THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EDUCATION AMONG PUBLIC UNIVERSITIES STUDENTS DURING COVID-19 PANDEMIC

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VERIFICATION BY SUPERVISOR

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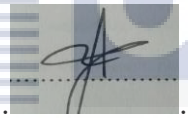
Signature : ……  ……..

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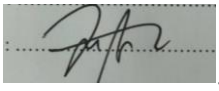
Signature : ……  …….

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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON EDUCATION AMIONG PUBLIC UNIVERSITIES STUDENTS DURING COVID-19 PANDEMIC.

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Report submitted in fulfilment of the requirement for the degree of Bachelor of Technology Management (Hons) in Innovation Technology

Faculty of Technology Management and Technopreneurship

Universiti Teknikal Malaysia Melaka

JANUARY 2023

DECLARATION OF ORIGINAL WORK

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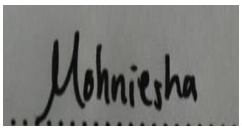
Signature : ……  ……

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DEDICATION

This research paper is dedicated to my beloved parents and to my siblings.

A special feeling of gratitude to my loving parents and caring siblings for being the sources of my inspiration and motivation.

I will always feel grateful and appreciate them for giving us strength and continually provide their endless love, support and guidance.

To my supervisor, friends and course mate who shared their knowledge and encouragement to finish this research.

ACKNOWLEDGMENT

I would like to begin by expressing my gratitude to my supervisor, Dr. Mohd Fazli Bin Mohd Sam, for his patient care, counsel, and support. I am thankful to have had the opportunity to study from Dr. and I feel I was taught by the greatest. Without Dr. Mohd Fazli's assistance and direction, this project could not be effectively accomplished.

In addition to expressing my gratitude to my supervisor, I would also want to thank UTeM for offering a learning atmosphere that is favourable to learning, competent learning materials, and insightful information that benefited me in doing my study. I would also want to use this opportunity to extend my heartfelt gratitude to Mr. Mukhiffun Bin Mukapit, my panel for this research, for providing a helpful suggestion and an honest assessment of this research.

In conclusion, I would want to express my gratitude to my parents, my siblings, and my friends for providing me with the support and motivation I needed to finish my study.

ABSTARCT

Today, many students use AI in education for academic purposes. As a result, traditional education has been forgotten owing to the presence of AI, which might result in a worldwide educational system shift. Meanwhile, this study is to examine the factors that affecting public universities students' intention to use AI on education. The purpose of this quantitative study was to use Technology Acceptance Model (TAM) and Technology Readiness (TR) as a proposed framework to examine the factors that could affecting public universities students' intention to use AI on education in enhancing student's life. There are four factors such as perceived ease of use, perceived usefulness, perceived innovativeness and perceived optimism in associated with public universities student's intention to use AI on education. A quantitative research design was chosen to investigate the research problem and associated questions. The total population for this study was 584576 public students as the research location was chosen at Malaysia and target respondent are especially students which from public universities. Besides that, the researcher used the minimum sample size for SEM and the minimum of 120 respondent was selected for this study. While for the data collection and analysis, the researcher will be using SmartPLS and SPSS to analyse. According to the conclusions of this study, there is a significant relationship between perceived innovativeness and perceived optimism with the public universities students' intention to use AI on education. For future reference, this study is thought to be useful for the students and education sector.

Keywords: AI, education, Covid-19 pandemic, TAM, TR

ABSTRAK

Hari ini, ramai pelajar menggunakan AI dalam pendidikan untuk tujuan akademik. Akibatnya, pendidikan tradisional telah dilupakan kerana kehadiran AI, yang mungkin mengakibatkan peralihan sistem pendidikan di seluruh dunia. Sementara itu, kajian ini adalah untuk mengkaji faktor-faktor yang mempengaruhi hasrat pelajar IPTA untuk menggunakan AI dalam pendidikan. Tujuan kajian kuantitatif ini adalah untuk menggunakan Model Penerimaan Teknologi (TAM) dan Kesediaan Teknologi (TR) sebagai rangka kerja yang dicadangkan untuk mengkaji faktor-faktor yang boleh mempengaruhi niat pelajar IPTA untuk menggunakan AI dalam pendidikan dalam meningkatkan kehidupan pelajar. Terdapat empat faktor seperti persepsi kemudahan penggunaan, persepsi kebergunaan, persepsi inovasi dan persepsi optimis yang dikaitkan dengan hasrat pelajar universiti awam untuk menggunakan AI dalam pendidikan. Reka bentuk kajian kuantitatif telah dipilih untuk menyiasat masalah kajian dan persoalan yang berkaitan. Jumlah populasi bagi kajian ini adalah seramai 584576 orang pelajar awam memandangkan lokasi kajian dipilih di Malaysia dan sasaran responden adalah terutamanya pelajar dari universiti awam. Selain itu, pengkaji menggunakan saiz sampel minimum untuk SEM dan sekurang-kurangnya 120 responden telah dipilih untuk kajian ini. Manakala bagi pengumpulan dan analisis data, pengkaji akan menggunakan Smartpls dan SPSS untuk menganalisis. Mengikut kesimpulan kajian ini, terdapat hubungan yang signifikan antara persepsi inovasi dan persepsi optimis dengan hasrat pelajar universiti awam untuk menggunakan AI dalam pendidikan. Untuk rujukan masa hadapan, kajian ini difikirkan berguna untuk pelajar dan sektor pendidikan.

Kata kunci: AI, pendidikan, pandemik Covid-19, TAM, TR

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LIST OF ABBREVIATIONS

UTeM	Universiti Teknikal Malaysia Melaka
SmartPLS	Smart Partial Least Square
SPSS	Statistical Package for Social Science
AI	Artificial Intelligence
TAM	Technology Acceptance Model
TR	Technology Readiness
PEOU	Perceived Ease of Use
PU	Perceived Usefulness
PI	Perceived Innovativeness
PO	Perceived Optimism
IU	Intention to Use

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CHAPTER ONE

INTRODUCTION

1.0 INTRODUCTION

This chapter will discuss the background of the research regarding the impact of Artificial Intelligence (AI) on education among Public Universities students in Malaysia during the Covid-19 pandemic. This chapter focuses on the problem statement, which explains the problem that was required and needs to be solved, followed by the research questions and objective. Then followed by the scope of the study, which refers to the aspects of this study being investigated, a limitation which will be discussed about the boundaries and constraints faced. Then, a significant study will be conducted to explain the timeline and implications. Lastly, the preparations process and conclusion of the study will be addressed.

1.1 BACKGROUND OF THE STUDY

Malcolm X once remarked that education is the passport to the future, for tomorrow belongs to those who prepare for it today. From this, we can see how education plays a significant role in everyone's life, even around the world. The COVID-19 pandemic had an impact on the global population's health, economics, education and even social life stated by Mahdy in 2020. According to World Health Organization, Coronavirus disease which known as (COVID-19) is an infectious disease caused by the SARS-COV-2 virus (Coronavirus, 2020). Due to the alarming spread and severity of the diseases, the World Health Organization (WHO) has declared that COVID-19 as a pandemic for the entire world on March 11, 2020, and has urged for immediate social distancing measures and maintain personal cleanliness to prevent the spread (Listings of WHO's Response to COVID-19, 2020).

Besides that, the global had experienced the fast spread of the Covid-19 pandemic due to in China, a wet market that sold dead and living exotic animals as China's food. These animals such as birds, snake, frog and rat were suspected of being carriers of the virus that is presently endangering human's health in unprecedented way (Lan et al., 2019). On December 31, 2019, (Archived: WHO Timeline - COVID-19, 2020), well World Health Organization known as (WHO) reported a case of pneumonia in Wuhan City, which in China, with 44 same cases was reported within only in four days. Then, Chinese authorities had identified a new type of coronavirus which related to the previous pneumonia cases. Since then, the virus spread rapidly plus outreached 282 cases of infection within the same month, therefore all activities including educational activities been controlled and reduced.

According to the pandemic prevention guidelines proposed by UNESCO (2020), in order to spread virus rapidly and continuously, countries around the world had begun global school closure. Besides that, to prevent the virus to spread from one person to another person, local government had also issued relevant policies, calling on people to cut the travelling and gathering with others (Che Mat et al., 2020). On January 25, 2020, the first Covid-19 case in Malaysia was been recorded, which involved by three Chinese citizens from Wuhan (Che Mat et al.,2020) and had continued spread the virus swiftly on every week (Rampal & Liew, 2020), afterwards surging to the second wave with a total number of 8266 cases (DG of Health, 2020).

The situation changed as the Covid-19 cases expanded beyond imported cases to include members of the local population (Izhar et al., 2021). Furthermore, numerous cases indicated Covid-19's propensity to infect people who had no direct contact with the Wuhan market, where the virus originated (Lan et al., 2019; Malaysian Ministry of Health, 2020), thus it caused the restriction of all physical activities, which had included education. The field of Artificial Intelligence (AI) has formally entered the domain of higher education, both theoretically and in early practice (Muhammad Tanveer et al, 2020).

According to Global Market Insights, the size of the AI in the education market surpassed one billion dollars in 2020 and is anticipated to increase at a compound annual rate of more than forty percent between 2021 and 2027. Due to all this hype, there is inevitably a great lot of ignorance (as well as anxiety) over what AI Is and what effect it may have on higher education. Artificial intelligence (AI) which may be defined as the development of computer systems that employ reasoning, logic plus other human attributed to execute tasks autonomously, provides businesses with the means by which they can automate and simplify their processes and workflows.

Total 8 public universities in Malaysia offers AI degrees and course which are Universiti Malaya (UM), Universiti Kebangsaan Malaysia (UKM), Universiti Pendidikan Sultan Iris (UPSI), Universiti Pertahanan National Malaysia (UPNM), Universiti Putra Malaysia (UPM), Universiti Saints Malaysia (USM), Universiti Teknikal Malaysia Melaka (UteM), and Universiti Utara Malaysia (UUM). According to Ministry of Higher Education, there are 20 of Public university, 36 of Polytechnics, 104 of community college, and last but not least, there are 434 of IPTS which know as Private Higher Educational Institutions.

Figures 1.1 show that number of Higher Education Institute in Malaysia

Number of academic staff and student in public university

	Academic Staff	Student
Universiti Islam Antarabangsa Malaysia (UIAM)	1,979	29,254
Universiti Kebangsaan Malaysia (UKM)	2,094	30,844
Universiti Malaya (UM)	2,045	35,885
Universiti Malaysia Kelantan (UMK)	521	11,058
Universiti Malaysia Pahang (UMP)	764	13,607
Universiti Malaysia Perlis (UNIMAP)	1,109	13,176
Universiti Malaysia Sabah (UMS)	1,042	17,498
Universiti Malaysia Sarawak (UNIMAS)	830	16,551
Universiti Malaysia Terengganu (UMT)	668	10,323
Universiti Pendidikan Sultan Idris (UPSI)	872	26,554
Universiti Pertahanan Nasional Malaysia (UPNM)	382	4,972
Universiti Putra Malaysia (UPM)	1,837	28,587
Universiti Sains Islam Malaysia (USIM)	785	13,608
Universiti Sains Malaysia (USM)	2,064	31,674
Universiti Sultan Zainal Abidin (UniSZA)	711	12,901
Universiti Teknikal Malaysia Melaka (UTeM)	866	14,937
Universiti Teknologi Malaysia (UTM)	1,697	32,900
Universiti Teknologi MARA (UiTM)	8,904	188,701
Universiti Tun Hussein Onn Malaysia (UTHM)	1,092	18,581
Universiti Utara Malaysia (UUM)	1,246	32,965

Figure 1.2 shows that number of academic staff and student in public universities in the year of 2022.

Source: Ministry of Higher Education Malaysia

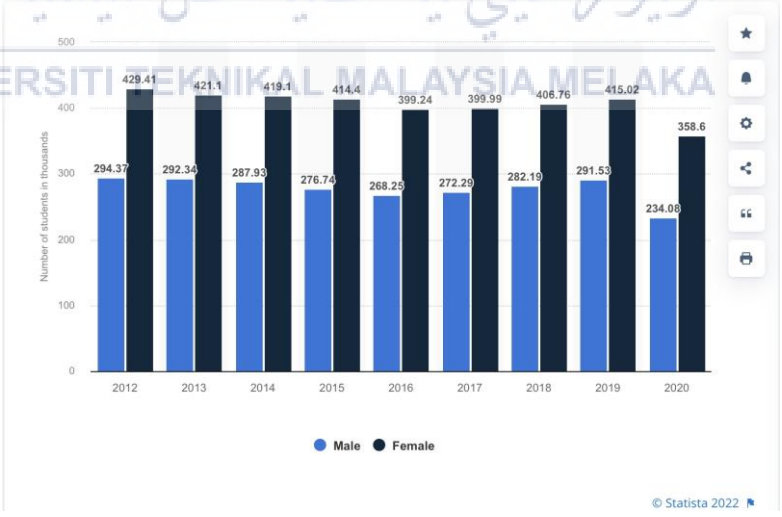


Figure 1.3 show the number of students enrolled in public higher education institutions in Malaysia from 2012 to 2020, by gender.

According to Statista published by R.Hirschmann, Jan 13,2022, There were around 234.08 thousand male students and 358.6 thousand female students enrolled in public higher education institutions in the year 2020. Although there has been a gradual decline in the number of male students enrolled since 2016, there were still a much greater number of female students than male students in 2019. This paralleled the global trend of more women than males enrolling in higher education programmes all around the globe.

1.2 Problem Statement

According to Bahar Moni et al., in 2021, the world is recently facing a pandemic due to the swiftly spread of coronavirus disease 2019 known as COVID-19, and it is caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), (Esposito & Principi, 2020). Malaysia has recorded 334,156 confirmed cases, with 1,238 fatalities and a mortality rate of 0.4 per cent (Worldometer Coronavirus Statistics). According to Sundarasen S et al. in 2021 mentioned that even though the case fatality rate in Malaysia was modest when compared to other developed countries such as the United States, the United Kingdom and Canada, many were concerned and worried that the virus may spread quickly via direct or indirect contact.

On January 25, 2020, the first case of COVID-19 was discovered in Malaysia (Elengoe, May 31, 2020). A spike in cases led the Malaysian government to implement measures such as physical separation rules, social gathering restrictions, appropriate mask use, Movement Control Order (MCO), Conditional Movement Control Order (CMCO), extended movement control orders and border closures between mid-March and August-2020 in an effort to contain the disease's spread (Shah AUM, Safri SNA, Thevadas R, in 2020). According to Hamrouni et al., in 202, every element of our existence, from geopolitics to health care to culture events and even education was impacted by the Covid -19 pandemic. COVID-19 is the biggest obstacle that these national education systems have ever met.

The epidemic has affected the study of almost one billion pupils and students in 129 nations throughout the globe, according to the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Most educational institutions

throughout the world have taken the initiative to stop in-school teaching and learning in order to stop the spread of the virus, according to Dhawan in 2020.

Discontinue the school and universities as became one of the safety measurements to stop the virus spreading between students and teachers. According to (United Nations Educational, Scientific and Cultural Organization [UNESCO], 2020a), Mexico, Argentina, Chile, Paraguay, Brazil, South Sudan, Uganda, Somalia, Saudi Arabia, India, Myanmar, Cambodia and some other countries are continue closing schools due to COVID-19 until October 2020.

Accordingly, the Malaysian government has asked all educational institutions to shut on March 18th, 2020, until additional instructions (National Security Council, 2020). Numerous universities and colleges all around the globe have either postponed or cancelled all campus events in an effort to reduce the number of meetings and, as a result, lower the risk of viral transmission (Sharon, 2020).On the other hand, these policies have greater repercussions in terms of the economy, medical care, and social issues for both the undergraduate and postgraduate populations (Nicola M, 2020).

