed)

Note. Develop for the research

Direction

According to the results from table 4.18, there is a positive relationship between leaders' idealised influence and academic performance in Malaysian public research university due to the positive value for the correlation coefficient. The idealised influence variable of leaders shows a 0.646 correlation with the academic performance variable. Hence, when perceived leaders' idealised influence is high, academic performance in Malaysian public research universities is high.

Strength

The correlation coefficient's values of 0.646 falls within the coefficient range from ±0.41 to ±0.70. Thus, the relationship between leaders' idealised influence and academic performance in Malaysian public research universities is moderate.

Significant

The relationship between leaders' idealised influence and academic performance in Malaysian public research university is significant. This is because the p-value <0.001 is smaller than the alpha value of 0.01.

4.3.1.2 Pearson Correlation Coefficient between Leaders' Intellectual Stimulation and Academic Performance

Table 4.19

Correlation between leaders' intellectual stimulation and academic performance

Correlations

		Academic Performance average	Leaders' Intellectual Stimulation average
Academic Performance average	Pearson Correlation	1	.590**
	Sig. (2-tailed)		<.001
	N	272	272
Leaders' Intellectual Stimulation average	Pearson Correlation	.590**	1
	Sig. (2-tailed)	<.001	
	N	272	272

**. Correlation is significant at the 0.01 level (2-tailed)

Note. Develop for the research

Direction

According to the results from table 4.19, there is a positive relationship between leaders' intellectual stimulation and academic performance in Malaysian public research universities due to the positive value for the correlation coefficient. The intellectual stimulation variable of leaders shows a 0.590 correlation with the academic performance variable. Hence, when perceived leaders' intellectual stimulation is high, academic performance in Malaysian public research universities is high.

Strength

The correlation coefficient's values of 0.590 falls within the coefficient range from ±0.41 to ±0.70. Thus, the relationship between leaders' intellectual stimulation and academic performance in Malaysian public research universities is moderate.

Significant

The relationship between leaders' intellectual stimulation and academic performance in Malaysian public research universities is significant. This is because the p-value <0.001 is smaller than the alpha value of 0.01.

4.3.1.3 Pearson Correlation Coefficient between Leaders' Innovation and Academic Performance

Table 4.20

Correlation between leaders' Innovation and academic performance

Correlations

			Academic Performance average	Leaders' Innovation average
Academic Performance average		Pearson Correlation	1	.528**
		Sig. (2-tailed)		<.001
		N	272	272
Leaders' Innovation average		Pearson Correlation	.528**	1
		Sig. (2-tailed)	<.001	
		N	272	272

**. Correlation is significant at the 0.01 level (2-tailed)

Note. Develop for the research

Direction

According to the results from table 4.20, there is a positive relationship between leaders' innovation and academic performance in Malaysian public research universities due to the positive value for the correlation coefficient. The innovation variable of leaders shows a 0.528 correlation with the academic performance variable. Hence, when perceived leaders' innovation is high, academic performance in Malaysian public research universities is high.

Strength

The correlation coefficient's value of 0.528 falls within the coefficient range from ±0.41 to ±0.70. Thus, the relationship between leaders' innovation and academic performance in Malaysian public research universities is moderate.

Significant

The relationship between leaders' innovation and academic performance in Malaysian public research universities is significant. This is because the p-value <0.001 is smaller than the alpha value of 0.01.

4.3.2 Multiple Linear Regression Analysis

It is a statistical technique that predicts the outcome of a dependent variable using one or more independent variables. Several important parameters, including R value, R square value, significance (p-value), and beta value under standardised coefficient, should be evaluated in the multiple linear regression analysis.

Table 4.21

Multiple Linear Regression Analysis (Model Summary)

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669[a]	.448	.442	.31441

a. Predictors: (Constant), Leaders' Innovation average, Leaders' Idealized Influence average, Leaders' Intellectual Stimulation average

Note. Develop for the research

Table 4.22

Multiple Linear Regression Analysis (ANOVA)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.517	3	7.172	72.555	<.001[b]
	Residual	26.493	268	.099		
	Total	48.010	271			

a. Dependent Variable: Academic Performance average

b. Predictors: (Constant), Leaders' Innovation average, Leaders' Idealized Influence average, Leaders' Intellectual Stimulation average

Note. Develop for the research

Table 4.23

Multiple Linear Regression Analysis (Coefficients)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.462	.201		7.285	<.001
	Leaders' Idealized Influence average	.476	.073	.488	6.553	<.001
	Leaders' Intellectual Stimulation average	.257	.069	.286	3.719	<.001
	Leaders' Innovation average	-.059	.069	-.068	-.842	.400

Note. Develop for the research

H1: Leaders' idealised influence has a positive effect on academic performance in Malaysian public research university.

H2: Leaders' intellectual stimulation has a positive effect on academic performance in Malaysian public research university.

H3: Leaders' innovation has a positive effect on academic performance in Malaysian public research university.

According to the ANOVA table, p-value <0.001 is smaller than the alpha value 0.01. The F-statistic is significant. The study's model is a good descriptor of the relationship between the dependent variable and predictor variables. Hence, the independent variables (leaders' idealized influence, leaders' intellectual stimulation and leaders' innovation) are significant explain the variance in dependent variable (academics performance) in Malaysian public research universities. The evidence supports the alternative hypothesis.

The correlation coefficient between the dependent variable and the independent variables is indicated by the R value. The study's R value is 0.669. The dependent variable and the independent variables have a positive and moderate correlation.

The R square represents the extent or percentage to which the independent variables can explain variations in the dependent variable. Independent factors might influence 44.8% of the changes in the dependent variable in this research. Yet, it still leaves 55.2% (100.0% - 44.8%) of this study unexplained. This means, there are other additional variables that are significant in explaining academics performance in Malaysian public research universities that were not taken into account in this research. For this study, the R square value was low, which means our regression model does not fit well with the observed data.

Leaders' idealized influence is significant in predicting the dependent variable in this research. This is due to the p-value <0.001 for leaders' idealized influence is smaller than the alpha value of 0.01. Thus, H1 should not be rejected.

Leaders' intellectual stimulation is significant in predicting the dependent variable in this research. This is due to the p-value <0.001 for leaders' intellectual stimulation is smaller than the alpha value of 0.01. Thus, H2 should not be rejected.

Leaders' innovation is not significant in predicting the dependent variable in this research. This is due to the p-value 0.400 for leaders' innovation is more than the alpha value of 0.01. Thus, H3 should be rejected.

Regression Equation

$Y = a + b1(X1) + b2(X2) + b3(X3)$

X1 = independent variable 1

X2 = independent variable 2

X3 = independent variable 3

Academic performance = 1.462 + 0.476 (leaders' idealised influence) + 0.257 (leaders' intellectual stimulation) + (–0.059) (leaders' innovation)

Leaders' idealised influence (predictor variable) contributes the most to the variation of academic performance because its beta value (under the standardized coefficients) is the largest (0.488) when compared to other predictor variables, which are leaders' intellectual stimulation and leaders' innovation. This indicates that when all other predictor variables in the model are controlled for, the leaders' idealised influence has the strongest unique contribution in explaining the variation in academic performance.

Leaders' intellectual stimulation (predictor variable) contributes the second highest to the variation of academic performance because its beta value is the second largest (0.286) when compared to other predictor variables, which are leaders' idealised influence and leaders' innovation. This indicates that when all other predictor variables in the model are controlled for, the leaders' intellectual stimulation has the second strongest unique contribution in explaining the variation in academic performance.

Leaders' innovation (predictor variable) contributes the least to the variation of their academic performance because the beta value is the smallest (–0.068) compared to leaders' idealised influence and leaders' intellectual stimulation. This indicates that when all other predictor variables in the model are controlled for, the leaders' innovation has the least contribution in explaining the variation in academic performance.

4.4 Conclusion

In this study, we conducted a sample survey of 272 respondents in Malaysian public research universities. The SPSS software was used to analyse and summarise all of the data acquired throughout the research. The analysis is divided into three sections: descriptive analysis, scale measurement, and inferential analysis. The descriptive analysis data is analyzed and concluded into tables and figures. We also run an internal reliability test to examine the questionnaire item's reliability. By using Pearson correlation, we can identify the relationship of variables' strength, direction, and significance. In order to explain the relationship among the

variables, we have run multiple regression analysis. The findings of all the independent variables (leaders' idealized influence, leaders' intellectual stimulation, and leaders' innovation) significantly relate to the dependent variable (academic performance). Chapter 5's discussion and conclusion will further take place.

Chapter 5: Discussion, Conclusion and Implications

5.0 Introduction

In this chapter, a summary of the illustrative, inferential, and significant findings from the analysis are offered. The results of the study will also be included. Researchers will talk about the research's limitations and the suggestions made for future studies.

5.1 Summary of Statistical Analyses

5.1.1 Descriptive Analysis

A total of 272 sets of the questionnaire survey had been received from the respondents for data collection purposes. According to the data, there were 150 female respondents (54.7%), compared to 122 male respondents (45.30%). Additionally, 64 respondents (19.9%) are from Universiti Malaya, and 65 respondents (23.9%) are from Universiti Sains Malaysia Malaysian. The remaining universities are 52 respondents (19.1%) from Universiti Teknologi Malaysia, 51 respondents (18.8%) from Universiti Kebangsaan Malaysia, and lastly 50 respondents (18.4%) from Universiti Putra Malaysia.

In addition, 105 respondents, or 38.6% of the total, were in the survey's largest age category, 45 to 54 years old. Then, there are 37 respondents (13.6%) who are under 25 years old and 93 respondents (34.2%) who are between the ages of 35 and 44. Only 27 respondents (9.9%) and 10 respondents (3.7%) respectively, from the age groups of 25 to 34 and 55 and older, made up the majority of the respondents.

As a result, the majority of survey participants are Malay, including 156 respondents (57.4%), followed by Chinese, with 90 respondents (33.1%). There are 25 (9.2%) respondents who identify as

Indian, while 1 (0.4%) who do not. A total of 146 respondents (53.7%) and 70 respondents (25.7%) out of the 272 participants in the poll have doctoral degrees, respectively. Additionally, 48 respondents (17.6%) have bachelor's degrees, and only 8 respondents (2.9%) are having diploma qualification. On the other hand, 246 respondents are employees and 26 respondents are contract workers, which are 90.4% and 9.6% respectively.

In addition, 64 respondents (23.5%) are senior lecturers, 64 respondents (22.8%) are lecturers, 53 respondents (19.5%) are assistant professors, 43 respondents (15.8%) are associate professors, and 50 respondents (18.4%) are professors. As a result, senior lecturers make up the majority of the academic jobs in this survey. Next, mostly respondents involved in the survey are Dean in the position of immediate superior which consists of 86 respondents (31.6%), followed by the Head of Department with 64 respondents (23.5%). There are total 50 (18.4%) Indian respondents and 30 (11.0%) respondents are Head of program. The respondents from the Unit Head, Cluster Head, and other position occupied a small portion which are only 20 respondents (7.4%), 5 respondents (1.8%) and 17 respondents (6.2%).

Finally, there are 129 respondents (47.4%) who have between 11 and 20 years of experience working in their current institution, 75 respondents (27.6%), have less than 10 years of experience, 62 respondents (22.8%), have between 21 and 30, and 6 respondents (2.2%) have more than 31 years of experience.

5.1.2 Reliability Analysis

A reliability test was conducted to evaluate the consistency and dependability of both dependent variables and independent variables. Cronbach's alpha reliability helps reduce the error of each variable and ensure the reliability of the data collection. Every variable has a Cronbach's alpha value that falls between 0.80 and 0.95. Based on the research result in Chapter 4, the highest Cronbach value of variables is leaders' innovation which had recorded 0.914, thus the 10 items measuring leaders' innovation are very good reliability. The 10 items assessing leaders' intellectual stimulation have extremely strong reliability as Cronbach's alpha value is within the range of 0.80 to 0.95. Next, leaders' intellectual stimulation has the second highest Cronbach's alpha value among variables, which is 0.895. Reliability testing of academic achievement is then conducted, and the results show

that the Cronbach's alpha value is 0.883, indicating that the 10 items evaluating leaders' idealistic influence have extremely strong reliability and fall within the range of 0.80 to 0.95. Lastly, followed by leaders’ idealized influence which shows Cronbach's alpha value is 0.881. The 10 measures used to measure leaders' idealised influence are quite reliable, with a Cronbach's alpha value that falls between 0.80 and 0.95. In conclusion, all of the variables' Cronbach's alpha values lie within the range of 0.80 and 0.95, all the variables in the questionnaire have good and fair level of reliability and the degree of reliability is attempting to reach moderate.

5.1.3 Inferential Analysis

5.1.3.1 Pearson Correlation Coefficient Analysis

Correlation by Pearson Coefficient demonstrates that each of the variables are positively correlated with each other because 0.000 p-value is less than 0.01 alpha value. The independent variable with the highest significance value is leaders' idealised impact, which has a value of 0.646. Next in line are leaders' intellectual stimulation and invention, both of which have values of 0.590 and 0.448 respectively. The outcome indicated that all three variables' values fall within a coefficient range of ±0.41 to ±0.70. All of the independent variables have a strong correlation with academic and work performance. Additionally, there is a favourable correlation between the independent variables (leaders’ idealized influence, leaders’ intellectual stimulation, and leaders’ innovation) and dependent variable (employee performance) because the correlation coefficient has positive value. In addition, all the independent variables have a moderate correlation with academic performance.

5.1.3.2 Multiple Liner Regression Analysis

Table 5.1

Summary of the Result of Hypotheses Testing

No.	Hypothesis	Result
1	Leaders' idealized influence has a significant influence on academic performance in Malaysian public research university.	**$p < 0.0001$ Accepted**
2	Leaders' intellectual stimulation has a significant influence on academic performance in Malaysian public research university.	**$p < 0.0001$ Accepted**
3	Leaders' innovation has a significant influence on academic performance in Malaysian public research university.	**$P = 0.400$; assume $p < 0.0001$ Not Accepted**

Note. Develop for the research

5.2 Discussions of Major Findings

5.2.1 Leaders' Idealised Influence

H1: Leaders' idealised influence has a positive effect on academic performance.

This study demonstrates that the idealised impact of leaders has a positive effect on academic achievement at Malaysian public research institutions. According to Haseeb et al. (2021), leaders with idealised influence would greatly contribute to improving employee performance. Therefore, it will result in the achievement of the organization's long-term objectives and responsibilities. As supported by Jerobon et al. (2016), idealised influence has a significant impact on employee performance. When leaders become role models for employees through effective communication of objectives and vision, the employees are motivated and inspired by them to improve organisational performance. Additionally, leaders with idealised influence encourages and motivates employees to achieve the goals (Koveshnikov & Ehrnrooth, 2018). Therefore, the respondents believed that leaders' idealised influence has the most significant value to their performance based on the statistical evidence.

5.2.2 Leaders' Intellectual Stimulation

H2: Leaders' intellectual stimulations has a positive effect on academic performance.