As a consequence of this, the only method that is both secure and feasible for carrying out activities related to online learning (Bozkurt, 2020) and teaching is known as online distance learning (ODL), (Bogdandy et al., 2020) which is more often abbreviated as e-learning (Baskaran, 2018). According to Yusuf in 2020, stated that online education is the most effective technique for everyone involved, including students and teachers, particularly throughout the extended MCO stages.

It's difficult to embrace or adjust to online learning in the face of a sudden epidemic like COVID-19 without running into several issues and hurdles, according to Al-Kumaim et al., 2021. Recent reports from researchers indicate that university students encounter a variety of challenges while attempting to carry out ODL activities utilising various ICT platforms stated by Al-Baadani & Abbas, in 2020. Al-Kumaim et al., in 2021, and Education: From School Closure to Recovery in 2022, marked that the challenges will be or my include issue like the unfamiliarity with the information technology platforms used, stress lack of experience using and dealing with online learning platforms such as online -learning and e-learning in terms of students' engagement and participation.

According to UNESCO, the number of students enrolled in tertiary institutions is expected to drop by around 3.5 percent, which would lead to a decrease of 7.9 million students overall. Next on the list is pre-primary education, where it is predicted that enrolments have dropped by 2.8 percent, which is equivalent to a loss of 5 million children (Daniel, 2020). According to (Dhawan, 2020), it is anticipated that elementary and secondary educational institutions would be considerably less impacted.

In a nutshell, university students are facing difficulties by the current pandemic where they could not get to access any source of face to face educations other than online learning and e-learning. Thus, involvement and implementation of AI into education have also been giving a good impact like time-saving nature and make problem solving more efficient as some university students still faces negative impact like human interaction decreases and laziness in the students due to limitation in reaching to AI systems. Traditional education has been forgotten due to the involvement of AI which could lead to an educational system changement globally. Meanwhile, there is a requirement to study on the factors that affecting public universities student's intention to use AI on education due to adopt this new and advanced Artificial Intelligence technology in Malaysia's education systems in future.

1.3 Research Questions

The research question is the essential process where it provides the focus and framework for the direction of the study. The research question is fundamentally the key component as it can guide and provide a concise plus more understanding guideline of this study. The research question is stated as below:

1. How can AI technology help in enhancing students' life by applied in education?
2. What are the factors that affecting public universities students' intention to use AI on education?
3. Which factor is the best fir for public universities students to select and use AI on education?

1.4 Research Objectives

The objective defined the impact of AI on education among public universities students. As a result, a well-reviewed report was created to keep the study focused and on track. The following are the three-research objective:

1. To investigate the ways of AI in application on education help in enhancing public universities students' life.
2. To examine the factors that affecting public universities student's intention to use AI on education during Covid-19 pandemic.
3. To analyse the best fit factor for public universities students to select and use AI on education during Covid-19 pandemic.

1.5 Scope of the study

The focus of this analysis is to propose measures to enhance the implementation of Artificial Intelligence learning by studying the factors that affecting public universities student's intention to use AI on education during Covid-19 pandemic. Besides that, even though, Artificial Intelligence was introduced to all education systems but this research focuses on all public university in Malaysia which known as IPTA. This is because it will make easy for the researcher to get or gather some data and information regarding about total public university students in Malaysia on education statistic from Department of Statistics Malaysia Official Portal.

1.6 Limitation

In this study, there is various type of constraints or limitations while doing this research. First, in this research, it is a bit challenging and tough for the researcher in finding resources such as information and data regarding the impact of Artificial intelligence on education in public universities students during Covid 19 pandemic. This is because lately, artificial intelligence in education is gaining a lot of attention from secondary students while receiving little attention, especially from universities students. Besides that, there aren't many researchers doing this, particularly research during the Covid 19 pandemic. As a result, there is a lack of journals with an article or even news that can be used as research references during this study.

Next, in this study, researcher will collect data using quantitative methods like questionnaires. Thus, the researchers will face some constraints during conducting this study, such as restricted access to respondents. This is because the researcher can only perform surveys with universities students in Malaysia as the scope of research focuses on the Public universities in Malaysia. Lastly, another constraint while doing this research is the geographic scope of this study. This is because the researcher can conduct surveys only in Malaysia.

1.7 Significant of the study

The proposed model in the study will provide a significant and effective way of factor that will affecting public universities students to use Artificial intelligence in their education during the Covid 19 pandemic, as they can learn a new subject or course via Artificial Intelligence-based applications to boost or increase their knowledge and their upcoming exam grades or marks. This research finding will benefit to universities students that can allow them to know, understand and appreciate the usage of AI on education amidst Covid 19 pandemic.

1.8 Summary

This chapter provides the background of the study which introduces the impact of Artificial Intelligence on education among public universities in Malaysia during the Covid-19 pandemic. Followed by the problem statement which defines the need of this research. Meanwhile, three research questions and three research objectives will be discussed further. The scope of research focuses on public universities in Malaysia and universities students. The limitation at the same time, it took quite some time to gather the data and information regarding this research while completing the report. The significance of the study is to understand the necessity of digital transformation in the education system. Artificial Intelligence can help universities students to achieve their goals by streamlining the education process by providing students with access to the right subject or course that is suitable for them, improving with teachers and freeing up more time for students to focus on other aspects of life. Artificial Intelligence plays a vital impact in the university's students' education journey.

1.9 Synopsis

In the study of Chapter 1, the researcher will be explained the problem statement where higher education in Malaysia affected due to Covid-19 by lockdown and Malaysia's universities closed. Involvement and implementation of Artificial Intelligence into education had given a good and successful impact to students as some students still faces negative impact due to limitation in reaching to Artificial intelligence systems. Artificial Intelligence did give impact to students via education such as self-paced learning opportunities to students. This is because universities students spend a lot of time and prefer to use their smartphones or tablets. Artificial Intelligence-based applications allow them to study during their free leisure time, just at least spend 20 to 25 minutes on a task. Thus, it is compulsory to have an understanding and implement Artificial Intelligence learning by examine the factors that affecting public universities student's intention to use AI on education especially during the COVID 19 pandemic.

In Chapter 2 will be discussed about the literature review that related to the research questions. There is not much academic research completed in this field on interest as it is fairly new adoption. The literature review has broken down into sections where first describe about the Covid-19 outbreak globally, Covid -19 outbreak in Malaysia, Artificial intelligence technology, Artificial Intelligence in education, Technology Acceptance Model, and Technology Readiness, Research Framework and Proposed Framework. A new proposed framework has constructed with different variables and the hypothesis of this study are proposed.

In chapter 3 will be covered more detailed to which research method to be used in meetings this objective. The researcher is then using quantitative research by collecting data numerically and applying statistical criteria to the measures. Surveys and questionnaires will be conducting as for data collection. Explanatory research for research design will be used in conducting the study as it outlines the procedures and show this relationship of independents variables to dependent variable. Data collection will be collected through primary and secondary data. Research location will be set in Malaysia where it will be easy for research to find data. A Cronbach Alpha in the reliability is applied as to measures the alpha coefficient in this research.

In chapter 4, the researcher will be conducting data analysis in respective to the impact of Artificial intelligence on education among public universities students during Covid–19 pandemics. All of the data were collected as to make further analyses and will be using SmartPLS 4 and statistical package for social sciences (SPSS) version 28 for analyses purpose. There are a few of data analyses to be conducted such as pilot test analysis result, analysis of respondent's demographic information, descriptive analysis and Path coefficient, multiple regression analysis and hypothesis testing.

Lastly, in chapter 5, will be summarized on all the findings in order to meet with the research objectives. Implication of research will be discuses in details as to provide an insight of the research. Besides, contribution for research and limitation will also be explained by the researcher in regard that influenced the research findings. Recommendation for the future research and conclusion will be suggested and a sum of conclusion will be drawn from the research.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

This chapter will present on a description of Artificial Intelligence on education among Public University in Malaysia during Covid-19 pandemic. The framework will be analysed, along with the factors that affecting public universities students' intention to use Artificial Intelligence on education. Optimism, innovativeness, perceived usefulness and perceived ease of use are components of the research framework. The researchers developed a conceptual structure to correlate the independent variables and dependent variables. As a result, in order to achieve and discover the most crucial relationship between the dependent variables, the researchers also developed hypotheses based on variables that were independent of the conceptual context. As a consequence, the literature review has been divided into many parts, the first of which describes the Covid-19, Covid-19 outbreak in Malaysia, Education system in Malaysia, Universities in Malaysia, Artificial Intelligence, Technology Acceptance Model and Technology Readiness Index. In a nutshell, in the last segment of this chapter, a rundown of Chapter 2 will be discussed.

2.1 COVID-19

According to Almutairi et al., in 2021 the human body is exposed to a range of infectious microorganisms, such as viruses, bacteria, fungus, protozoa, and helminths, which cause tissue damage via diverse ways. Viruses are special among these sorts of infectious organisms in that they can influence the host-cell machinery in a unique manner and continually adapt to live and flourish in every species. The causal agent is a new coronavirus, according to whole-genome sequencing studies. As a result, this virus represents the coronavirus family's eighth human infector, mentioned by Wu et al., in 2020.

According to Johnson NP et al in 2002 ; Kain T et al in 2019 ; Simonsen I in 1998 and Viboud C in 2016, stated that on March 11, 2020, the WHO officially declared COVID-19 to be a pandemic following 1918 Spanish flu (H1N1), 1957 Asian flu (H2N2), 1968 Hong Kong flu (H3N2), and 2009 Pandemic flu (H1N1), which caused an estimated 50 million, 1.5 million, 1 million, and 300,000 human fatalities.

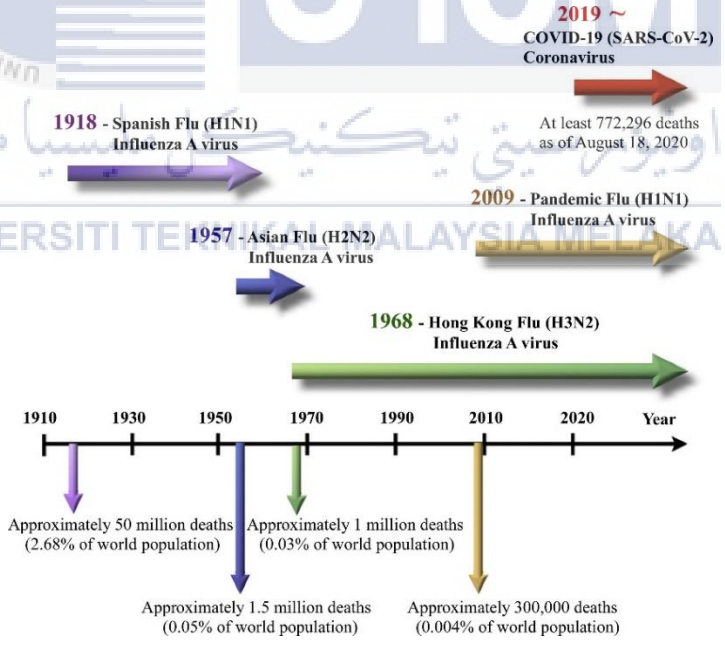


Figure 2.1 depicts since 1918, a timeline of 5 pandemic have occurred, each with its own set of worldwide spreading viruses.

SARS-CoV-2 is mostly transmitted from person to person through family members, including relatives and acquaintances who have had close contact with patients or incubating carriers (Guo et al., in 2020). According to Guan WJ et al., observed in 2019 that among non-residents of Wuhan, 31.3 percent of patients had recently been to Wuhan and 72.3 percent had contact with persons from Wuhan.COVID-19 was transmitted between healthcare personnel in 3.8 percent of COVID-19 patients, according to a report released by China's National Health Commission on February 14, 2020 (Guo et al., in 2020).

SARS-CoV and MERS-CoV, on the other hand, are said to spread mostly by nosocomial transmission. In 33–42 percent of SARS cases, healthcare personnel were infected, while transmission between patients was showed 62 to 79 percent and it was the most prevalent route of infection in MERS-CoV cases declared by Chowell G et al., in 2015 and by Kang CK IN et al., 2015. According to Guo et al., in 2020, the major route of SARS-CoV-2 transmission was thought to be direct interaction with intermediate host animals or ingestion of wild animals. SARS-source(s) CoV-2's and transmission routine(s) are yet unknown.

2.1.1 COVID-19 outbreak situation Globally

According to Huang et al., in 2019 stated that, at late December of 2019, an epidemic of a strange pneumonia marked by fever, dry cough, and exhaustion, with sometimes gastrointestinal symptoms eventuate in a seafood wholesale wet market which known as the Huanan Seafood Wholesale Market, in Wuhan, Hubei, China. The first epidemic was detected at the market in December 2019 and impacted roughly 66 percent of the personnel there. The market was shut down on January 1, 2020, following the publication of an epidemiologic warning by the local health authority on December 31, 2019. However, in the next month which in January, thousands of citizens across China, including numerous provinces such as in Hubei, Zhejiang, Guangdong, Henan plus Hunan, and in cities like Beijing with Shanghai were assaulted by the uncontrolled spreading of the illness, proclaimed by World Health Organization Novel Coronavirus in 2019.

According to WHO, in 2020, Thailand was reported the first COVID-19 case outside of China on January 13 in 2020 which two days after China reported its first

fatality on January 11 in 2020. As a result of this instance, airports in Thailand, Hong Kong, South Korea, and Singapore have implemented more strict screening procedures for travellers with fever announced by Secon et al., 2020 in research. Secon et al., in 2020 also mentioned that the first case was reported in the United States on January 20 in 2020, in a person who had previously returned from Wuhan, China. On January 31, 2020, the US designated nCoV a Public Health Emergency, one day after the WHO named the epidemic as a Global Public Health Emergency (Secon et al., 2020; WHO, 2020c; Worldometer, 2020).

According to Worldometer in 2020; Department of Health and Social Care in 2020; Sofiychuk in 2020, The first instances were revealed and announced in Sweden and Spain on 31 of January in 2020, while Russia and the United Kingdom each announced two cases correspondingly. SARS-CoV-2 was still spreading over the world, eventually. As of April 11, 2020, Table 1 lists the top ten countries with the greatest number of COVID-19 instance or cases were announced by Worldometer in 2020. Besides that, many sources provide the most recent information on the number of COVID-19 cases across the globe.

Five country have overtaken the number of cases in China, where the viral covid-19 and pandemic started. Many factors have impacted the rise in number of instances, such as population and the size of the respective nations mentioned by Shah et al., in 2020. Shah et al., in 2020 stated that it would not be reasonable to estimate the capabilities of the authorities in treating disease instances solely on the number of total fatalities and total recovered cases alone, given the groupings of infected patients are different in each nation. As noted previously, those categories of persons with a damaged immune system, the elderly, and those with a history of other disease are more vulnerable to COVID-19, including death declared by Lu et al., in 2020; Carlos et al., in 2020; Xia et al., in 2020.

Another element that might help this virus live and propagate more quickly is a chilly climate. As a result, nations with a larger senior population and colder temperatures have seen an increase in mortality and a decrease in healing (Shah et al., 2020). Shah et al., in 2020 also mentioned that Malaysia has reported a total of 4346 cases and recovered a total of 1830 till April 11, 2020. For example, Malaysia is a tropical nation where temperatures may reach up to 40 degrees Celsius, and this

environment may assist to prevent the development of this deadly illness. In a nutshell, table 1 was received, which there were 1,699,632 of cases worldwide, with 102,734 of fatalities and 376,330 of recoveries.

No.	Country	Total Cases	Total Deaths	Total Recovered
1	USA	502,876	80,747	27,340
2	Spain	158,273	16,081	55,668
3	Italy	147,577	18,849	30,455
4	Germany	122,171	2736	24,932
5	France	124,869	13,195	77,525
6	China	82,003	3342	35,465
7	Iran	73,758	4232	77,525
8	UK	73,758	8958	35,465
9	Turkey	47,209	1006	2423
10	Belgium	26,667	3019	5568
34	Malaysia	4346	70	1830

Table 2.1 show the top 10 countries with the greatest numbers of Covid-19 cases on 11th of April in 2020.

Source: Worldometer in 2020

2.1.2 COVID-19 outbreak of situation in Malaysia.

According study conducted by Abdullah, in 2020 stated that the danger of COVID-19 became more evident in Malaysia when, on 23rd of January in 2020, Singapore announced its first imported COVID-19 case from Wuhan, China, which was also the republic's first positive case. In accordance with eight close contacts were detected and found in Johor, Malaysia, as a result of the first instance.

Besides that, Abdullah (2020) mentioned that on the 25th of January in 2020, Malaysia reported their first COVID-19-positive instances, which was less than 48 hours after Singapore reported their first case of the Covid-19 plus this was a case that had been brought into our country from Wuhan in China. From the initial instance, a total of eight positives were recorded in only six days. There were no domestically produced instances in any of these situations declared by Abdullah in 2020. COVID-19 was first detected in Malaysia on February 3, 2020, when a person who had previously been to a neighbouring nation for a business conference was found to be infected (Ahmad, 2020).

As of March 31, in 2020, reported cases in Malaysia may be separated into three waves. By February 27 in 2020, the first wave had been effectively treated, with all 22 previously recorded cases with patients being released from the hospital. The majority of cases was reported in the initial wave were Chinese patients and their connections. Only two instances were determined to have been transmitted locally (Abdullah, 2020). For the first wave of COVID-19 cases in Malaysia, the numbers are shown in Table 2 (Shah et al., in 2020).

Date	Chinese citizen	Malaysian	Other	Total recovered
Jan 25 - Feb 27 in 2020	15	7	1	22

Table 2.2 illustrate the first wave of Covid-19 positive case in Malaysia, based on nationality, according to Abdullah in 2020.

The Ministry of Health (MOH) in Malaysia has documented 5,251 COVID-19 cases, including 86 fatalities and 2,967 instances of recovery, as of April 17th, 2020. To present, the state of Selangor in Malaysia has experienced the largest number of confirmed COVID-19 cases (1,338) in 17th of April in 2020. Because of the huge number of positive cases identified in certain locations, the government designated 27 districts as red zones, including Lembah Pantai which was 592 cases, Hulu Langat had 446 cases, Petaling Jaya had 366 cases, Seremban had 288 cases, Kuching had 255 cases and Kluang had 221 (Minister of Health websites).

According to Barker Anne in March 19 (2020), the number of reported COVID-19 cases climbed steadily in March 2020 until a religious gathering in Sri Petaling, Kuala Lumpur, which resulted in an exponential increase in cases. Malaysia has the greatest number of COVID-19 positive patients in South East Asia a few weeks following the occurrence. The religious mass gathering lasted four days and drew 16,000 individuals, including 1,500 visitors from outside Malaysia mentioned by Barker Anne in March 19 of 2020.

COVID-19 was disseminated to other Malaysian states as well as neighbouring nations including Brunei, Cambodia, Indonesia, Thailand, Singapore, the Philippines, and Vietnam stated by Chie Le in 17th March 2020 and Tashny Sukumaran on 21st March 2020. On March 16, 2020, the number of positive cases surpassed 553, prompting Malaysia's Prime Minister to issue a Movement Control Order (MCO). To slow and prevent the spread of COVID-19, social distancing was to be used for 14 days which from 18th March till 31st March 2020 from John Bunyan and Soo Wern Jun in Malaymail.

Since 18th March 2020, the government barred citizens from going to neighbouring states or COVID-19 impacted regions. Only 1 individual from 1 household could leave the home and go out to acquire needed supplies ((Elengoe, March 31, 2020). The government enacted a “Enhanced Movement Controlled Order (EMCO)” for select locations in Kuala Lumpur which was in Kluang, Hulu Langat, Menara City One, Malayan Mansion and Selangor Mansion, enforced till 28th April 2020 (Azman F, 2020).

According to Bernama news, people who were under the EMCO were not authorised to leave their residences (the government supplied food to the affected residents), receive guests, or access COVID-19 impacted regions. All the occupants had to be checked for COVID-19 by health authorities. The MOH found a new cluster of COVID-19 cases in Sendayan, Negeri Sembilan, on the 14th April 2020 where 39 persons were diagnosed as COVID-19 positive.

According to Ministry of Health in Malaysia, too far, the MOH has detected 29 viral clusters in Malaysia. The MOH reported 69 COVID-19 positive cases on April 17th, 2020, which was the first time the number of cases was fewer than 100 since March 14th, 2020.

2.2 Artificial Intelligence

In many respects, today's world resembles Lewis Carroll's fictional Wonderland, which the British mathematician detailed in his best-selling books. Artificial intelligence (AI) is the capacity of a system to understand external input properly, to learn from such data, and to apply those learnings to accomplish specified objectives and tasks via flexible adaptation. Image recognition, smart speakers, and self-driving automobiles are all examples of this (Kaplan et al., in 2019).

The study conducted by McCarthy in 2007 offers the definition of artificial intelligence as the science and engineering of constructing intelligent devices, particularly clever computer programmes. McCarthy (2007) also mentioned that it is connected to the same job of utilising computers to comprehend human intellect; however, artificial intelligence does not have to constrain itself to approaches that are biologically observable. Because of the key forces at play, it may be difficult for experts in a particular field to provide a concise explanation of artificial intelligence (AI). The study conducted by Nix et al. in 2009, a number of cutting-edge AI technologies have been included into general software programmes that aren't classified as AI. These technologies include natural language processing, image recognition, and voice recognition.

There are many academics and professionals from various domains like as neurology, psychology, and linguistics that are constantly contributing to the subject

of artificial intelligence by bringing their unique perspectives, skills, and terminology to the table (Kashveenjit Kaur, 2021). According to Russell (2018), AI was used to characterise robots or computers that mimicked "cognitive" capabilities associated with the human mind, such as learning and problem solving. (Russell in 2018, stated that many scholars have sought to define AI. The study of intelligence refers to the capacity to perceive one's environment and to maximise one's chances of achieving a certain objective.

An AI system may be characterised as one that has the capacity to understand and learn from inputted data and then use what it has learnt in order to accomplish a certain goal (Kaplan et al., 2020). The area of artificial intelligence spans a broad variety of disciplines, including computer science, psychology, linguistics, neurology, philosophy and mathematics, despite the lack of a commonly recognised definition of the concept. According to Kearney et al., in 2018, artificial intelligence is therefore a multidisciplinary science with a large application spectrum. AI has shown its capacity to aid learners in discovering knowledge gaps and obtaining specialised assistance, relieving instructors from mundane labour and enabling them to react more effectively to assignments (Jarrahi., 2018) and "learner bots" (Dubey et al., 2020)

A computer that can mimic human intellect has been created thanks to the advent of big data and cloud computing, artificial neural networks, and machine learning. Artificial intelligence (AI) is a term used by this research to describe a class of robots that are capable of understanding, recognising, learning, responding, and solving problems (AI) (K. Kumar et al., 2012 and J.M. Spector et al., 1993). According to T. Horakova in 2017 stated that smart technology like this will inevitably transform the way people work in the future.

2.2.1 Types of Artificial Intelligence.

2.2.1.1 Reactive machine

Machines that react to their environment are the most fundamental forms of artificial intelligence (AI). As a pure reactionary device, computers don't need to store information in memory or draw on previous experience. In a major publication, AI researcher Rodney Brooks claimed that only this kind of AI should be developed. For

example, IBM's chess-playing supercomputer, Deep Blue, was a reactive machine that created history by defeating Grandmaster Garry Kasparov in 1997. No pre-existing datasets or prior matches were used in this analysis. Just the rules of the game and how to play them were all it knew. The computer used its real-time insight to win the chess game.

2.2.1.2 Limited Machine

Limited memory is analogous to reactive machines that have been given past data to aid in their decision-making. Devices that we use nowadays are almost all restricted memory machines, fuelled by datasets. Artificial Intelligence (AI) uses deep learning and vast amounts of data to build a reference model for addressing future challenges. Image recognition AIs are taught to identify and classify certain objects, such as a cat or a dog, based on images. As a result of earlier training, it understands how cats and dogs appear. From now on, it will not display any photographs that are a match.

Self-driving automobiles are examples of Limited Memory AI, which makes judgments based on the most recent data acquired. Automobiles with self-driving capabilities, such as Uber's, employ a variety of sensors to better understand the route they're travelling on. This helps to keep accidents to a minimum in the future (Lateef in 2020).

2.2.1.3 Theory of Mind

The hypothesis of mind machines is an advanced class of technology; however, it is simply a concept at this time. For this form of AI, you need to know how people and things feel and act in a certain context. In order to understand people's emotions, feelings, and ideas, the theory of minds is a crucial technical advancement. This level of AI, despite several advances, has not yet been completely achieved. It was created in the late 1990s and is an illustration of the theory of mind in action. Human emotions can be replicated and recognised by Kismet. According to Hassani in 2020, the theory of mind is unlike the previous two categories of AI, which is either an idea or a work in progress at the moment. It is the AI systems based on theories of mind may better

grasp the needs, emotions, beliefs, and mental processes of the beings with whom they come into contact.

2.2.1.4 Self Aware

AI that is self-aware is exactly what is shown in AI movies. The self-aware AI robots that think for themselves and kill people are the ideology-driven AI robots. However, we cannot rule out the possibility that everything may go wrong. There's also a potential that the future AI may work alongside humans. Self-aware AI is on many scientists' wish lists, despite the fact that it is currently unattainable. Elon Musk and Stephen Hawkings, for example, have repeatedly cautioned us about the progress of AI, which might eventually reach the level of self-awareness. According to Hassani in 2020, the ultimate goal of all AI research is to achieve this level of AI development, which now exists only in a theoretical form. This kind of AI refers to systems that have gained self-awareness to the point that they are equivalent to human brains.

2.2.1.5 Artificial Narrow Intelligence

Artificial Narrow Intelligence which known as ANI is the kind of AI that exists in our society today. It also known as “Weak “artificial Intelligence. AI systems with a narrow focus, such as weather forecasting systems or computers that can play Chess, are known as narrow AI systems. Real-time attention is possible, but the information is drawn from a limited data collection. As a consequence, these systems are limited to the specific goal for which they were created (Jajal, in 2020).

According to Jajal in 2020 also mentioned that even though it looks to be far more advanced, narrow AI functions within a predetermined, predefined spectrum. Everything we see in our daily lives is a Narrow AI. Examples of Narrow AI include Google Assistant, Google Translate, Siri, and other systems that process natural language. "Weak" AI is a term we use to describe robots that can communicate with humans and process human language, but these machines are far from possessing human-like intelligence. For all intents and purposes, they aren't intelligent enough to compete with humans. In other words, they are incapable of making their own decisions.

According to Jajal in 2020, Narrow artificial intelligence (AI) has freed us from a slew of tedious, monotonous, and menial chores. Narrow AI has improved our lives in a variety of ways, whether it's ordering pizza for us online through Siri or sifting through mountains of data to find insights. As a consequence, it shouldn't be undervalued. Self-driving vehicles, ANI systems, and other cutting-edge technology will allow us to spend less time sitting in traffic and more time doing things we like. According to Aaron Saenz stated in Singularity Hub (2016), In addition to improving its ability to analyse its surroundings, narrow AI is also becoming more aware of the distinction between what a human says and what a human want."

2.2.1.6 Artificial General Intelligence

Artificial General Intelligence known as AGI and it also known as Strong AI. It is a term used to describe robots that demonstrate human-like intelligence. As a result, artificial intelligence (AI) is capable of doing every work that a human person is capable of accomplishing. It's the kind of AI that we see in movies like "Her" or other sci-fi films, where people interact with robots and operating systems that are conscious, sentient, and motivated by emotion and self-awareness (Jajal, 2020).

Machines can currently digest data more quickly than humans. In order to make well-informed judgments or generate novel ideas, we humans have the capacity to think strategically, abstractly, and to draw on our memories and thoughts. This form of intelligence elevates humans beyond machines, yet defining it is difficult due to the fact that it is mostly based on our capacity to be sentient beings. The fact that it's impossible to recreate mechanically speaks volumes (Jajal, 2020).

2.2.1.7 Artificial Super Intelligence

According to Escott in 2017 stated that ASI, or artificial super intelligence, is a hypothetical AI that does not just copy or comprehend human intellect and behaviour; rather, ASI is where computers become self-aware and beyond the potential of human intelligence and capability. Disastrous futures in which machines take over, overturn, or enslave the human race have long been inspired by the idea of superintelligence.

Artificial superintelligence is the idea that AI will become so humanlike that it would be able to feel and experience human emotions and wants on its own.

To begin with, ASI would potentially be better at everything we do than we are as humans in terms of intellect; this includes everything from math and science to sports and art to medicine to hobbies and emotional connections. For example, ASI would be able to store more information and analyse it more quickly. Consequently, the ability of super intelligent entities to make decisions and solve problems is significantly greater than human.

2.3 Artificial Intelligence in Education

According to Chen, Xie, & Hwang, in 2020, stated that an increasing number of educational applications of artificial intelligence (AI), such as intelligent tutoring systems, teaching robots, learning analytics dashboards, adaptive learning systems and human-computer interactions, have been developed as a result of advances in computing and information processing techniques. Besides that, because of AIED introduction in the early 1980s, AI has been seen as an important instrument in the creation of innovative instructional design, technical advancements and educational research that would be hard to carry out in more conventional educational settings, mentioned by Holmes et al., in 2019; Hwang et al., in 2020.

As a result of AIEd, educational advances like as individualised learning, the challenge of the teacher, and the creation of a complex educational system have been presented with new chances, potentials, and problems (Baker et al., 2019; Holmes et al., 2018; Starcic, 2019). As a result, a variety of AIEd approaches such as like natural language processing and artificial neural networks which have been deployed to develop intelligent educational settings for behaviour detection and prediction model creation as well as learning suggestion, among other functions declared by Chen, Xie, & Hwang in 2020; Rowe in 2019.

Moreover, computers in education research is increasingly focused on AIEd, which has the potential to revolutionise culture, knowledge, and cognition, which were stated by Hwang et al., in 2020. As much as artificial intelligence (AI) has the potential

to alter education, according by Holmes et al., in 2019, the positive educational results aren't always achieved by simply using AI computer technology (Castaneda & Selwyn, 2018); Du Boulay, 2000; Selwyn, 2016). In addition, various types of educational technology often imply different philosophical and pedagogical viewpoints, which in turn have a significant impact on the standard of education and training. (Hwang et al., in 2020).