Based on the research, the intellectual stimulation of leaders has a favourable influence on academic achievement at Malaysian public research institutions. As proven by the research of Muthimi (2020), academic performance was enhanced by intellectual stimulation. The leaders engage employees in problem-solving by allowing them to review the decision-making process. It creates a job environment that promotes sharing and exchanging information and opinions. Hence, it is a supervisory style that encourages freedom of speech in an organisation. According to Khalil et al. (2018), employee performance improves when leaders promote and support employee creativity and innovation and motivate them to come up with brilliant ideas. In addition, when leaders let employees think independently to solve issues, make decisions on their own, and create inventive ways to complete their duties, employee performance rises steadily (Ogola, 2017).

5.2.3 Leaders' Innovation

H3: Leaders' innovation has a positive effect on academics performance.

According to the research, leaders' innovation has non-significant influence on academic performance in Malaysian public research university. Dr. David Gliddon (2006) described innovative leadership as a theory and a method that integrates many leadership philosophies to persuade staff to come up with creative ideas, products, and services. Instead than waiting for issues to arise, innovative leaders look for them (Othman & Abd Rahman, 2013). It is essential to lead innovatively to assure success given the quick evolution of technology and business practises. Today, firms require creative leaders to adapt to change. On the other hand, Mumford and Licuanan (2004), stated that "The demand for innovation in companies has led in a fresh focus on the role of leaders in defining the type and effectiveness of creative activities." This can prove that more than half of respondents strongly felt that there was a strong connection between lecturers' effectiveness and creative leadership (Sukkar & Diallo, 2021). However, this research demonstrates a negative influence of innovation on employee performance in public University in Malaysia. Firstly, employees frequently want to avoid the uncertainty and discomfort that change entails. Second, their coworkers are reluctant to change their routines and behaviours because they are used to them. Third, many

coworkers have already agreed to follow the company's standard operating procedure. The result is workplace disputes between innovative employees and their coworkers will increase as a result of coworkers' opposition to their innovative activities. Additionally, Harrison and Wagner (2016) contend that engaging in creative endeavours may deplete the energies necessary for maintaining healthy interpersonal connections. Employees who work on creative projects must focus entirely on the issue at hand for extended periods of time, which saps their energy and makes it difficult for them to keep up positive working relationships with their coworkers (Policastro & Gardner, 1998). Finally, the adoption of certain innovations may need that staff members carry out some new duties and practises that will raise their burden and cause them to feel stressed and anxious (González & Hernández, 2016; Zhang et al., 2018). In short, that basically suggests that the extreme innovation was anticipated to be experienced by the academic personnel in this study, which would be detrimental to their ability to execute their jobs.

5.3 Implications of the Study

This research has shown that leaders' idealised influence and leaders' intellectual stimulation significantly impact academic performance. This study has some potential implications.

5.3.1 Managerial Implication

Firstly, the Ministry of Higher Education (MOHE) should establish new programmes and policies to build leaders with idealised influence and intellectual stimulation. They could provide training and resources to public research universities. For example, MOHE could offer training programs in leadership and relevant fields in order to nominate the suitable leaders. Consequently, the leaders have the capability to handle the future issues. This assists the universities to grow and increase the opportunity for applicants in leadership roles while also enabling the existing academics to further their careers in the existing universities. Besides, leadership training and mentorship programmes encourage academics to build their leadership skills. It enables leaders to prioritize training in professional development based on the contemporary need and assists those who have the potential to become future leaders in Malaysian public research universities (Da Wan et al., 2020).

Secondly, transitioning to a leadership position in public research universities requires taking on extra strategic planning responsibilities. It is suggested that the human resource department should strengthen and modernise the recruiting operating procedures in order to attract talents with idealised influence and intellectual stimulation. An action plan is required to humanize the decision in recruiting leaders. Besides, a supportive and conducive environment is essential in attracting the top local talents in leadership roles. Therefore, it can increase the performance of management for developing the talent of academics.

Thirdly, supervisors have the ability to boost the work performance by establishing their position as a leader, showing leadership behaviours and developing the leadership styles. This implies that supervisors should enhance their leadership abilities with intellectual stimulation and idealised influence in order to accomplish the desired outcome. Thus, when leadership styles are used effectively for certain circumstances, it will be more successful.

5.4 Limitations of the study

When carrying out this study, the researchers were confronted with a few challenges. One of the limitations is the response rate of participants is low and inadequate sample size for statistical calculations. There were around 500 google forms sent through the respondents' email. However, the researchers only received 272 responses, which only comprises 54% response rate. The researchers were not permitted to perform physical surveys due to Covid-19 pandemics. Some respondents declined to respond as they were concerned that their information might be exploited and they may consider the email a virus or scam (Wright, 2005). As a result, they ignored the email and the survey may be removed. In addition, some respondents were preoccupied with their education and administrative duties. Hence, they lacked time to complete the survey.

The second limitation is the scope of coverage in the study. Malaysia has three basic types of universities: research universities, specialised universities, and comprehensive universities. The researchers only conducted the study for Malaysian Public Research Universities. Therefore, the study cannot represent all the academics and their departments in the universities of Malaysia. The number of respondents may have been greater for more accurate representation.

The third limitation is this study only consists of three dependent variables and has no mediating variable. There are two components of transformational leadership involved in this study which are idealised influence and intellectual stimulation. The low R square value for this research indicates that the regression model does not adequately account for the observed data. In this research, 44.8 percent of the variability in the dependent variables were explained. Hence, this research still leaves 55.2% of variance unexplained. There are more potential factors or leadership styles that are significant in influencing academics performance.

5.5 Recommendations for Future Research

The use of survey methodologies to acquire data for the study is strongly recommended. One of the ways to increase the response rate is to provide compensation for involvement because it provides value by making it valuable. For instance, raffles, charity gifts, promotional products, and money are the most effective incentives. Gift cards and coupons are examples of money incentives which are useful for future researchers to entice more respondents to take part in this survey. Hence, it can achieve more accurate results and outcomes in this research.

This study restricted Malaysian public research universities in the coverage limitation's range. Future researchers are recommended to obtain more respondents from a broader geographical region or such as a comparative comparison of several nations. Besides, this research can be expanded institutionally. For example, conducting studies in other private and public universities. Hence, it can acquire more precise and reliable results because of different organizational cultures.

In addition, future researchers are suggested to include more elements of transformational leadership and mediating variables such as inspirational motivation and individual consideration to analyse academic performance in Malaysian public and private universities. Besides, there are many different leadership styles that can be conducted for future study. For example, laissez-faire leadership and transactional leadership. Effective leadership styles are essential for the institution to achieve success. (Arokiasamy & Tat, 2019).

5.6 Conclusion

In summary, the study's results show that leaders' idealised influence and intellectual stimulation have a positive impact on academic performance in Malaysian public research institutions, however leaders' innovation does not. It would help organisations and human resource management have a better understanding of the variables affecting academic performance.

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APPENDICES

Appendix 1: Research Questionnaire

UNIVERSITI TUNKU ABDUL RAHMAN

FACULTY OF BUSINESS AND FINANCE

BACHELOR OF BUSINESS ADMINISTRATION (HONS)

FINAL YEAR PROJECT

QUESTIONAIRE SURVEY

TOPIC: LEADERS' IDEALISED INFLUENCE, INTELLECTUAL STIMULATION AND INNOVATION TOWARDS ACADEMICS PERFORMANCE IN MALAYSIAN PUBLIC RESEARCH UNIVERSITIES.