According to Rose in 1987, mentioned that AI approaches may allow intelligent tutoring systems to solve the issues they pose for the user in a human-like and acceptable manner, then reason about and remark on the solution process. However, in 2003, Hwang stated that as an intelligent tutoring system that helps to organise system knowledge plus with operational information to enhance the operator performance and automatically determines exercise progression plus with remediation during a training session which based on past student performance has been defined as AI in education context. The study conducted by Johnson et al., in 2009 confirmed that Artificially intelligent teachers or tutors, provide replies in real time based on their own understanding of the topic and assessment of students' assessments of the problem. According to Popenici and Kerr in 2017, informed that as described by the term "artificial intelligence," AI refers to computer systems that can perform human-like functions such as memory storage, data processing, plus learning. However, Chatterjee and Bhattacharjee in 2020 stated that, according to the AI definition, computational systems that are able to engage in human-like activities like learning, adapting, synthesising and improving themselves via the use of varied data are considered to be AI.

2.3.1 The state of education in Malaysia

Education enrolment is a great success for Malaysia. In Malaysia, pre-school education is not mandated, although over 91% of children between the ages of 4 and 5 were enrolled in some type of pre-school education in 2014. (Malaysia, 2015). Enrolment in elementary school in Malaysia has reached around 98 percent, while secondary school enrolment reached 90 percent in 2014 (Chang Da wan et al., 2018).

According to MOHE (2017), in 2016, total of 20,232 students attended public community colleges, total of 99,551 students attended public polytechnics, total of

695,026 students attended private higher education institutions (including colleges, university colleges, and universities), and total of 532,049 students attended Malaysia's twenty public universities. In addition, there were 98,379 Malaysian students enrolled in post-secondary education programmes in other countries. Enrolment in higher education for the age cohort of 18-23 years old reached 48 percent in 2012, exceeding the universal objective established by the World Bank and UNESCO.

Existing educational facilities have been able to sustain the increased enrolment in schooling to a great degree. There were 5,984 pre-school establishments around the world in 2014, with 1,450 in urban regions and 4,534 in rural areas. There were 7,756 elementary schools in total, with 27% of them situated in metropolitan areas. There were 2,376 secondary schools, with half of them located in metropolitan areas. Government and government-aided schools were included in these primary and secondary schools, namely national, national-type (vernacular), religious, technical, vocational, special education, sports, and arts schools (MOE 2015b).

More than 350 private colleges have been established in the country since the beginning of the 21st century, including twenty public universities (including five research universities, four comprehensive universities, and eleven focused universities in fields of technical, education, management and defence), fifty-three private universities which had seven branch campuses of foreign university, twenty-six private university colleges, thirty public polytechnics, and more than 80 public community colleges (Chang Da wan et al., 2018).

Universities' rankings are often used to judge the quality of their programmes in higher education. Here, we suggest that it's oversimplified and biased toward research and publishing metrics. (Wan, Morshidi and Dzulkifli 2015). Rankings might be deceptive because of the way they are calculated. Such indicators are not effective for understanding universities since they fail to reflect the various functions of universities (such as teaching and service) (see Azman and Mydin Kutty 2016; Morshidi Azman and Wan 2017; Wan 2015).

When it comes to institutional rankings, Malaysian institutions have not performed very well over the course of the last ten years. Rankings of universities that are widely disseminated yet primarily concentrate on a few institutions do not accurately portray the quality of education provided by the country's overall higher

education system (Chang Da wan et al., 2018). One may argue that the Universitas 21 Ranking is a more reliable indication for evaluating national higher education systems since it integrates evaluations of resources, environment, connectedness, and production. In this sense, Malaysia's higher education system was placed 27th overall in 2015 according to the QS World University Rankings (Universitas 21, n.d).

The higher education system in Malaysia is ranked 32nd in terms of the quality of its best universities and 39th in terms of the educational attainment of the workforce. Despite the fact that Malaysia is ranked 8th in terms of government expenditure on higher education as a share of GDP and 12th in terms of expenditure per student, Malaysia is ranked 39th overall. It is quite clear that the amount of money and other resources that have been poured into higher education have not resulted in the level of production that was anticipated (Chang Da wan et al., 2018). As a result, when we look at the rankings as a whole, we can deduce that there is still a significant amount of space for improvement in terms of the overall quality and effectiveness of higher education.

According to Department of Statistics Malaysia Official Portal, in the year of 2020, there are total of 584576 students in public universities, Malaysia. In Universiti Islam Antarabangsa Malaysia, there are 29254 students, Universiti Kebangsaan Malaysia had 30844 students, Universiti Malaya had 35885 students, Universiti Malaysia Kelantan had 11058 students, Universiti Malaysia Pahang had 13607 students , Universiti Malaysia Perlis had 13176 students, Universiti Malaysia Sabah had 17498 student, Universiti Malaysia Sarawak had 16551 students, Universiti Malaysia Terengganu had 10323 students, Universiti Pendidikan Sultan Idris had 26554 students, Universiti Pertahanan Nasional Malaysia had 4972 students, Universiti Putra Malaysia had 28587 students, Universiti Sains Islam Malaysia had 13608, Universiti Sains Malaysia has 31674, Universiti Sultan Zainal Abidin had 12901 students, Universiti Teknikal Malaysia Melaka had 14937 students, Universiti Teknologi Malaysia had 32900 students, Universiti Teknologi MARA had 188701 students, Universiti Tun Hussein Onn Malaysia had 18581 students , and Universiti Utara Malaysia had 32965 students.

2.4 Technology Acceptance Model

According to Mai, Yoshi & Tuan, in 2013, the Technology Acceptance Model (TAM) was first presented by Davis in the year of 1986, and it was later finalised by Davis, Bagozzi, and Warshaw in the year of 1989. Davis came up with the TAM in 1989, and it was based on the theory of reasoned action (TRA) paradigm in the first place (Fishbein and Ajzen, 1975). Ting et al. (2015) state that TRA offers a perspective on understanding consumers' behaviour on the usage of new technologies, while TAM is used to describe users' internal beliefs, attitudes, and intentions to actually utilise an information system (Legris, Ingham & Collerette, 2003). TAM concentrated mostly on determining, based on people's attitudes and behaviours, how and when they would utilise and accept technological advancements.

According to Davis in 1989, who indicated that TAM model comprises of four variables, those constructs include attitudes towards using behaviour intention to use the technology, perceived usefulness, and perceived ease of use. The purpose of the user is what determines whether or not they will utilise a new gadget. The elements that impact an individual's behaviour include things like how helpful something is regarded to be and how easy it is believed to be to utilise something (Chun Chu & Chun Chu,2011).

In addition, the study conducted by Aggelidis & Chatzoglou in 2009 declared that the term "perceived usefulness" refers, to some extent, to the fact that consumers would accept a new technology if they believe that specific technology will assist them in completing a job in a more effective and time-saving manner. According to Aggelidis and Chatzoglou's research from 2009, perceived ease of use defines as the consumers' willingness to accept new technology if they feel it requires the least amount of physical and mental effort to accomplish a job.

The feelings of either favorability or unfavorability toward the use of the technology are referred to as attitudes (Kim and Bernhard, 2014). Both beliefs are thought to affect a user's attitude and intention when it comes to the acquisition of new technology, as stated by Oh et al. (2019). As a result, the TAM is put to use in order to demonstrate a correlation between beliefs, attitudes, and actions (Oh et al., 2009). Actually, there are few of studies that related with Artificial Intelligence with a frame of Technology acceptance Model (TAM).

In conclusion, according to the TAM model, the perceived utility and simplicity of use of a technology will ultimately have an effect on users' attitudes about the technology, which in turn will have an effect on users' intentions towards their usage of a certain technology. According to Oh et al explanation, TAM is frequently employed in the technical (Schepers and Wetzels 2007), industrial (Lin, Shih, and Sher 2007), and hospitality sectors owing to its theoretical foundation (Morosan and Jeong 2008). The attitude variable was formerly a part of TAM, but it was eventually taken out because of the little function it had in mediating the connection between the users' interests and views.

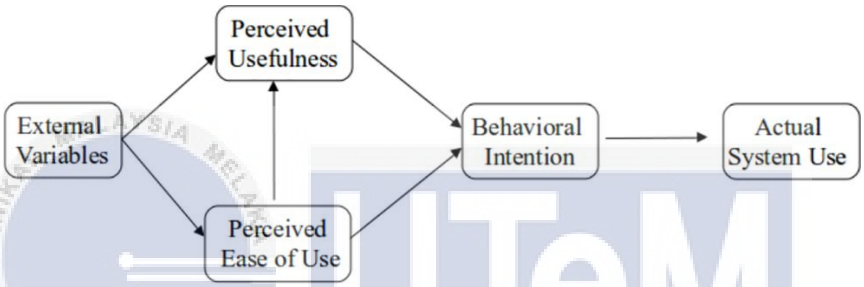


Figure 2.2 show the TAM model

Source: Park in 2009

2.5 Technology Readiness

According to Parasuraman in 2000 stated, that Technology Readiness (TR) is described as the predisposition of individuals to adopt and make use of new technologies in order to achieve their personal and professional objectives. In order to establish a consumer's preference for using new technologies, the construct measures an overall state of mind arising from a mix of mental facilitators and inhibitors (Parasuraman, 2000). A person's impressions of a particular technology might include both good and negative characteristics, which together determine whether or not a

person is ready to accept Technology, according to Lai (2008). Parasuraman & Colby (2015) mentioned that the favourable perceptions of new Technology would encourage people to adopt them, while the negative ones will deter them.

According to Parasuraman (2000) and Parasuraman and Colby (2015), such beliefs may be broken down into several dimensions such as discomfort, optimism, insecurity, and innovativeness. Optimism and innovativeness may be considered as positive characteristics (contributors), whereas discomfort and insecurity consider as negative (inhibitors). The study of Technology Readiness by Parasuraman in 2000, indicates that users of Technology must learn more thoroughly to grasp the Technology or system before they can utilize it effectively. To put it another way, the user's main purpose is to master the Technology or system because of its usefulness.

Users that are curious about a new system may encounter a variety of obstacles and experiences when they try to learn more about it. Eventually, when people's curiosity grows, and their views begin to form, the technological system will begin to make sense to them. There were four factors of user sentiments or opinions were identified, which are optimism, inventiveness, discomfort, and insecurity (Ariani, Napitupulu, Jati, Kadar, & Syafrullah, 2018).

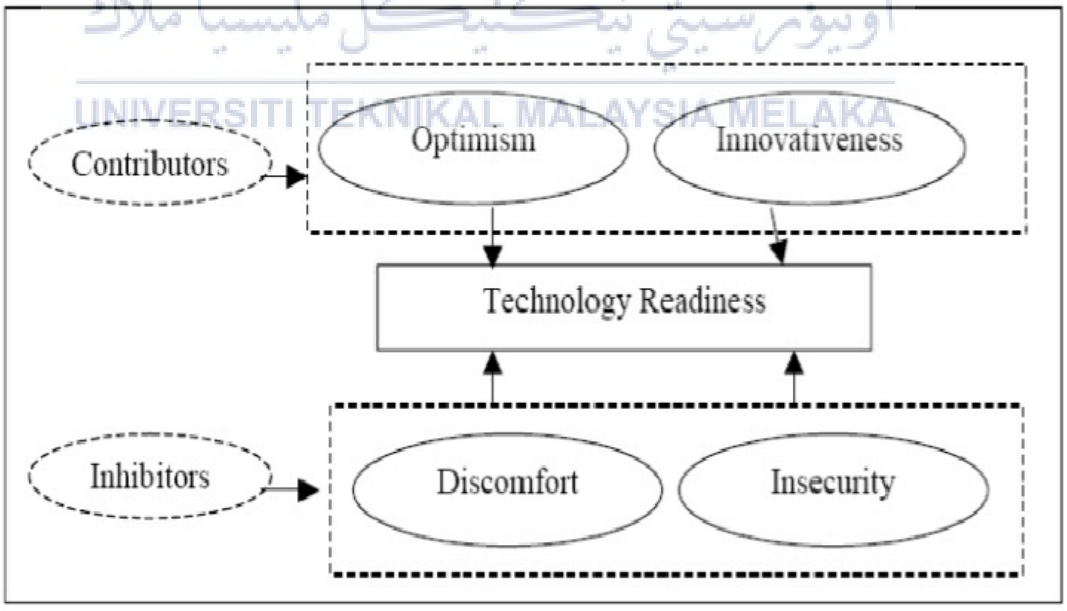


Figure 2.3 show the TRI Model

2.6 Research Framework

In the end, because of the assumptions about relevant expectations and the objective of this study is to determine the factors that influence public university students' intentions to utilize AI in education, the researcher has selected TAM as the framework for this study. The researcher has picked additional variables factors from the Technology Readiness Index, such as innovativeness and optimism, in order to further define the framework (TRI).

2.6.1 Dependent Variable

The dependent variable which known as DV in this research is public universities student's intention to use Artificial Intelligence. Based on the literature review, proposed model is able to explain and offer a better prediction on the public universities student's intention to use a new technology which is AI.

2.6.1.1 Intention to use Technology

Fishbein and Ajzen were conducting research on people's behaviours in relation to their intentions to use Technology. As part of this research, and in addition to contributing to the development of the Theory of Reasoned Action, Fishbein and Ajzen were the first to introduce the concept of intention (TRA) (Hien Le Dang, 1975). According to the Theory of Reasoned Action (TRA), the desire to utilize Technology, enhances the possibility of one's activities being carried out, such as like using Technology. After 35 years in 2010, Fishbein and Ajzen modified the TRA to stress further that the intended use factor is the best single component that can be used to forecast an object's behaviour. This change was made due to their finding that the intended use factor is the best single factor.

According to Hien Le Dang in 1975, Bratman in 1987 stated that intention is a mental state that indicates a person's assurance that a future action will be carried out. Planning and foresight are two of the mental actions that are involved. Since Fishbein and Ajzen (1975) added the ideas of perceived ease of use and perceived usefulness into the TAM in 1989, Davis has built a technology acceptance model (TAM model) (Davis, 1989). Both impressions influence one's attitude toward use intention, as indicated in the model. Due to its limited influence as a mediator, Davis and Venkatesh

in 1996 modified the model and omitted the 'attitude' element, concentrating instead on the direct impact of use intention on perceived usefulness (Hien Le Dang, 1975).

According to Mandilas, Karasavvoglou, Nikolaidis, & Tsourgiannis in 2013, many variables might impact one's desire to use a specific technology. The degree to which a person has created a deliberate plan for carrying out a particular future behaviour is known as behavioural intention. In 2009, Shin stated that intentions might relate to a user's willingness to do the action that they believe. When analysing Technology in its early phases, the majority of TAM-based studies utilized intents as the ultimate level (Wang & Qualls, 2007). Legris, Ingham, & Collerette, in 2003, mentioned that the TAM model has subsequently become the most extensively utilized model for predicting technology target group adoption. Davis' hypothesis has been used in a number of researches to apply the TAM model to a variety of areas such as like (Aypay, Celik, & Sever, 2012; Shroff, Deneen, & Ng, 2011; Park, 2009). The findings of these investigations are statistically significant.

2.6.2 Independent Variables

It is suggested that the independent variables are the factors that determine the shifts in the dependent variables. The researcher uses selected constructed from the main Technology Acceptance Model which are perceived ease of use and perceived usefulness. The researcher also includes innovativeness and optimism from technology readiness. To determine the factors that affect public universities students' intention to use AI on education.

2.6.2.1 Perceived Ease of Use

The study conducted by Aggelidis & Chatzoglou (2009) mentioned that the phrase "perceived ease of use" refers to the degree to which a person feels that using a specific piece of Technology will require the barest minimum of effort on their part. Previous studies were done by Davis et al. in 1989, and Venkatesh et al. in 2003 have demonstrated that people are more likely to have a favourable attitude toward the usage of Technology when they consider it reasonably straightforward to use (Teo et al. 2009).