Dear respondents,

We are the undergraduate students of Bachelor Business Administration (HONS) from Faculty of Business and Finance at Universiti Tunku Abdul Rahman (UTAR). This study aims to examine the leaders' idealised influence, intellectual stimulation and innovation toward academic performance in Malaysian public research university. Your cooperation in answering those questions is greatly appreciated in helping our research.

There are **FIVE (5)** sections in this questionnaire. Section A is on demographics. Section B, C, D and E cover all the variables in this study. Please read the instructions carefully before answering the questions. Please answer ALL questions in ALL sections. Completion of this questionnaire will take you approximately 5 to 10 minutes.

Your participation in this study is entirely voluntary. There will be no disadvantage if you decide not to complete the attached anonymous questionnaire.

You can withdraw at any time without any penalty. You can refuse to answer any question at any time if you feel uncomfortable.

The information collected from you will be kept strictly private and confidential. All responses and findings will be used solely for academic purpose. Your assistance in completing this questionnaire is very much appreciated. Thank you for your participation.

If you decide to complete this attached anonymous questionnaire, this will be taken as you voluntarily agree and formal consent to participate in this study. Thank you very much for your cooperation and willingness to participate in this study. If you have any question regarding the questionnaires, you may contact any of us:

Name	**Student ID**	**Contact Number**
Ching Yi Nan	19ABB04117	011-10508279
Lee Ka Zen	18ABB07195	011-10978922
Lee Sook Qi	18ABB03819	011-16429532
Tang Yuan Qi	19ABB06863	017-5210327
Yap Zhi Yi	18ABB00169	012-3859381

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to: -
    - For assessment of any application to UTAR
    - For processing any benefits and services
    - For communication purposes
    - For advertorial and news
    - For general administration and record purposes
    - For enhancing the value of education
    - For educational and related purposes consequential to UTAR
    - For the purpose of our corporate governance

- For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan

2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.

2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

3. You may access and update your personal data by writing to us at leekazen1997@1utar.my.

Acknowledgment of Notice

☐ I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

☐ I disagree, my personal data will not be processed.

……

Name:

Date:

Section A: Demographic Profile

Please place a tick (✓) for each of the following

1. University:

   ☐ Universiti Malaya

   ☐ Universiti Kebangsaan Malaysia

   ☐ Universiti Sains Malaysia

   ☐ Universiti Putra Malaysia

   ☐ Universiti Teknologi Malaysia

2. Gender:

   ☐ Male

   ☐ Female

3. Age:

   ☐ Below 25 years old

   ☐ 25 to 34 years old

   ☐ 35 to 44 years old

   ☐ 45 to 54 years old

   ☐ 55 years old and above

4. Ethnic group:

   ☐ Chinese

   ☐ Malay

   ☐ Indian

   ☐ Other: _____

5. Highest Qualification:

   ☐ Diploma

   ☐ Bachelor's degree

   ☐ Master's degree

   ☐ PhD

6. Job Status:

   ☐ Permanent

   ☐ Contract

7. Academic Position (RESPONDENT):

   ☐ Lecturer

   ☐ Senior Lecturer

   ☐ Assistant Professor

   ☐ Associate Professor

   ☐ Professor

8. The position/post of your immediate superior: please indicate.

   ☐ Dean

   ☐ Deputy Dean

   ☐ Head of Department

   ☐ Head of program

   ☐ Cluster Head

   ☐ Unit Head

   ☐ Other: _____

9. Years of service in current institution

   ☐ Below 10 years

   ☐ 11 to 20 years

   ☐ 21 to 30 years

   ☐ 31 years and above

Section B: Idealised Influence (II)

Please circle the most appropriate option that best indicate your agreement level about the following statements.

Strongly Disagree (SD)	**Disagree (D)**	**Neutral (N)**	**Agree (A)**	**Strongly Agree (SA)**
1	2	3	4	5

No.	**Questions**	**SD**	**D**	**N**	**A**	**SA**
1.	My immediate leader has a clear understanding of we are doing	1	2	3	4	5
2.	My immediate leader paints an interesting picture of the future for our group	1	2	3	4	5
3.	My immediate leader is always seeking new opportunities for the organization	1	2	3	4	5
4.	My immediate leader inspires others with his/her plans for the future	1	2	3	4	5
5.	My immediate leader is able to get others committed to his/her dream	1	2	3	4	5
6.	My immediate leader talks to us about his/her most important values and beliefs	1	2	3	4	5
7.	My immediate leader emphasizes the importance of having a collective sense of mission	1	2	3	4	5
8.	My immediate leader specifies the importance of having a strong sense of purpose	1	2	3	4	5
9.	My immediate leader displays conviction in his/her ideals, beliefs, and values	1	2	3	4	5
10.	My immediate leader takes a stand on difficult issues	1	2	3	4	5

Section C: Intellectual Stimulation (IS)

Please circle the most appropriate option that best indicate your agreement level about the following statements.

Strongly Disagree (SD)	**Disagree (D)**	**Neutral (N)**	**Agree (A)**	**Strongly Agree (SA)**
1	2	3	4	5

No.	**Questions**	**SD**	**D**	**N**	**A**	**SA**
1.	My immediate leader re-examines critical assumptions for appropriateness	1	2	3	4	5
2.	My immediate leader seeks differing perspectives when solving problems	1	2	3	4	5
3.	My immediate leader gets others look at problems from many different angles	1	2	3	4	5
4.	My immediate leader suggests new ways of looking at how to complete assignments	1	2	3	4	5
5.	My immediate leader allows me to have my own judgment in solving problems	1	2	3	4	5
6.	My immediate leader challenges me to think of old problems in a new way	1	2	3	4	5
7.	My immediate leader encourages me to think out of ability (out of the box)	1	2	3	4	5
8.	My immediate leader encourages me to learn new things	1	2	3	4	5
9.	My immediate leader encourages me to be creative at work	1	2	3	4	5
10.	My immediate leader supports me whenever I do high risk task	1	2	3	4	5

Section D: Innovation (I)

Please circle the most appropriate option that best indicate your agreement level about the following statements.

Strongly Disagree (SD)	**Disagree (D)**	**Neutral (N)**	**Agree (A)**	**Strongly Agree (SA)**
1	2	3	4	5

No.	**Questions**	**SD**	**D**	**N**	**A**	**SA**
1.	My immediate leader develops new innovation based on new technology is a strategic priority in my organization	1	2	3	4	5
2.	My immediate leader emphasizes technological innovation activities improve teamwork among my colleague	1	2	3	4	5
3.	My immediate leaders support my competency (knowledge, skill and ability) to improves through technological innovation activities	1	2	3	4	5
4.	My immediate leader encourages self-discipline to improve through technological innovation activities	1	2	3	4	5
5.	My immediate leader motivates me to be involve in the technological innovation activities	1	2	3	4	5
6.	My immediate leader ensures my performance gets better through technological innovation activities	1	2	3	4	5
7.	My immediate leader focuses my competency (knowledge, skill and ability) through organizational innovation activities	1	2	3	4	5
8.	My immediate leader ensures my self-discipline will be improved through organizational innovation activities	1	2	3	4	5
9.	My immediate leader motivates me to be involve in the organizational innovation activities	1	2	3	4	5
10.	My immediate leader ensures my performance gets better through organizational innovation activities	1	2	3	4	5

Section E: Academics Performance (AP)

Please circle the most appropriate option that best indicate your agreement level about the following statements.

Strongly Disagree (SD)	**Disagree (D)**	**Neutral (N)**	**Agree (A)**	**Strongly Agree (SA)**
1	2	3	4	5

No.	**Questions**	**SD**	**D**	**N**	**A**	**SA**
1.	I am deft to work	1	2	3	4	5
2.	I am thoroughly working	1	2	3	4	5
3.	I am completing work according to company quality standards	1	2	3	4	5
4.	My quantity of work is according to the expected standard	1	2	3	4	5
5.	I am finishing the job faster than the specified time	1	2	3	4	5
6.	I am not delaying work	1	2	3	4	5
7.	I am having skills in the field of work	1	2	3	4	5
8.	I am able to use skills for the job	1	2	3	4	5
9.	I understand the task that must be done	1	2	3	4	5
10.	I can take responsibility for the result of work	1	2	3	4	5

Appendix 2: Result of Data Analysis

Appendix 2.1: Result of Descriptive Analysis

Appendix 2.1.1: Respondent Demographic Profile

Notes

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	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=University Gender Age Ethnicgroup HighestQualification JobStatus AcademicPositionRESPONDENT Thepositionpostofyourimmediatesuperiorpleaseindicate Yearsofserviceincurrentinstitution /NTILES=4 /STATISTICS=STDDEV VARIANCE RANGE MINIMUM MAXIMUM MEAN MEDIAN MODE /PIECHART PERCENT /ORDER=ANALYSIS.
Resources	Processor Time	00:00:01.17
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Statistics

		University	Gender	Age	Ethnic	Highest Qualification	Job Status
N	Valid	272	272	272	272	272	272
	Missing	0	0	0	0	0	0

Mean				3.09	1.77	3.30	1.10
Median				3.00	2.00	4.00	1.00
Mode				4	2	4	1
Std. Deviation				1.083	.621	.862	.295
Variance				1.173	.385	.743	.087
Range				4	3	3	1
Minimum				1	1	1	1
Maximum				5	4	4	2
Percentiles	25			3.00	1.00	3.00	1.00
	50			3.00	2.00	4.00	1.00
	75			4.00	2.00	4.00	1.00

Statistics

		Academic Position	The position/post of your immediate superior.	Years of service
N	Valid	272	272	272
	Missing	0	0	0
Mean		2.83	2.85	2.00
Median		3.00	2.50	2.00
Mode		2	1	2
Std. Deviation		1.421	1.919	.771
Variance		2.020	3.681	.594
Range		4	7	3
Minimum		1	1	1
Maximum		5	8	4
Percentiles	25	2.00	1.00	1.00
	50	3.00	2.50	2.00
	75	4.00	4.00	2.75

University

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Universiti Malaya	54	19.9	19.9	19.9
	Universiti Kebangsaan Malaysia	51	18.8	18.8	38.6
	Universiti Sains Malaysia	65	23.9	23.9	62.5
	Universiti Putra Malaysia	50	18.4	18.4	80.9
	Universiti Teknologi Malaysia	52	19.1	19.1	100.0
	Total	272	100.0	100.0	

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	122	44.9	44.9	44.9
	Female	150	55.1	55.1	100.0
	Total	272	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 25 years old	37	13.6	13.6	13.6
	25 to 34 years old	27	9.9	9.9	23.5
	35 to 44 years old	93	34.2	34.2	57.7
	45 to 54 years old	105	38.6	38.6	96.3
	55 years old and above	10	3.7	3.7	100.0
	Total	272	100.0	100.0	

Ethnic Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinese	90	33.1	33.1	33.1
	Malay	156	57.4	57.4	90.4
	Indian	25	9.2	9.2	99.6
	Others	1	0.4	0.4	100.0
	Total	272	100.0	100.0	

Highest Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	8	2.9	2.9	2.9
	Bachelor's degree	48	17.6	17.6	20.6
	Master's degree	70	25.7	25.7	46.3
	PhD	146	53.7	53.7	100.0
	Total	272	100.0	100.0	

Job Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Permanent	246	90.4	90.4	90.4
	Contract	26	9.6	9.6	100.0

	Total	272	100.0	100.0	

Academic Position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lecturer	62	22.8	22.8	22.8
	Senior Lecturer	64	23.5	23.5	46.3
	Assistant Professor	53	19.5	19.5	65.8
	Associate Professor	43	15.8	15.8	81.6
	Professor	50	18.4	18.4	100.0
	Total	272	100.0	100.0	

The Position/Post of Your Immediate Superior.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dean	86	31.6	31.6	31.6
	Deputy Dean	50	18.4	18.4	50.0
	Head of Department	64	23.5	23.5	73.5
	Head of Program	30	11.0	11.0	84.6
	Cluster Head	5	1.8	1.8	86.4
	Unit Head	20	7.4	7.4	93.8
	Others	17	6.2	6.2	100.0
	Total	272	100.0	100.0	

Years of Service in Current Institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 10 years	75	27.6	27.6	27.6
	11 to 20 years	129	47.4	47.4	75.0
	21 to 30 years	62	22.8	22.8	97.8
	31 years and above	6	2.2	2.2	100.0
	Total	272	100.0	100.0	

Appendix 2.1.2: Central Tendencies Measurement of Constructs

Notes

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	Cases Used	All non-missing data are used.
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Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.00

		Leaders' Idealised Influence	Leaders' Intellectual Stimulation	Leaders' Innovation	Academic Performance
N	Valid	272	272	272	272
	Missing	0	0	0	0
Mean		42.51	43.61	42.92	44.00
Standard Deviation		4.322	4.694	4.921	4.209

Scale: Leaders' Idealised Influence (II)

		N	Mean	Std. Deviation
II1	My immediate leader has a clear understanding of we are doing	272	4.35	.576
II2	My immediate leader paints an interesting picture of the future for our group	272	4.31	.538
II3	My immediate leader is always seeking new opportunities for the organization	272	4.31	.626
II4	My immediate leader inspires others with his/her plans for the future	272	4.33	.607

II5	My immediate leader is able to get others committed to his/her dream	272	4.31	.621
II6	My immediate leader talks to us about his/her most important values and beliefs	272	4.37	.653
II7	My immediate leader emphasizes the importance of having a collective sense of mission	272	4.39	.628
II8	My immediate leader specifies the importance of having a strong sense of purpose	272	4.38	.626
II9	My immediate leader displays conviction in his/her ideals, beliefs, and values	272	4.40	.606
II10	My immediate leader takes a stand on difficult issues	272	4.35	.718

Scale: Leaders' Intellectual Stimulation (IS)

		N	Mean	Std. Deviation
IS1	My immediate leader re-examines critical assumptions for appropriateness	272	4.43	.634
IS2	My immediate leader seeks differing perspectives when solving problems	272	4.38	.608
IS3	My immediate leader gets others look at problems from many different angles	272	4.39	.628
IS4	My immediate leader suggests new ways of looking at how to complete assignments	272	4.32	.652
IS5	My immediate leader allowed me to have my own judgment in solving problems	272	4.38	.671
IS6	My immediate leader challenged me to think of old problems in a new way	272	4.35	.681
IS7	My immediate leader encouraged me to think out of ability (out of the box)	272	4.37	.587
IS8	My immediate leader encouraged me to learn new things	272	4.36	.667
IS9	My immediate leader encouraged me to be creative at work	272	4.35	.660

IS10	My immediate leader supports me whenever I do high risk task	272	4.28	.747

Scale: Leaders' Innovation (I)