Davis in 1986; Davis in1989 explained that the ability to utilize a piece of Technology without devoting an excessive amount of time to learn its intricacies and nuances is referred to as the perceived ease of use. According to Davis (1989), an individual's capacity to adapt to Technology will be greater if the subject believes that the Technology is simple to use. It was proven by Wu et al. (2008) and Smit, Roberts-Lombard, and Mpinganjira in 2018 that perceived ease of use influenced intention. It was also supported by the studies conducted by Damerji (2019).

Besides that, Davis, in 1989, discovered that perceived ease of use had a considerable impact on perceived usefulness after assessing the association between perceived ease of use and perceived usefulness plus target groups' exerted influence to adopt Technology. According to Hien Le Dang in 2020, Davis found that, after adjusting for perceived usefulness, the impact of ease of use on use intention was reduced by 91%.

According to many research, perceived ease of use has a significant influence on the inclination to utilize AI technology (e.g. Lule, Omwansa, & Waema, 2012; Aypay et al., 2012; Park, 2009). Furthermore, Melas et al. (2011) discovered that perceived ease of use had a higher influence on technology adoption than perceived usefulness on one's willingness to utilize Technology in the research study of 604 medical staff members at 14 hospitals in Greece, and it was validated by Shroff et al. (2011).

A recent research by Damerji (2021) focused on accounting students in the United States and found that perceived ease of use had a favourable influence on these students' intention to utilize Technology. On the other hand, Park in 2009, found a different result. According to a poll of Korean bachelor's students, there is no link between easy-to-use awareness and the desire to utilize online learning technologies. Lastly, another research done in Taiwan by Lee, Hsieh, and Hsu (2011) found that perceived ease of use had no effect on use intention for workers of organizations employing online training systems.

H0: There is no significant relationship between the perceived ease of use and student’s intention to use AI on education.

H1: There is significant relationship between the perceived ease of use and the student’s intention to use AI on education.

2.6.2.2 Perceived Usefulness

Perceived usefulness is the belief that using Technology will allow one to perform more efficiently (Davis in 1986; Davis in 1989). According to Davis (1989), the greater the subject's perception of usefulness, the more likely the subject would accept Technology. This was later supported by studies such as Bagozzi, Davis, & Warshaw, in 1992; Adams, Nelson, & Todd, in 1992; Larasati, Widyawan, & Santosa in, 2017; Nugroho & Fajar, in 2017. Besides that, in Damerji's on 2019 applied research, as well as in Smit et al's (2018) study, this impact was substantial.

According to Davis, Bagozzi, and Warshaw in 1989, conducted a study on the effect of perceived usefulness and perceived ease of use on the acceptance of a word processing programme which called as WriteOne among MBA students at the University of Michigan. They came to the conclusion that perceived usefulness had a significant influence on a person's intention to use Technology. In addition, studies that came after this one came to the same conclusion as well mentioned by Park in 2009, Lee et al.in 2011 and Lule et al. in 2012.

Shin and Lee (2014) reached their conclusion after analysing the influence of these two perception elements on the acceptability of NFC mobile payment technology among college students in South Korea. They found that perceived utility had a favourable effect on the students' desire to utilize Technology. The users' impression that the payment programme was simple to use did not, however, significantly influence their desire to utilize the service. In addition, Shroff et al. (2011) discovered, in their research conducted on bachelor's degree students in Hong Kong, that perceived usefulness did not alter students' inclination to utilize Technology. here, electronic portfolio instructional platform.

H0: There is no significant relationship between the perceived usefulness and student's intention to use AI on education.

H2: There is significant relationship between the perceived usefulness and the student's intention to use AI on education.

2.6.2.3 Innovativeness

Innovativeness is components of the Technology Readiness (TR) model that was employed in this research. The study conducted by Parasuraman in 2000 it has been characterized as the belief that a firm that has cutting-edge Technology would be regarded as a frontrunner in a certain technical sector. According to the findings of Thakur and Srivastava (2014), analysing the acceptability of innovation in information technology requires taking human innovation into account as a significant factor. Within the scope of this investigation, perceived innovativeness is taken into account because of the important role it plays in fostering a deeper comprehension of the process of innovation adoption. Innovation decides whether or not an organization is considered a pioneer in technical progress and an influential thought leader.

It serves as a driver of motivation and improves a person's preparedness for technological advancement stated by Parasuraman & Colby in 2001. Extensive study has been done on how the innovativeness of Technology influences how beneficial it is thought to be as well as how easy it is to use. Moreover, Buyle et al. in 2018 conducted a research not too long ago in which they found that innovativeness had a significant influence on both of the perception criteria. Earlier, Erdomuş and Esen (2011) had arrived at a result that was comparable to this one.Shin and Lee (2014) conducted research on the intention of Korean students to utilize artificial intelligence technology (NFC mobile payment), and their findings verified the favourable influence that innovativeness has on perceived ease of use.

In 2019, Panday and Rachmat did a study on employee technology readiness and acceptability at a firm headquartered in Indonesia. They discovered that innovativeness had a favourable influence on perceived ease of use, which was another finding from their research. According to Larasati in 2017 conducted a research on Indonesian small and medium-sized businesses and came to the conclusion that innovativeness had a favourable influence on perceived ease of use and perceived usefulness.

H0: There is no significant relationship between the innovativeness and student's intention to use AI on education.

H3: There is significant relationship between the innovativeness and the student's intention to use AI on education.

2.6.2.4 Optimism

Technology optimism was another aspect of the TR model that was examined. Many academics utilize it to examine the influence on people's willingness to use Technology such as like Panday & Rachmat in 2019, Buyle et al in 2018 and Nugroho & Fajar, in 2017. Technology optimism is characterized as a favourable attitude toward Technology. In the context of artificial intelligence technology, this means that the Technology can help humans operate more independently, productively, and flexibly (Parasuraman, 2000). The authors of the former study, Parasuraman and Colby (2001), state that an optimistic outlook fosters the notion that Technology is beneficial and user-friendly.

This, one after the other, has an effect on how easy it is viewed to use and how valuable it is seen to be. It has been found by Larasati et al. (2017) and Damerji (2019) that students' optimism impacts their desire to employ AI technology in connection to their educational pursuits. The language of technological optimism often focuses on the positive features of Technology, which are typically associated with its utility, performance (continuous with high precision), and the ease with which it can be controlled by a relatively small workforce. According to Parasuraman & Colby in 2001 declared that it may also refer to the role that advances in artificial intelligence have had in enhancing people's quality of life, as well as their living standards and their performance at work

In one of the first studies to utilize this factor, researchers at a Belgian multi-site financial service company looked at workers' technology adoption (Walczuch, Lemmink, & Streukens, 2007). When asked which software programme they used the most, participants were invited to fill out a questionnaire regarding their thoughts on that application. Results demonstrated that optimism about Technology had a beneficial impact on both its perceived ease of use and its perceived utility.

According to a study by Erdomuş and Esen (2011), HR managers at private organizations in Turkey found that these two perspectives had a favourable influence on optimism. When Larasati et al. (2017) focused on Indonesian small and medium-sized businesses as a whole, they found something very different. There was no correlation between optimism about Technology and how easy it was regarded to utilize. According to a study conducted by Buyle et al. (2018), workers in both private

and public sector organizations in Belgium do not have a statistically significant difference in their perceptions of how simple and helpful Technology is to use.

H0: There is no significant relationship between the optimism and student's intention to use AI on education.

H4: There is significant relationship between the optimism and the student's intention to use AI on education.

2.7 Proposed Framework

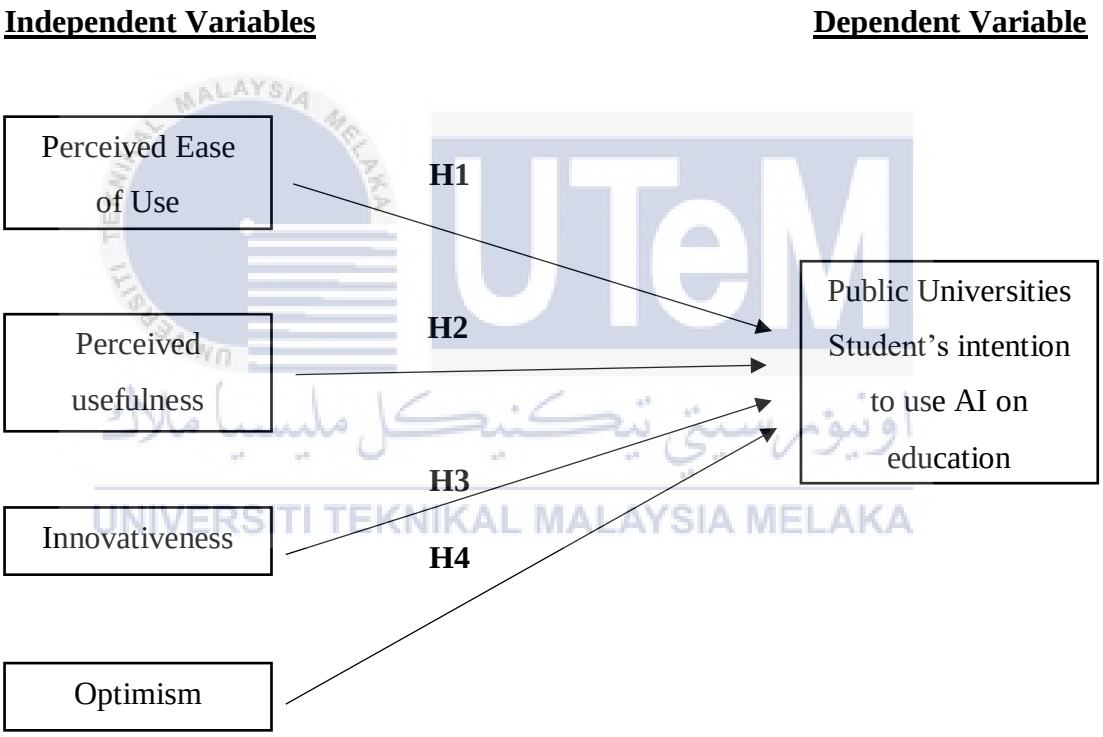


Figure 2.4 show the proposed of Conceptual Framework.

2.8 Hypothesis of Study

A variety of hypotheses may be derived from the suggested study framework, as indicated in the diagram above. Hypotheses included the following:

Perceived Ease of Use

H0: There is no significant relationship between the perceived ease of use and student's intention to use AI on education.

H1: There is significant relationship between the perceived ease of use and the student's intention to use AI on education.

Perceived Usefulness

H0: There is no significant relationship between the perceived usefulness and student's intention to use AI on education.

H2: There is significant relationship between the perceived usefulness and the student's intention to use AI on education.

Innovativeness

H0: There is no significant relationship between the innovativeness and student's intention to use AI on education.

H3: There is significant relationship between the innovativeness and the student's intention to use AI on education.

Optimism

H0: There is no significant relationship between the optimism and student's intention to use AI on education.

H4: There is significant relationship between the optimism and the student's intention to use AI on education.

2.9 Summary

In conclusion, few independent variables existed in this research framework, such as perceived ease of use, perceived usefulness, innovativeness, and Technology optimism. In this chapter, the researcher explained the study procedure, which focused on students' intentions at public universities to employ AI in education. The researcher devised specific hypothesis testing methods to investigate the association between these independent and dependent variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

In this chapter, the researcher will discuss the study's research methods in detail, including how they help us tackle the previous chapter's issue and problem statements and meet the study's objective. The study conducted by Ghauri in 2005 stated that the research method is described as a tool for resolving challenges and problems in a scientific investigation. Then, the research method is frequently used to gather and analyses data. Besides that, research methodology can also be utilized to aid researchers in data collection, sample collection, and issue resolution. Collecting and evaluating data becomes a methodology and process in research methodologies mentioned by Saunders, Lewis, and Thornhill in 2016. As a consequence, research design and research procedures will be included in the scope of this study. This study will also provide research methodology in the form of a defined research process flow. The purpose of this chapter is to discuss the process structure and data-gathering methodologies. The data was collected using the data collection and sampling procedure.

3.1 Research Design

According to William et al., in 2017, in the context of research, the term "research design" refers to an overarching strategy that outlines how the researcher intends to address the issues or concerns raised by the study. The strategy defines the whole study framework as well as the significance of each component to the final analysis. The study conducted by Selltiz, Deutsh, and Cook in 1962 stated that a research design is a set of criteria for gathering and evaluating data that aims to balance relevance with process economy in pursuit of a specific research goal. As defined by Kumar in 2019, the research design presents an overview of the study design to should be proposed, as well as methods for collecting data from respondents, choosing possible respondents, evaluating the data, and conveying the results. According to Kumar in 2019 mentioned that it is important to outline the study's processes and ensure the link between independent variables (IV) and dependent variables (DV) has an influence on its effect. Moreover, the research design is required and significant if more accurate and exact data collection plus analysis information to gathered utilizing exploratory, descriptive and explanatory data collection techniques. Most of these strategies do help researchers think strategically about how to collect valuable information.

3.1.1 Explanatory Research

The study conducted by Hair et al. in 2011 stated that when a change in one thing (the cause) causes another thing (the effect) to change, it is known and recognised as explanatory research. In addition, according to Saunders, Lewis and Thornhill, in 2016, defined explanatory research as a study of a problem or a condition in the correlation between variables. As reported by Sekaran in 2000, the technique of discovering how one variable affects the alternative of another variable is known as causal analysis. Saunders, Lewis, and Thornhill in 2016 mentioned that explanatory research questions usually begin with the words "Why" or "How." Besides that, the researchers developed evidence to explain a significant relation, demonstrating a link between perceived usefulness leads to public university students' intention to employ Artificial Intelligence in their education.

3.2 Research Methods

The purpose of this research is to determine the public universities students' intention to use Artificial Intelligence on education. As a consequence, research approaches are typically divided into quantitative and qualitative categories mentioned by Muijs, D. in 2010. The two parts of the research technique and research methodologies were assessed separately. The section comparing the two is covered first, followed by the section on research methodology. Then, several types of research techniques, as well as the two main categories of research methodologies, qualitative and quantitative research, are studied.

3.2.1 Quantitative Research

The study conducted by Muijs, in 2010 stated that the term "quantitative research" refers to studies that gather and analyses numerical data in order to make sense of observed occurrences. Positivism is often utilized when high-structured data collecting methods are used (Muijs, 2010). Besides that, statistical and graphical methods are used to examine the connections between different variables that may be quantitatively assessed. Then, Hair et al in 2011 mentioned that the term "quantitative data" refers to the results of measurements in which numbers are used to express the qualities of something directly. They can be statistically analyzed since they are documented with numbers immediately. To test hypotheses, quantitative methods gather data and apply statistical criteria to the measurements. This provides objectivity. Quantitative research aims to find exact measurements and analyses of target ideas via the use of surveys and questionnaires.

3.3 Data Collection

According to Kabir, Syed Muhammad in 2016 mentioned that data collection is the systematic process of gathering and measuring data on variables of interest in sequence to answer specific research questions, test hypotheses, and analyses results. Furthermore, the goal of this data collecting is to identify research answers. A teacher may utilize data to more effectively uncover the root cause of problems. The study conducted by Megel & Heermann, in 1994 stated that the data collection could

describe as the process of gathering and analysing information on important factors in order for a researcher to answer specific research questions, test hypotheses, and assess results. The goal of data collecting is to gather high-quality information that can be used to conduct extensive data analysis and provide reliable answers to the questions posed (Megel & Heermann, 1994). Researchers may gather information to test hypotheses and characterize research topics from two sorts of data. Besides that, there are two types of data which are primary and secondary data. This kind of data collecting will provide the researchers with the essential results. This is because the data allows researchers to assess the effectiveness of planned programmers. Additionally, after a strategy for dealing with a problem that has been devised, data collection helps the researcher to determine how well the solution functions and which approach the researcher should pick.