		N	Mean	Std. Deviation
I1	My immediate leader developing new innovation based on new technology is a strategic priority in my organization	272	4.42	.632
I2	My immediate leader emphasizes technological innovation activities improve teamwork among my colleague	272	4.32	.628
I3	My immediate leader supports my competency (knowledge, skill and ability) to improves through technological innovation activities	272	4.30	.674
I4	My immediate leader encourages self-discipline to improves through technological innovation activities	272	4.28	.622
I5	My immediate leader motivates me to be involve in the technological innovation activities	272	4.30	.657
I6	My immediate leader ensures my performance gets better through technological innovation activities	272	4.26	.679
I7	My immediate leader focuses my competency (knowledge, skill and ability) through organizational innovation activities	272	4.27	.696
I8	My immediate leader ensures my self-discipline improved through organizational innovation activities	272	4.25	.641
I9	My immediate leader motivates me to be involve in the organizational innovation activities	272	4.24	.676
I10	My immediate leader ensures my performance gets better through organizational innovation activities	272	4.27	.648

Scale: Academic Performance (AP)

		N	Mean	Std. Deviation
AP1	I am deft to work	272	4.37	.674
AP2	I am thoroughly working	272	4.35	.614
AP3	I am completing work according to company quality standards	272	4.42	.589
AP4	My quantity of work is according to the expected standard	272	4.41	.607
AP5	I am finishing the job faster than the specified time	272	4.36	.657
AP6	I am not delaying work	272	4.38	.608
AP7	I am having skills in the field of work	272	4.39	.586
AP8	I am able to use skills for the job	272	4.40	.580
AP9	I understand the task that must be done	272	4.48	.529
AP10	I can take responsibility for the result of work	272	4.43	.579

Appendix 2.2: Result of Scale Measurement

Appendix 2.2.1: Reliability Analysis (30 Respondents)

Scale: Leaders' Idealised Influence

Notes

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Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.882	.888	10

Inter-Item Correlation Matrix

	II1	II2	II3	II4	II5	II6	II7	II8	II9	II10
II1	1.000	.479	.462	.293	.558	.039	.512	.380	.549	.312
II2	.479	1.000	.548	.440	.459	.214	.608	.613	.481	.327
II3	.462	.548	1.000	.444	.473	.460	.588	.668	.690	.468
II4	.293	.440	.444	1.000	.423	.526	.102	.702	.293	.515

II5	.558	.459	.473	.423	1.000	.138	.320	.530	.420	.237
II6	.039	.214	.460	.526	.138	1.000	.057	.566	.441	.688
II7	.512	.608	.588	.102	.320	.057	1.000	.447	.494	.293
II8	.380	.613	.668	.702	.530	.566	.447	1.000	.423	.573
II9	.549	.481	.690	.293	.420	.441	.494	.423	1.000	.606
II10	.312	.327	.468	.515	.237	.688	.293	.573	.606	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
II1	My immediate leader has a clear understanding of we are doing	38.70	24.769	.540	.537	.876
II2	My immediate leader paints an interesting picture of the future for our group	38.67	24.506	.639	.578	.870
II3	My immediate leader is always seeking new opportunities for the organization	38.87	22.257	.760	.706	.859
II4	My immediate leader inspires others with his/her plans for the future	38.67	24.368	.601	.619	.872
II5	My immediate leader is able to get	38.87	23.637	.531	.491	.878

	others committed to his/her dream					
II6	My immediate leader talks to us about his/her most important values and beliefs	39.03	23.551	.500	.663	.882
II7	My immediate leader emphasizes the importance of having a collective sense of mission	38.80	25.062	.511	.626	.878
II8	My immediate leader specifies the importance of having a strong sense of purpose	38.87	22.740	.793	.774	.858
II9	My immediate leader displays conviction in his/her ideals, beliefs, and values	38.77	23.840	.703	.711	.866
II10	My immediate leader takes a stand on difficult issues	38.97	22.240	.640	.665	.870

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
43.13	28.878	5.374	10

Scale: Leaders' Intellectual Stimulation

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=IS1 IS2 IS3 IS4 IS5 IS6 IS7 IS8 IS9 IS10 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=SCALE CORR /SUMMARY=TOTAL.
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Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.859	.867	10

Inter-Item Correlation Matrix

	IS1	IS2	IS3	IS4	IS5	IS6	IS7	IS8	IS9	IS10
IS1	1.000	.070	.267	.289	.374	.385	.477	.244	.328	.414
IS2	.070	1.000	.436	.335	.272	.387	.641	.712	.559	.153
IS3	.267	.436	1.000	.214	.727	.368	.318	.412	.512	.351
IS4	.289	.335	.214	1.000	.150	.588	.214	.459	.417	.451
IS5	.374	.272	.727	.150	1.000	.490	.484	.360	.604	.255
IS6	.385	.387	.368	.588	.490	1.000	.504	.365	.757	.249
IS7	.477	.641	.318	.214	.484	.504	1.000	.476	.658	.191
IS8	.244	.712	.412	.459	.360	.365	.476	1.000	.466	.190
IS9	.328	.559	.512	.417	.604	.757	.658	.466	1.000	.154
IS10	.414	.153	.351	.451	.255	.249	.191	.190	.154	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IS1	My immediate leader re-examines critical assumptions for appropriateness	38.67	23.264	.465	.519	.854
IS2	My immediate leader seeks differing perspectives when solving problems	38.80	22.441	.571	.787	.845

IS3	My immediate leader gets others look at problems from many different angles	38.70	22.769	.596	.691	.844
IS4	My immediate leader suggests new ways of looking at how to complete assignments	38.83	21.868	.515	.599	.851
IS5	My immediate leader allowed me to have my own judgment in solving problems	38.77	21.702	.590	.724	.843
IS6	My immediate leader challenged me to think of old problems in a new way	38.80	21.752	.678	.694	.836
IS7	My immediate leader encouraged me to think out of ability (out of the box)	38.70	22.493	.642	.746	.840
IS8	My immediate leader encouraged me to learn new things	38.80	21.959	.600	.634	.843
IS9	My immediate leader encouraged me to be creative at work	38.93	21.789	.733	.746	.833
IS10	My immediate leader supports me whenever I do high risk task	38.90	22.576	.390	.406	.865

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
43.10	27.059	5.202	10

Scale: Leaders' Innovation

Notes

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Case Processing Summary

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	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.911	.913	10

Inter-Item Correlation Matrix

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.000	.464	.314	.485	.423	.485	.600	.673	.368	.375
I2	.464	1.000	.395	.366	.306	.314	.477	.263	.259	.357
I3	.314	.395	1.000	.748	.660	.480	.533	.478	.548	.627
I4	.485	.366	.748	1.000	.630	.656	.699	.759	.634	.669
I5	.423	.306	.660	.630	1.000	.630	.580	.676	.674	.369
I6	.485	.314	.480	.656	.630	1.000	.522	.581	.759	.486
I7	.600	.477	.533	.699	.580	.522	1.000	.755	.528	.220
I8	.673	.263	.478	.759	.676	.581	.755	1.000	.592	.346
I9	.368	.259	.548	.634	.674	.759	.528	.592	1.000	.330
I10	.375	.357	.627	.669	.369	.486	.220	.346	.330	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I1	My immediate leader developing new innovation based on new technology is a	38.17	29.454	.610	38.17	.907

	strategic priority in my organization					
I2	My immediate leader emphasizes technological innovation activities improve teamwork among my colleague	38.47	29.085	.452	38.47	.917
I3	My immediate leader supports my competency (knowledge, skill and ability) to improves through technological innovation activities	38.43	27.151	.716	38.43	.900
I4	My immediate leader encourage self-discipline to improves through technological innovation activities	38.57	26.599	.851	38.57	.892
I5	My immediate leader motivates me to be involve in the technological innovation activities	38.60	25.903	.736	38.60	.900
I6	My immediate leader ensures my performance gets better through technological innovation activities	38.57	27.495	.726	38.57	.900