3.3.1 Primary Data

Primary data is information derived through own experience. According to Walliman in 2010, primary data is information that has been witnessed, experienced, or documented in the immediate aftermath of an occurrence. Besides that, the information produced or collected by the researcher specifically for the research work are often obtained through the employment of survey, questionnaires and with observation methods. Then, observation is a means of observing and listening to a conversation as it happens in a methodical and selected manner. It's a methodical way to dealing with people, situations, and things. When using structured questions, a self-completion survey is performed to gather data. A structured questionnaire is a collection of questions intended to gather information from the respondents who are being polled. A questionnaire will give to the respondents who assume have the grasp and an enthusiasm to complete by their own.

3.3.2 Secondary Data

The concept of secondary data analysis from multiple sources is given, then followed by a discussion of the numerous secondary data sources which provided by Chivaka Reason in 2018. Secondary data is acquired from any current publication that

is relevant to the topic, such as journal, an article, book, website, or even statistics data. So, secondary data is information that has been studied after it has been collected for a different reason or procedure. The study conducted by Saunders, Lewis and Thornhill, in 2016 stated that there are three main types of secondary data which is survey, multiple source and document.

3.4 Research Strategic

A research strategy is a broad plan of action that is devised to attain a certain aim (Saunders, Lewis and Thornhill in 2016). This research strategy stated how researchers would answer their research questions in such a way that is agreeable to its research aims. Since this research study on public universities students' intention to use AI on education, a survey was used as a research approach. The use of a survey approach is rather common. Questionnaires are useful because they enable data to be gathered from a large number of people. For data gathering purposes, questions such as how many, when, how much, what, agree or disagree are asked in the questionnaire section. Besides that, it is simple to ask a set of questions to the target population using this survey questionnaire in order to determine the factor influencing their use of AI in education. According to Saunders, Lewis and Thornhill in 2016, mentioned that his method is often used since it is simple and thorough.

3.5 Sampling

According to Walliman, in 2010 stated that the practice of selecting a small number of examples from a larger group is known as sampling. Then, it is built using either probability or non-probability approaches. In quantitative research, probability sampling is a way of picking a representative sample from a population using a random approach to assure impartiality in sample selection. The study conducted by Sekaran in 2000 said that non-probability sampling focuses on a group of people who have no predefined chance of being chosen as subjects.

The approach used is determined on the study's goal. Based on the purpose of the study and some of the study's limitations, the researcher will use probability sampling for this investigation. Because of its precision and accessibility, simple

random sampling is best suited for this study. Moreover, simple random sampling is a method in which every member of the population has an equal probability of being chosen for the sample. Random selection is a method of picking responders at arbitrarily who have a common interest.

The goal of this research is to look at the intentions of public university students to employ AI in their education. The demographic of interest will most likely be anybody who has the same interest and issue that people confront on a daily basis. In an ideal world, the researcher would be able to choose a sample of possible responders among public university students with a variety of academic backgrounds. Students from Malaysia's public universities would have an equal chance of being chosen to participate in the research. Then, random selection will reduce the influence of selection bias and increases the study's validity.

In addition, this study will be carried out at Malaysian public universities by the researcher. According to the Department of Statistics Malaysia Official Portal, in the year 2020, there are a total of 584576 students enrolled in Malaysian public universities. Hence, the target respondent for this research is public universities students and total population is 584576 students. According to Hair et al., in 2010, the determination of the minimum sample size for SEM is (Number of indicators + number of latent variables) x (estimated parameters). Thus. based on the guidelines, the minimum sample size for this study is: Minimum sample = (25+5) x 4=120. Last but not least, the minimum of 120 respondent was selected for this study.

3.6 Time Horizon

The 'snapshot' perspective relates to cross-sectional time, while the 'diary' viewpoint refers to longitudinal time (Saunders, Lewis and Thornhill in 2016). The methodologies employed in quantitative and qualitative analysis within a certain time range are referred to as the time horizon. Cross-sectional studies look at a phenomenon at a single point in time.

BIL	ACTIVITY	WEEK														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Discussion and finalize the topic															
2	Prepare and identifying the RO and RQ															
3	Identifying the variables and developing framework															
4	Research the sources of secondary data															
5	Determining the methodology to be used in the research															
6	Drafting the research proposal															
7	Submit the draft to the supervisor															
8	Re-draft the research proposal															
9	Correction and submission the final draft for															

	supervisor's review														
10	Proposal presentation and proposal defense														

Table 3.1 Gantt chart

3.7 Questionnaire Design

Researchers must prepare a questionnaire form for this study, which will be sent to respondents. The purpose of the questionnaire was to gather information in order to find a solution to a problem statement. As a result, the researcher will construct it using data from prior research projects that are comparable to current one. This study target respondents who are studying in public universities, Malaysia.

Part A: *Demographic*

This section includes questions on Gender, Age, Race, Year of study and IPT. In order to get additional information from responders, the researchers have opted to start with some basic, standardized questions.

Part B: *Factors affecting public universities students' intention to use AI on education.*

Total, there are four part consisted in categories for factors affecting public universities students' intention to use AI on education. the factors are perceived ease of use, perceived usefulness, innovativeness and optimism. A Likert scale would be suggested in the questionnaire formulation stage, according to (BP Subedi in 2016), to discover what the researchers doing the study needed. All of the questions in this section are built with a five-point Likert scale. According to BP Subedi in 2016, stated that the Likert scale included five answer options which are 1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, and 5: Totally Agree. It's a good measuring scale for

figuring out what respondents are thinking. The table below shows the structure of the Likert scales that were used:

Strongly Agree	Disagree	Neutral	Agree	Totally Agree
1	2	3	4	5

Table 3.2 show the Likert – Type of Scale

Firstly, the researcher will be created questionnaire by developed from journal published by David in 1989 for the aspect of perceived ease of use. The main reason for selecting this reference as a guideline in creating questionnaire was because one's ability to accept technology will be higher if the subject perceives that technology is easy to use, stated by Davis in 1989. Secondly, the questionnaire produced for perceived usefulness was taken from journal also which released by Davis in 1989. this is because of the higher the level of usefulness perceived by the subject, the higher the likelihood of technology adoption. This was borne up by further studies which from Bagozzi, Davis, & Warshaw, in 1992; Adams, Nelson, & Todd in 1992; Larasati, Widyawan, & Santosa, in 2017; and Nugroho & Fajar, in 2017).

Thirdly, the questionnaire built for factor innovativeness was stated by journal which released by Parasuraman & Colby, in 2001. This is because it boosts a person's technological readiness and serves as a motivating element. Lastly, the general questionnaire is optimism was generated by Parasuraman in 2000. This is due to the fact that, in the case of AI technology, it suggests that technology may help humans operate more independently, productively, and flexibly. Parasuraman and Colby in 2001, confirmed that the perception of optimism fosters the idea that technology is beneficial and kind. Besides that, Larasati et al. in 2017 and Damerji in 2019 found that students' intentions to adopt AI technology for learning are influenced by their optimism.

Part C: *The intention of students in public university to use AI on education.*

In this section, respondents are requested to provide their opinions on the use of AI in education in their answers to the questions. The following questions must also be answered by respondents using a Likert scale. This questionnaire was created which stated by Fishbein and Ajzen in 2010 and this is because an individual's intention to use technology enhances the possibility that they will carry out their plans and use it. A mental state known as intention displays the assurance that a future action will be taken stated by Bratman, in 1987.

3.8 Validity and Reliability

According to Graziano & Raulin in 2004 said that Validity plays an important role in research since it relates to a study's conceptual and scientific soundness. Validity aims to improve the accuracy and utility of findings by removing as many confounding factors as feasible, allowing for more trust in a study's findings. Internal, external, concept, and statistical conclusion validity are the four type of validity.

The study conducted by Joppe in 2000, stated that the degree to which findings are consistent over time plus reflect the whole population is referred to as reliability. Moreover, Greener in 2008 said that the research analysis is seen to be dependable if the outcomes of a study can be replicated using a comparable approach. internal consistency, often known as homogeneity, which is a research tool that assesses one construct said by Heale & Twycross in 2015.

Internal consistency is described as when the items in a test assess the same notion and are linked to the test's related items. Next, in this study, Cronbach Alpha is employed, and the alpha coefficient is calculated as a value between 0 and 1. (Tavakol & Dennick, 2011). According to Tavakol and Dennick in 2011 declared that acceptable alpha values range from 0.70 to 0.95. The greater the Cronbach alpha, the better the dependability however if it's less than 0.7, it's regarded bad. The limited number of questions and the interconnectedness between the categories may be the cause for the bad rating.

3.9 Data Analysis

In this research, SmartPLS will be used. For variance-based structural equation modelling utilizing the partial least squares route modelling approach, SmartPLS is a graphical user interface programmed. The use of SMART-PLS for data analysis by scholars and academics is on the rise. The benefits of using SMART-PLS are it is fun and hassle-free, it can get deep insights into our data analysis, the powerful modelling environment lets you create a path model in minutes ab it helps us to keep track of all analyses and file. SmartPLS is a SEM instrument of the second generation. It creates and evaluates models. The pros and cons of using SmartPLS in research are well-known. Management and information systems are the primary use cases for SmartPLS, a new solution. Additionally, Smart PLS is able to handle data from both the formative and reflective SEM model. Formative SEM models are those in which the indicator variables produce a construct variable. So, the arrow head is used to build a variable from indicators. SEM models with reflective construct variables have construct variables that reflect their indicator variables, as the name suggests. Arrow points from construct variables to their manifest variables as a result of this arrangement. Statistically, this means that the indicator variable's value will be error-free.

3.10 Summary

The research technique is defined in this chapter as the manner by which the research will be carried out. Basically, the processes through which the researcher concentrated on describing, explaining, and identifying the study methodology. Then the researcher employs a quantitative approach in this study because she wants to learn more about consumers' intentions for utilizing biometric smart door locks. Research design, research techniques, data collecting, research strategies, time horizon, questionnaire design, validity and reliability, and data analysis are some of the aspects that will be examined in this study.

CHAPTER FOUR

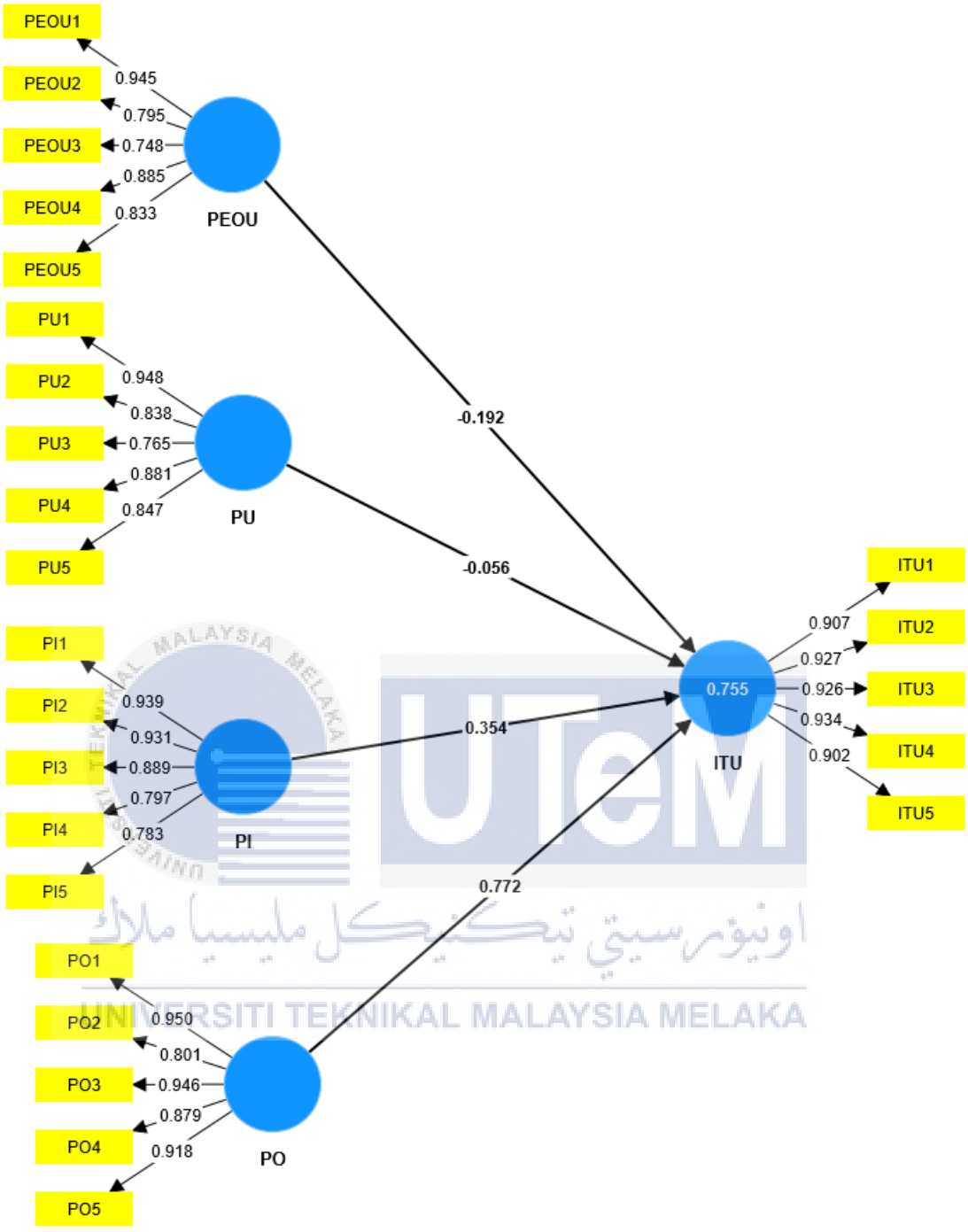
DATA ANALYSIS

4.0 Introduction

In this chapter, the analysis of quantitative research regarding the intention of students in public university to use AI on education was discussed. The data was gathered so that analysis could be done in order to achieve the goals that had been established. The data analysis was performed using version 4 of SmartPLS and SPSS software statistics 28. There were total of 7 sections that will be discussed in this chapter. It included Pilot test, Determine Reflective model using CTA, Factor loading, Construct Reliability & Construct Validity, Structural Equation Modelling (Inner Model), Descriptive Analysis of Demographic, Descriptive Analysis, Multiple Linear Regression, Hypothesis Testing and last but not least, Summary.

4.1 Pilot Test

In most cases, the first step that must be taken before distributing questionnaires to respondents is to conduct a pilot test. The validity and reliability of the questionnaires will be evaluated throughout the conducting phase of the research. In order to get opinions, feedbacks and suggestions from 25 respondents who are students at public universities Malaysia, a google form and questionnaires were sent out to them. The purpose of this was to inquire about their perspectives on the intention to use AI in education. In the figure 4.1 below shows the result of PLS-SEM Algorithm for pilot test. Besides that, in the table 4.1 below shows the Cronbach alpha for pilot test. Furthermore, in table 4.1 below, all factors in the pilot test add up to 0.923.



Figures 4.1 shows the result of PLS-SEM Algorithm for pilot test.

(Source: from Smartpls 4)

	Cronbach's alpha
ITU	0.954
PEOU	0.897
PI	0.918
PO	0.941
PU	0.909

Table 4.1 shows the Cronbach alpha for pilot test.

(Source: from Smartpls 4)

Throughout this examination, intention to use, perceived ease of use, perceived innovativeness, perceived optimism and perceived usefulness are picked as a questionnaire element. In a conclusion, as a general accepted degree of reliability is more than 0.70, thus the pilot test is considered logical and with the question that created.

4.2 Determine measurement model using CTA

In PLS-SEM, designing the measurement model is not always a simple process. Some studies already have difficulty determining whether the link between the indicators and the latent variable is formative or reflecting which stated by Ken Kwong-Kay Wong in 2019. The reflecting measurement mode is the one that is shown by default for the latent variable in SmartPLS 4. In other words, arrows can be seen pointing from the latent variable that is "circle-shaped" to the indicators that are "rectangular-shaped."

When constructing a formative measurement model, it might be troublesome if the researchers fail to switch the direction of the arrows. Besides that, Confirmatory Tetrad Analysis in PLS also known as CTA-PLS plus it is a method that was created by Gudergan, Ringle, Wende, and Will in 2008. Thankfully, this problem may be resolved for researchers who working with SmartPLS 4 by using this method (2008).

The sole constraint is that CTA-PLS can only assess latent variables that are connected with at least four indications. In a reflective or reflecting measurement model, each tetrad (τ) is assumed to be zero, according the premise of CTA-PLS. Therefore, it is formative if one or more of tetrads in the measurement model are considerably different from zero, stated by Ryoo, J. H., & Hwang, H. in 2017.

	CI Low adj.	CI Up adj.		Measurement Model is
If all values are…	-	-	Then	Formative
If all values are…	+	+	Then	Formative
If one or more of the values are	-	+	then	Reflective

Table 4.2 shows the guideline for using CI to determine the measurement model source: Mastering Partial Least Squares Structural Equation Modelling (PLS-SEM) with SmartPLS in 38 hours by Ken Kwong-Kay wong.

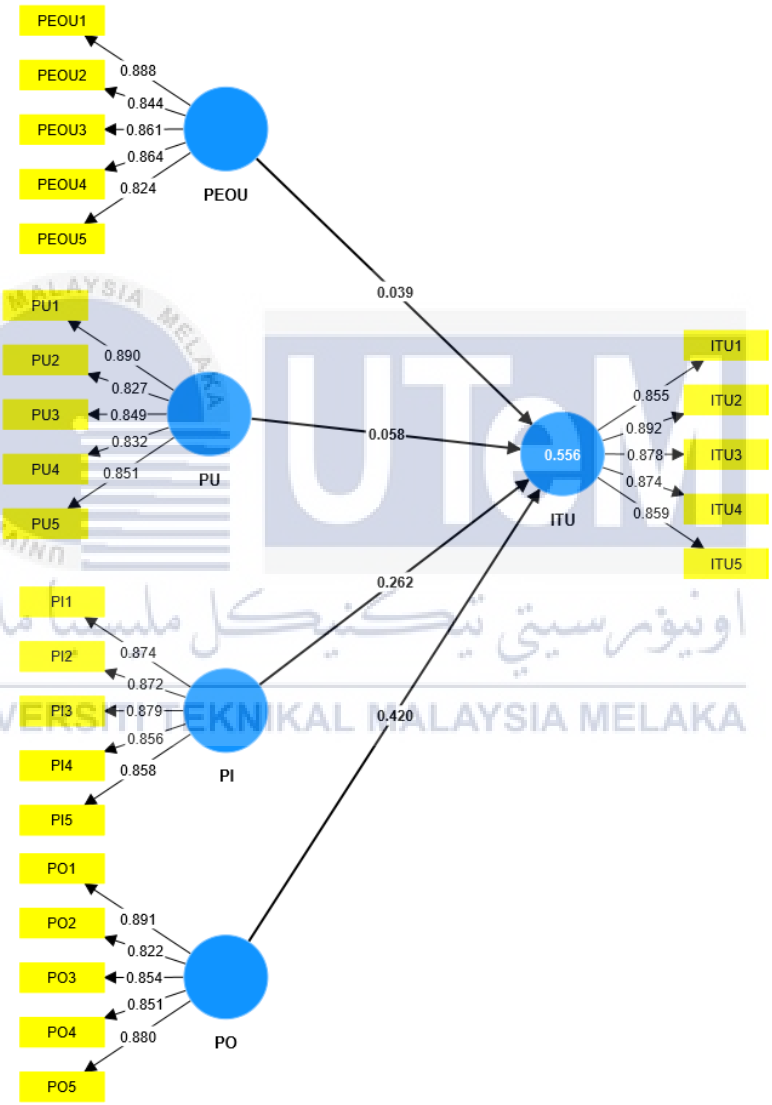
ITU	**CI low adj.**	**CI up adj.**
1: ITU1, ITU2, ITU3, ITU4	-0.186	0.06
2: ITU1, ITU2, ITU4, ITU3	-0.062	0.036
4: ITU1, ITU2, ITU3, ITU5	-0.062	0.08
6: ITU1, ITU3, ITU5, ITU2	-0.093	0.066
10: ITU1, ITU3, ITU4, ITU5	-0.067	0.15
PEOU	**CI low adj.**	**CI up adj.**
1: PEOU1, PEOU2, PEOU3, PEOU4	-0.133	0.321
2: PEOU1, PEOU2, PEOU4, PEOU3	-0.204	0.374
4: PEOU1, PEOU2, PEOU3, PEOU5	-0.311	0.149
6: PEOU1, PEOU3, PEOU5, PEOU2	-0.331	0.175
10: PEOU1, PEOU3, PEOU4, PEOU5	-0.077	0.201
PI	**CI low adj.**	**CI up adj.**
1: PI1, PI2, PI3, PI4	-0.127	0.133
2: PI1, PI2, PI4, PI3	-0.164	0.105
4: PI1, PI2, PI3, PI5	-0.209	0.058
6: PI1, PI3, PI5, PI2	-0.201	0.131
10: PI1, PI3, PI4, PI5	-0.16	0.21
PO	**CI low adj.**	**CI up adj.**
1: PO1, PO2, PO3, PO4	-0.186	0.05
2: PO1, PO2, PO4, PO3	-0.047	0.023
4: PO1, PO2, PO3, PO5	-0.09	0.085
6: PO1, PO3, PO5, PO2	-0.121	0.076
10: PO1, PO3, PO4, PO5	-0.055	0.19
PU	**CI low adj.**	**CI up adj.**
1: PU1, PU2, PU3, PU4	-0.055	0.126
2: PU1, PU2, PU4, PU3	-0.143	0.098
4: PU1, PU2, PU3, PU5	-0.068	0.056
6: PU1, PU3, PU5, PU2	-0.111	0.028
10: PU1, PU3, PU4, PU5	-0.022	0.097

Table 4.3 shows the table of CI Low adj and CI Up adj of variables for pilot test which is for 25 respondents.

(Source: from Smartpls 4)

In this research, each main variable has 5 tetrads according to table 4.3. It was found that perceived ease of use, perceived usefulness, perceived optimism and perceived innovativeness were having the reflective measurement model due to CI Low adj shows negative however CI Up adj shows positive, which showed in table 4.3. Due to the fact that SmartPLS used the reflective measurement model as the default

configuration, there is no need to modify the orientations of the arrows in our model according to Wong in 2013. In conclusion, researcher finalized that this research used a reflective measurement model, which presupposes that indicator variables are strongly linked and interchangeable, hence, the reflective measurement model is founded on the reliability and validity of the indicator variables. Figure 4.2 shows the result of PLS-SEM Algorithm.



Figures 4.2 shows the result of PLS-SEM Algorithm.

(Source: from Smartpls 4)

4.3 Factor Loading

The term "factor loading" describes "the degree to which each item in the correlation matrix connects with the specified main component. As stated by Pett et al. (2003), on page 299, noted that factor loading might be anywhere from -1.0 to +1.0, with larger absolute values indicating stronger associations between the item and the underlying factor ". If no items in the study had factor loadings below the acceptable value of 0.50, as indicated by Joseph F et al., 2016, then no additional items were excluded. In a conclusion, since the value of the factor loading for this research is more than the value of 0.5, none of the factor loading were excluded. Moreover, that that, factor loading is presented in table 4.4.

	ITU	PEOU	PI	PO	PU
ITU1	0.855				
ITU2	0.892				
ITU3	0.878				
ITU4	0.874				
ITU5	0.859				
PEOU1		0.888			
PEOU2		0.844			
PEOU3		0.861			
PEOU4		0.864			
PEOU5		0.824			
PI1			0.874		
PI2			0.872		
PI3			0.879		
PI4			0.856		
PI5			0.858		
PO1				0.891	
PO2				0.822	
PO3				0.854	
PO4				0.851	
PO5				0.88	
PU1					0.89
PU2					0.827
PU3					0.849
PU4					0.832
PU5					0.851

Table 4.4 shows the factor loadings.

(Source: from Smartpls 4)

4.4 Construct Reliability and Validity

According to Haradhan Kumar Mohajan in 2017, reliability and validity are the two most crucial, vital and essential aspects to consider when evaluating any measuring instrument or tool which used for a quality research study. Validity and reliability strengthen the transparency of qualitative research and reduce the potential for researcher bias, stated by Singh in 2014. Moreover, Saunders et al., in 2009 state that a comprehensive evaluation of the reliability and validity of secondary data necessitates an analysis of the data collection procedures.

Testing regarding reliability is crucial since it pertains to the uniformity of a measuring instrument's components stated by Huck in 2022. Tavakol & Dennick, in 2011 clarified that reliability and validity are essential ideas in research studies, since they are utilised to improve the accuracy of study assessment and evaluation. Besides that, without examining the research's reliability and validity, it will be impossible to characterise the implications of measurement errors on the measured theoretical connections mentioned by Forza in 2002.

Reliability of 0.60 or higher is recommended for a preliminary investigation, mentioned by Straub et al., in 2004. Specifically, Hinton et al. in 2004 propose four reliability thresholds which are excellent reliability (0.9 and above), high reliability (0.70 between 0.90), moderate reliability (0.50 between 0.70), and poor reliability (0.50). Although reliability is crucial to scientific inquiry, it is insufficient if not paired with validity. Therefore, a test must meet both validity and reliability criteria in order to be considered credible clarified by Wilson in 2010).

According to Blumberg et al. in 2005, validity is often understood or defined to refer to the degree to which an instrument measures what it claims to measure. The validity of a research instrument is the degree to which the instrument measures what it is intended to measure in the investigation stated by Goodenough et al., in 2012. It refers to how well the findings reflect the situation. Therefore, it is necessary to use a research instrument, such as a questionnaire, in order to accurately quantify the ideas that are being investigated clarified by Pallant in 2011. It takes into account the whole of the idea of the experiment and determines whether or not the findings gained satisfy all of the prerequisites for the scientific research method. According to Thatcher in

2010 explains that the concept of validity in quantitative research refers to the degree to which any measuring instrument measures what it is designed to measure.

4.4.1 Cronbach's Alpha

According to Tavakol et al., in 2011, Lee Cronbach invented the alpha statistic in 1951 to quantify the degree to which a test's or scale's items consistently elicit the same answers from different people. The degree to which all of a test's items assess the same notion or construct is referred to as internal consistency, and it is linked to the items' relationships with one another. In addition, an excessively high alpha might indicate that certain questions are unnecessary since they are essentially evaluating the same question in various ways mentioned by Tavakol et, al in 2011. It has been suggested that 0.90 be the highest acceptable alpha stated by Streiner in 2003.

	Cronbach's alpha
ITU	0.921
PEOU	0.909
PI	0.918
PO	0.912
PU	0.904

Table 4.5 shows the Cronbach's Alpha of each variables.

(Source: from Smartpls 4)

Cronbach's Alpha is often between 0 and 1, depending on the context. The better the internal consistency of the elements on the scale, the closer the Cronbach's Alpha Coefficient becomes to 1.0. The results of the reliability test are summarised in Table 4.5. The reliability coefficient must be at least 0.70 in order for it to be termed as "acceptable. Based on table 4.5 above, the Cronbach's Alpha value is 0.921 for intention to use, 0.909 for perceived ease of use, 0.918 for perceived innovativeness, 0.912 for perceived optimism and 0.904 for perceived usefulness. In a nutshell, Cronbach alpha for all factors are accepted, since, it is more than 0.7.

4.4.2 Composite Reliability

Joreskog's in 1971, composite dependability rho_c is one of the main measurements used in PLS-SEM. Greater values imply greater degrees of dependability. For instance, in exploratory research, reliability ratings between 0.60 and 0.70 are regarded "acceptable," and values between 0.70 and 0.90 are "satisfying to good" stated by Diamantopoulos et al., in 2012. Composite reliability, also known as construct reliability, is a measure of the internal consistency of scale items, very similar to Cronbach's alpha.

Sometimes build reliability is referred to as composite reliability (Netemeyer, 2003). According to Brunner and Süß (2005), one way to conceptualise it is as being equivalent to the whole amount of actual score variance relative to the total scale score variance. Alternately, it may be described as the "indicator of the shared variance among the observable variables that is employed as an indication of a latent construct" (Fornell & Larcker, 1981). Although Cronbach's alpha tends to lean toward conservatism, the composite reliability rho_c may be too optimistic.

The genuine reliability of the concept is often thought of as falling somewhere in the middle of these two extreme values. As an alternative, and expanding on Dijkstra's in 2009 work, later research has suggested the exact (or consistent) reliability coefficient known as rho_c. clarified by Dijkstra in 2014; Dijkstra & Henseler, in 2015. Because it often falls somewhere in the middle of the more conservative Cronbach's alpha and the more liberal composite reliability, the reliability coefficient rho_A is generally seen as a suitable compromise between these two measurements. From table 4.6 below, composite reliability statistics ranged from 0.929 to 0.941. In conclusion, because values are more than 0.70, it has been proved that the reflective latent variable has a high degree of internal consistency reliability.

	Composite reliability (rho_c)
ITU	0.941
PEOU	0.932
PI	0.938
PO	0.934
PU	0.929

Table 4.6 shows the composite reliability (rho_c) of each variable.

(Source: Source: from Smartpls 4)

4.4.3 Convergent Validity

How well a concept converges to account for the variation in its indicators is a measure of its convergent validity. Average variance extracted (AVE) for all indicators on each concept is the statistic used to assess convergent validity. As the average of the squared loadings of the indicators related to the construct, the AVE may be thought of as the overall average of the indicators such as the sum of the squared loadings divided by the number of indicators. Besides that, this means that the AVE is analogous to a structure's shared nature. To be considered valid, an AVE must be at least 0.50, which means that the construct accounts for at least 50% of the variation in its underlying indicators stated by Hair et al., in 2022. Moreover, than that, to calculate AVE, we take the mean squared loadings of all indicators related to the construct and take the absolute value of it mentioned by Ramayah et al., in 2018). In order to have a positive AVE, it must be more than 0.50, clarified by Hair, Ringle, & Sarstedt, in 2011 and Hair et al., in 2018. In a conclusion, AVE for all factors are accepted.

	Average variance extracted (AVE)
ITU	0.76
PEOU	0.734
PI	0.753
PO	0.74
PU	0.722

Table 4.7 shows the average variance extracted.