I7	My immediate leader focuses my competency (knowledge, skill and ability) through organizational innovation activities	38.40	27.697	.729	38.40	.900
I8	My immediate leader ensures my self-discipline improved through organizational innovation activities	38.40	27.490	.758	38.40	.898
I9	My immediate leader motivates me to be involve in the organizational innovation activities	38.50	28.190	.700	38.50	.901
I10	My immediate leader ensures my performance gets better through organizational innovation activities	38.20	29.131	.551	38.20	.910

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
42.70	34.010	5.832	10

Scale: Academic Performance

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
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Case Processing Summary

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Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.866	.879	10

Inter-Item Correlation Matrix

	AP1	AP2	AP3	AP4	AP5	AP6	AP7	AP8	AP9	AP10
AP1	1.000	.531	.393	.130	.678	.502	.136	.316	.109	.308
AP2	.531	1.000	.400	.391	.413	.363	.312	.628	.125	.384
AP3	.393	.400	1.000	.484	.152	.501	.611	.455	.314	.457
AP4	.130	.391	.484	1.000	.133	.302	.699	.458	.331	.566
AP5	.678	.413	.152	.133	1.000	.589	.175	.446	.314	.491
AP6	.502	.363	.501	.302	.589	1.000	.343	.684	.459	.655
AP7	.136	.312	.611	.699	.175	.343	1.000	.549	.436	.658
AP8	.316	.628	.455	.458	.446	.684	.549	1.000	.438	.681
AP9	.109	.125	.314	.331	.314	.459	.436	.438	1.000	.386
AP10	.308	.384	.457	.566	.491	.655	.658	.681	.386	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AP1	I am deft to work	39.13	21.637	.532	.671	.864
AP2	I am thoroughly working	39.47	22.120	.582	.633	.855
AP3	I am completing work according to company quality standards	39.17	23.937	.587	.617	.853

AP4	My quantity of work is according to the expected standard	38.93	24.823	.518	.557	.858
AP5	I am finishing the job faster than the specified time	39.23	22.461	.579	.676	.854
AP6	I am not delaying work	39.23	22.599	.716	.742	.842
AP7	I am having skills in the field of work	39.07	24.202	.573	.727	.854
AP8	I am able to use skills for the job	39.10	23.610	.749	.755	.844
AP9	I understand the task that must be done	38.87	25.706	.427	.377	.864
AP10	I can take responsibility for the result of work	39.00	22.897	.720	.708	.843

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
43.47	28.464	5.335	10

Appendix 2.2.2: Reliability Analysis (272 Respondents)

Scale: Leaders' Idealised Influence (II)

Notes

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Case Processing Summary

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	Excluded[a]	0	.0
	Total	272	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.881	.882	10

Inter-Item Correlation Matrix

	II1	II2	II3	II4	II5	II6	II7	II8	II9	II10
II1	1.000	.516	.468	.369	.406	.311	.455	.304	.387	.436
II2	.516	1.000	.513	.443	.403	.351	.356	.356	.347	.375
II3	.468	.513	1.000	.530	.454	.405	.497	.470	.468	.449
II4	.369	.443	.530	1.000	.482	.372	.358	.427	.331	.355
II5	.406	.403	.454	.482	1.000	.477	.422	.441	.408	.317
II6	.311	.351	.405	.372	.477	1.000	.425	.437	.412	.486
II7	.455	.356	.497	.358	.422	.425	1.000	.508	.492	.471
II8	.304	.356	.470	.427	.441	.437	.508	1.000	.486	.539
II9	.387	.347	.468	.331	.408	.412	.492	.486	1.000	.522
II10	.436	.375	.449	.355	.317	.486	.471	.539	.522	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
II1	My immediate leader has a clear understanding of we are doing	39.16	15.730	.573	.411	.872
II2	My immediate leader paints an interesting picture of the future for our group	39.20	15.924	.574	.397	.873
II3	My immediate leader is always seeking new opportunities for the organization	39.20	15.003	.678	.488	.865
II4	My immediate leader inspires others with his/her plans for the future	39.18	15.553	.576	.391	.872
II5	My immediate leader is able to get others committed to his/her dream	39.20	15.370	.601	.418	.871
II6	My immediate leader talks to us about his/her most important values and beliefs	39.14	15.272	.584	.381	.872
II7	My immediate leader emphasizes the importance of having a collective sense of mission	39.12	15.174	.636	.434	.868
II8	My immediate leader specifies the importance of having a strong sense of purpose	39.13	15.183	.636	.456	.868
II9	My immediate leader displays	39.11	15.387	.615	.411	.869

	conviction in his/her ideals, beliefs, and values					
II10	My immediate leader takes a stand on difficult issues	39.16	14.697	.629	.472	.869

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
43.51	18.679	4.322	10

Scale: Leaders' Intellectual Stimulation (IS)

Notes

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	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=IS1 IS2 IS3 IS4 IS5 IS6 IS7 IS8 IS9 IS10 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=SCALE CORR /SUMMARY=TOTAL.
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Case Processing Summary

	N	%

Cases	Valid	272	100.0
	Excluded[a]	0	.0
	Total	272	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.895	.896	10

Inter-Item Correlation Matrix

	IS1	IS2	IS3	IS4	IS5	IS6	IS7	IS8	IS9	IS10
IS1	1.000	.430	.358	.458	.480	.413	.334	.384	.382	.394
IS2	.430	1.000	.503	.528	.449	.455	.515	.482	.481	.378
IS3	.358	.503	1.000	.467	.486	.389	.307	.404	.447	.304
IS4	.458	.528	.467	1.000	.456	.548	.396	.509	.457	.404
IS5	.480	.449	.486	.456	1.000	.593	.517	.522	.539	.404
IS6	.413	.455	.389	.548	.593	1.000	.577	.508	.500	.431
IS7	.334	.515	.307	.396	.517	.577	1.000	.522	.598	.427
IS8	.384	.482	.404	.509	.522	.508	.522	1.000	.635	.501
IS9	.382	.481	.447	.457	.539	.500	.598	.635	1.000	.522
IS10	.394	.378	.304	.404	.404	.431	.427	.501	.522	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
IS1	My immediate leader re-examines critical assumptions for appropriateness	39.18	18.606	.553	.343	.890
IS2	My immediate leader seeks differing perspectives when solving problems	39.23	18.297	.647	.467	.884
IS3	My immediate leader gets others look at problems	39.22	18.623	.556	.386	.890

	from many different angles					
IS4	My immediate leader suggests new ways of looking at how to complete assignments	39.29	18.009	.650	.470	.884
IS5	My immediate leader allowed me to have my own judgment in solving problems	39.24	17.701	.687	.515	.881
IS6	My immediate leader challenged me to think of old problems in a new way	39.27	17.666	.682	.522	.882
IS7	My immediate leader encouraged me to think out of ability (out of the box)	39.25	18.430	.647	.516	.884
IS8	My immediate leader encouraged me to learn new things	39.26	17.697	.694	.517	.881
IS9	My immediate leader encouraged me to be creative at work	39.26	17.662	.709	.561	.880
IS10	My immediate leader supports me whenever I do high risk task	39.33	17.846	.575	.365	.890

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
43.61	22.031	4.694	10

Scale: Leaders' Innovation

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=I1 I2 I3 I4 I5 I6 I7 I8 I9 I10 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=SCALE CORR /SUMMARY=TOTAL.
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Case Processing Summary

		N	%
Cases	Valid	272	100.0
	Excluded[a]	0	.0
	Total	272	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.914	.913	10

Inter-Item Correlation Matrix

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10
I1	1.000	.613	.499	.424	.489	.514	.498	.447	.512	.396

I2	.613	1.000	.593	.472	.442	.469	.506	.396	.418	.432
I3	.499	.593	1.000	.564	.513	.574	.613	.505	.559	.546
I4	.424	.472	.564	1.000	.564	.515	.482	.497	.435	.424
I5	.489	.442	.513	.564	1.000	.592	.454	.424	.551	.372
I6	.514	.469	.574	.515	.592	1.000	.591	.608	.567	.515
I7	.498	.506	.613	.482	.454	.591	1.000	.648	.613	.549
I8	.447	.396	.505	.497	.424	.608	.648	1.000	.530	.579
I9	.512	.418	.559	.435	.551	.567	.613	.530	1.000	.598
I10	.396	.432	.546	.424	.372	.515	.549	.579	.598	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I1	My immediate leader developing new innovation based on new technology is a strategic priority in my organization	38.50	20.162	.644	.489	.907
I2	My immediate leader emphasizes technological innovation activities improve teamwork among my colleague	38.60	20.234	.636	.509	.908
I3	My immediate leader supports my competency (knowledge, skill and ability) to improves through technological innovation activities	38.61	19.382	.738	.573	.902
I4	My immediate leader encourage self-discipline to improves through technological innovation activities	38.64	20.240	.642	.464	.907

I5	My immediate leader motivates me to be involve in the technological innovation activities	38.62	19.993	.646	.505	.907
I6	My immediate leader ensures my performance gets better through technological innovation activities	38.65	19.365	.735	.565	.902
I7	My immediate leader focuses my competency (knowledge, skill and ability) through organizational innovation activities	38.65	19.233	.737	.589	.902
I8	My immediate leader ensures my self-discipline improved through organizational innovation activities	38.66	19.885	.685	.552	.905
I9	My immediate leader motivates me to be involve in the organizational innovation activities	38.67	19.520	.710	.564	.903
I10	My immediate leader ensures my performance gets better through organizational innovation activities	38.64	20.031	.649	.496	.907

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
42.92	24.218	4.921	10

Scale: Academic Performance

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data for all variables in the procedure.
Syntax		RELIABILITY /VARIABLES=AP1 AP2 AP3 AP4 AP5 AP6 AP7 AP8 AP9 AP10 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=SCALE CORR /SUMMARY=TOTAL.
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	Elapsed Time	00:00:00.01

Case Processing Summary

		N	%
Cases	Valid	272	100.0
	Excluded[a]	0	.0
	Total	272	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.883	.884	10

Inter-Item Correlation Matrix

	AP1	AP2	AP3	AP4	AP5	AP6	AP7	AP8	AP9	AP10
AP1	1.000	.461	.413	.368	.438	.367	.221	.310	.277	.280
AP2	.461	1.000	.430	.371	.385	.299	.249	.347	.213	.326
AP3	.413	.430	1.000	.614	.475	.461	.530	.483	.433	.389
AP4	.368	.371	.614	1.000	.493	.511	.539	.493	.483	.372
AP5	.438	.385	.475	.493	1.000	.648	.538	.477	.439	.457
AP6	.367	.299	.461	.511	.648	1.000	.560	.432	.469	.366
AP7	.221	.249	.530	.539	.538	.560	1.000	.522	.506	.464
AP8	.310	.347	.483	.493	.477	.432	.522	1.000	.535	.568
AP9	.277	.213	.433	.483	.439	.469	.506	.535	1.000	.448
AP10	.280	.326	.389	.372	.457	.366	.464	.568	.448	1.000

Item-Total Statistics

		Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
AP1	I am deft to work	39.64	14.727	.490	.335	.881
AP2	I am thoroughly working	39.65	15.040	.483	.321	.881
AP3	I am completing work according to company quality standards	39.59	14.361	.674	.499	.867
AP4	My quantity of work is according to the expected standard	39.59	14.257	.674	.502	.867
AP5	I am finishing the job faster than the specified time	39.64	13.877	.696	.540	.865
AP6	I am not delaying work	39.62	14.332	.655	.516	.868
AP7	I am having skills in the field of work	39.61	14.475	.650	.517	.868
AP8	I am able to use skills for the job	39.60	14.476	.657	.492	.868
AP9	I understand the task that must be done	39.52	14.996	.595	.416	.873
AP10	I can take responsibility for the result of work	39.57	14.829	.572	.402	.874

Scale Statistics

Mean	Variance	Std. Deviation	N of Items
44.00	17.716	4.209	10

Appendix 2.3: Result of Inferential Analysis

Appendix 2.3.1: Pearson Correlation Coefficient Analysis

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics for each pair of variables are based on all the cases with valid data for that pair.
Syntax		CORRELATIONS /VARIABLES=AcademicPerformanceAVE Leaders'IdealizedAVE Leaders'IntellectualAVE Leaders'InnovationAVE /PRINT=TWOTAIL NOSIG FULL /MISSING=PAIRWISE.
Resources	Processor Time	00:00:00.03
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Correlations

		Academic Performance average	Leaders' Idealized Influence average	Leaders' Intellectual Stimulation average	Leaders' Innovation average
Academic Performance average	Pearson Correlation	1	.646**	.590**	.528**
	Sig. (2-tailed)		<.001	<.001	<.001

	N	272	272	272	272
Leaders' Idealized Influence average	Pearson Correlation	.646**	1	.731**	.763**
	Sig. (2-tailed)	<.001		<.001	<.001
	N	272	272	272	272
Leaders' Intellectual Stimulation average	Pearson Correlation	.590**	.731**	1	.780**
	Sig. (2-tailed)	<.001	<.001		<.001
	N	272	272	272	272
Leaders' Innovation average	Pearson Correlation	.528**	.763**	.780**	1
	Sig. (2-tailed)	<.001	<.001	<.001	
	N	272	272	272	272

**. Correlation is significant at the 0.01 level (2-tailed)

Appendix 2.3.2: Multiple Linear Regression Analysis

Notes

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Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS CI(95) R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT AcademicPerformanceAVE /METHOD=ENTER

		Leaders'IdealizedAVE Leaders'IntellectualAVE Leaders'InnovationAVE.
Resources	Processor Time	00:00:00.00
	Elapsed Time	00:00:00.03
	Memory Required	6224 bytes
	Additional Memory Required for Residual Plots	0 bytes

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Leaders' Innovation average, Leaders' Idealized Influence average, Leaders' Intellectual Stimulation average[b]	.	Enter

a. Dependent Variable: Academic Performance average

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.669[a]	.448	.442	.31441

a. Predictors: (Constant), Leaders' Innovation average, Leaders' Idealized Influence average, Leaders' Intellectual Stimulation average

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.517	3	7.172	72.555	<.001[b]
	Residual	26.493	268	.099		
	Total	48.010	271			

a. Dependent Variable: Academic Performance average

b. Predictors: (Constant), Leaders' Innovation average, Leaders' Idealized Influence average, Leaders' Intellectual Stimulation average

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.462	.201		7.285	<.001
	Leaders' Idealized Influence average	.476	.073	.488	6.553	<.001
	Leaders' Intellectual Stimulation average	.257	.069	.286	3.719	<.001
	Leaders' Innovation average	-.059	.069	-.068	-.842	.400

Coefficients[a]

Model		95.0% Confidence Interval for B	
		Lower Bound	Upper Bound
1	(Constant)	1.067	1.857
	Leaders' Idealized Influence average	.333	.618
	Leaders' Intellectual Stimulation average	.121	.393
	Leaders' Innovation average	-.195	.078

a. Dependent Variable: Academic Performance average