(Source: from Smartpls 4)

4.4.4 Discriminant Validity

According to Hair et al., in 2022, the purpose of the discriminant validity check is to make sure that a reflective construct has the most robust associations with its own indicators (such as relative to all other constructs) in the PLS path model. As part of the process of establishing a model's discriminant validity, researchers must ensure that all its constructs are really distinguishable from one another (Kock, 2014; 2015; 2020b; Kock & Lynn, 2012). Besides that, if a model lacks discriminant validity, then it's unclear if the findings are supported by the data or whether the model just used the same construct repeatedly. Moreover, than that, Fornell and Larcker's (1981) criteria, as well as cross-loadings, (HTMT) known as the heterotrait-monotrait ratio, and a comprehensive examination of collinearity are just a few methods that have been proposed for evaluating discriminant validity in PLS-SEM. However, the last approach (i.e., complete collinearity) may be used for both reflective and formative constructions (Rasoolimanesh et al., 2017), whereas the previous three approaches can only be used for reflective constructs.

4.4.4.1 Fornell & Larcker

The Fornell-Lacker criteria is used in the process of determining whether or not a discriminant is legitimate which clearly stated by Fornell C and Cha J in 1994. Besides that, this methodology examines the relationship between the square root of the average variance extracted (AVE) and the correlation of latent constructs mentioned by Hair J, et al., in 2014. It is more important for a latent construct to adequately explain the variation of its own indicator than it is to adequately explain the variance of other latent constructs. Therefore, Hair J, et al., in 2014 also clarified that the square root of each construct's AVE ought to have a bigger value than the correlations with other latent constructs. However, in this research, some of the Fornell & Larcker for these variables is not bigger than the correlations with other latent constructs. Thus, researcher going to use cross loading also to determine whether the discriminant is legitimate or not.

	ITU	PEOU	PI	PO	PU
ITU	**0.872**				
PEOU	0.683	**0.857**			
PI	0.709	0.878	**0.868**		
PO	0.728	0.868	0.867	**0.86**	
PU	0.661	0.857	0.851	0.826	**0.85**

Table 4.8 shows the Fornell & Larcker value of each variable.

(Source: from SmartPLS 4)

4.4.4.2 Cross loading

Cross Loading is an alternative method for determining the discriminant validity. When each assessment item has a weak correlation with any construct other than the ones with which it is theoretically connected, discriminant validity has been shown, as stated by Gefen and Straub (2005). Besides that, researchers use cross-loadings to determine whether objects have high loadings on more than one build, as well as which items have high loadings on the same construct. Thus, significant item-to-item correlation within the same construct and low item-to-item correlation across constructs is required to prove discriminant validity at the item level. In spite of its seeming simplicity, this strategy lacks neither theoretical underpinnings nor empirical support (Henseler et. al., 2015). In a nutshell, based on table 4.9 below, the findings support the conclusion that discriminant validity has been demonstrated.

	ITU	PEOU	PI	PO	PU
ITU1	**0.855**	0.584	0.609	0.653	0.559
ITU2	**0.892**	0.635	0.654	0.652	0.621
ITU3	**0.878**	0.531	0.584	0.583	0.535
ITU4	**0.874**	0.652	0.645	0.669	0.581
ITU5	**0.859**	0.565	0.595	0.612	0.581
PEOU1	0.662	**0.888**	0.782	0.793	0.742
PEOU2	0.575	**0.844**	0.738	0.713	0.717
PEOU3	0.573	**0.861**	0.75	0.742	0.74
PEOU4	0.603	**0.864**	0.768	0.779	0.755
PEOU5	0.492	**0.824**	0.722	0.679	0.722
PI1	0.605	0.755	**0.874**	0.719	0.734
PI2	0.683	0.744	**0.872**	0.777	0.737
PI3	0.577	0.765	**0.879**	0.751	0.742
PI4	0.63	0.758	**0.856**	0.751	0.748
PI5	0.57	0.792	**0.858**	0.762	0.733
PO1	0.692	0.775	0.766	**0.891**	0.718
PO2	0.578	0.749	0.726	**0.822**	0.727
PO3	0.569	0.705	0.712	**0.854**	0.689
PO4	0.594	0.75	0.716	**0.851**	0.671
PO5	0.682	0.753	0.802	**0.88**	0.745
PU1	0.578	0.774	0.768	0.747	**0.89**
PU2	0.561	0.696	0.684	0.692	**0.827**
PU3	0.526	0.728	0.754	0.69	**0.849**
PU4	0.568	0.725	0.679	0.674	**0.832**
PU5	0.572	0.72	0.734	0.704	**0.851**

Table 4.9 show the value of cross loading for each variable.

(Source: from Smartpls 4)

In a nutshell, when one construct has a higher loading connection with other constructs than any other, this is known as cross loading. For instance, the value of cross loading for ITU1 with ITU construct is 0.855, for ITU2 is 0.892, for ITU3 is 0.878, for ITU4 is 0.874, and for ITU5 is 0.859. Besides that, each indication demonstrates the same outcomes across a variety of different frameworks. Furthermore, based on table 4.9 above, the findings support the conclusion that discriminant validity has been demonstrated.

4.5 Structural Equation Modelling

In the social sciences, structural equation modelling which known as (SEM) is a potent multivariate analytic approach stated by Gonzalez J et al., in 2008. According to Cheung GW in 2008, mentioned that it may be used for anything from a basic correlation study to more advanced assessments of measurement equivalence for first- and second-order entities. Researchers are able to put hypotheses to the test by building and evaluating complicated interactions between numerous variables within this framework.

One of the biggest drawbacks of studies is that they often fail to account for measurement error, therefore this may be their greatest strength. It has been utilised in certain fields, but not nearly as often in others, including medicine and epidemiology, declared by Tanya N Beran & Claudio Violato in 2010. According to Cudeck R et al., in 2009, SEM is a group of statistical techniques that may be used to both linear and nonlinear models, allowing researchers to examine the relationships between numerous components. In a conclusion, path coefficients and coefficient of determination may be used to evaluate the PLS SEM structural model (r2).

The size of a route coefficient indicates how powerful a causal relationship is. Without the path coefficient being statistically significant, its magnitude is meaningless, declared by et al., in 2018. Figure 4.2 displays the outcome of this bootstrapping exercise. To get estimated T-values for significance testing of the structural route, this method takes several subsamples from the original sample with replacement and averages the results. The Bootstrap estimate of data normalcy is rather close.

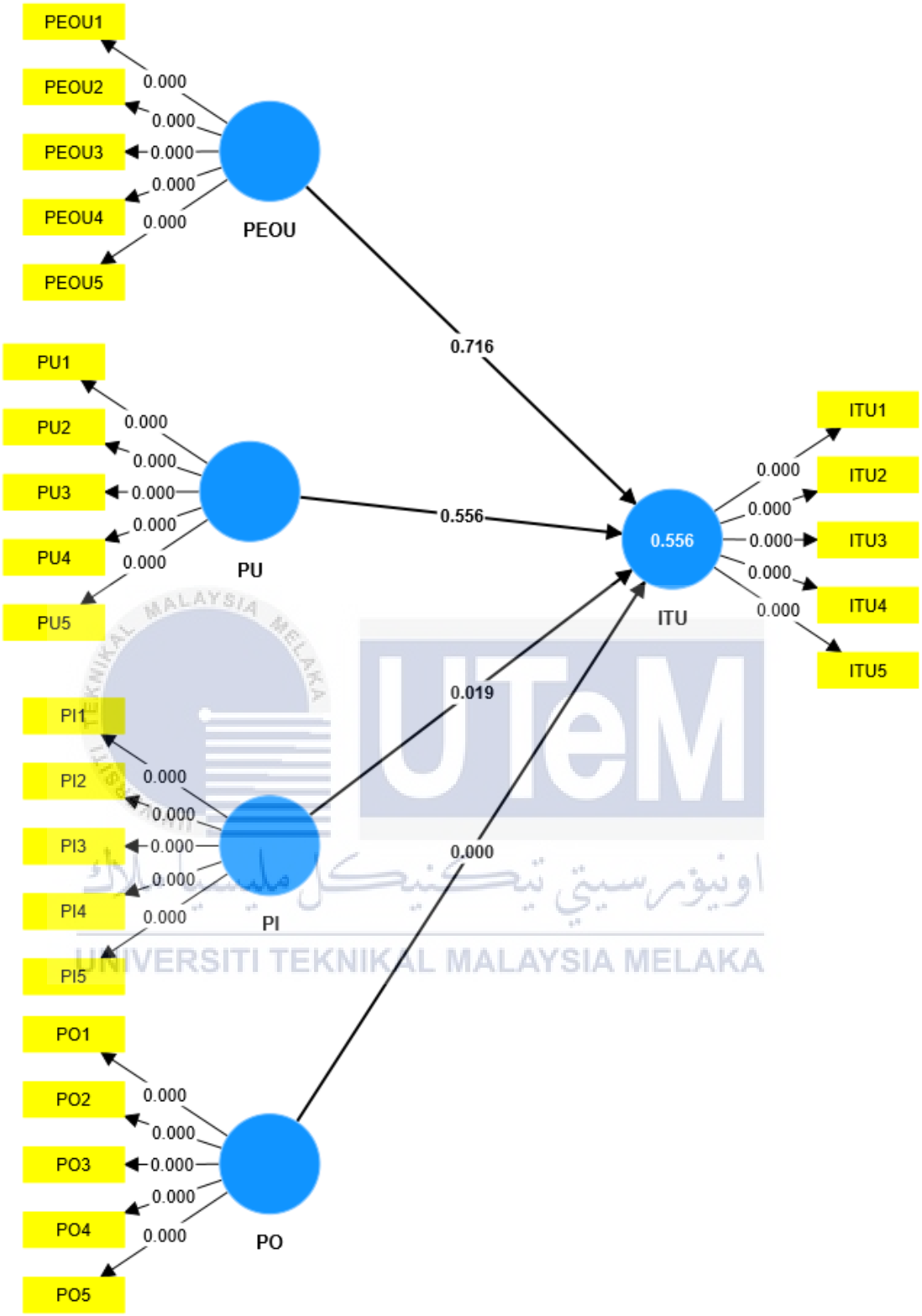


Figure 4.3 shows the Bootstrapping.

(Source: from Smartpls 4)

4.5.1 Path Coefficients

As a hypothesis, the structural model's "path" between two latent variables was taken into account. Measures of statistical significance and absolute values of path coefficients were analysed to check the structural model and assumptions. When the structural model is analysed, the researcher may determine the validity of each hypothesis and learn more about the interplay between the latent variables, clarified by Mohamed et al., in 2018. The results from the SmartPLS algorithm were used to analyse the connections between the latent variables. Conversely, the SmartPLS bootstrapping algorithm generates t-statistics for all pathways in order to assess the significance threshold. Besides that, the strength of the association between the latent variables will be determined using a correlation analysis, which will precede any examination of the correlations between the latent variables.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
PEOU -> ITU	0.039	0.044	0.106	0.364	**0.716**
PI -> ITU	0.262	0.255	0.112	2.344	**0.019**
PO -> ITU	0.42	0.418	0.105	4.004	**0**
PU -> ITU	0.058	0.059	0.098	0.589	**0.556**

Table 4.10 show path coefficient.

(Source: from Smartpls 4)

Hence, based on Table 4.10, perceived innovativeness (PI) and perceived optimism (PO) significantly affect intention to use AI on education among public university students. However, perceived ease of use (PEOU), and perceived usefulness (PU) does not significantly intention to use AI on education among public university students.

4.5.2 Coefficients of Determination

PLS techniques generate R-square, much as multiple regression analysis does, to find out how much of the construct's variation the model explains (Barclay, Higgins, & Thompson, 1995). Consequently, R-square values will indicate how well the model explains the data. The coefficient of determination in PLS may be interpreted in the same way as the R2 or R-square adjusted from a regression study. Furthermore, the predictive accuracy of a structural model is quantified by its coefficient of determination, which reflects the total effect size and variation explained by the endogenous component. Table 4.11 shows the quality endogenous latent component has an inner path model of 0.556 in this research. This means that the five latent constructs accounted for around 55.6% of the variation in project quality, with the four independent constructs accounting for the remaining 44.4%. According to Henseler et al. and Hair et al, the R-square adjusted value of 0.75 is considered to be very considerable, a R-square adjust value of 0.50 is considered to be moderate, and a R-square adjusted value of 0.26 is considered to be weak. Since R-square adjusted = 0.546 and r-square = 0.556, the R-square adjusted value in this research is considered as a moderate.

	R-square	R-square adjusted
ITU	0.556	0.546

Table 4.11 shows the r-square and r-square adjusted value.

(Source: from Smartpls 4)

4.6 Descriptive analysis of Demographic

In connection to the descriptive analysis, a total of 180 respondents were being evaluated at the time of this writing. The respondents' gender, age, race, years of study, name of their IPTA, and prior experience with the use of AI's educational applications are the factors that go into creating the demographic profile.

4.6.1 Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	101	56.1	56.1	56.1
	Male	79	43.9	43.9	100.0
	Total	180	100.0	100.0	

Table 4.12 shows the Gender of the respondent.

(Source: from SPSS 28 Output)

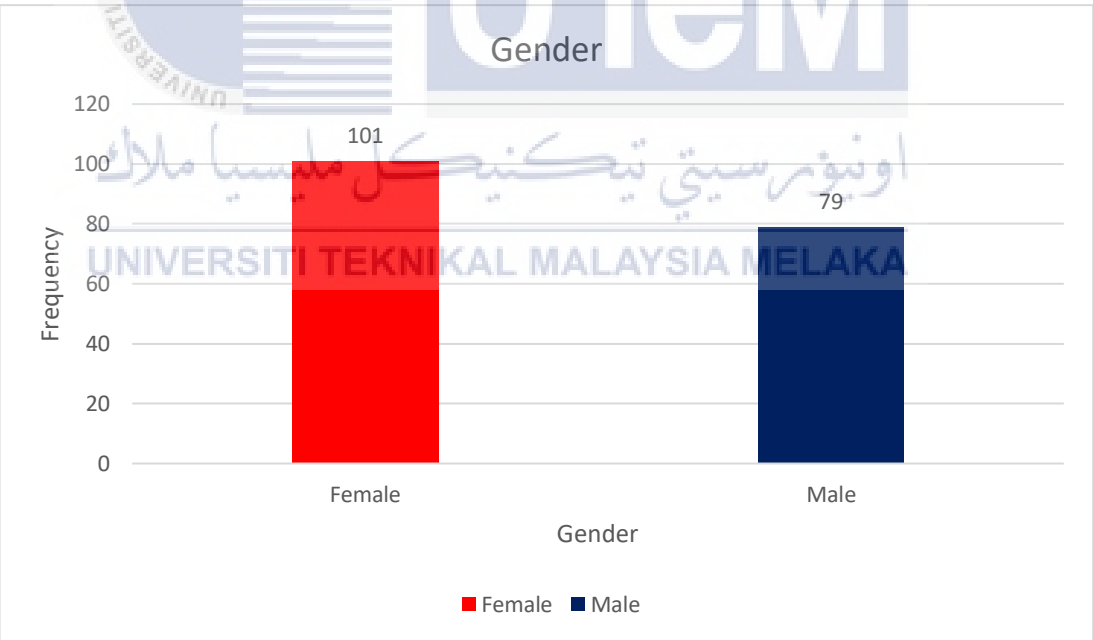


Figure 4.4 shows the Gender of the respondent.

According to the data shown in table 4.12, which can be seen above, there are 79 male respondents, which is equivalent to 43.9%, while there are 101 female respondents, which is equivalent to 56.1% of the total. Since the questionnaires are

being delivered at random to all IPTA students in Malaysia, thus the percentages between the male and female respondent is unequal.

4.6.2 Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years old	165	91.7	91.7	91.7
	26-35 years old	13	7.2	7.2	98.9
	Above 35 years old	2	1.1	1.1	100.0
	Total	180	100.0	100.0	

Table 4.13 shows the age of respondent.

(Source: from SPSS 28 Output)

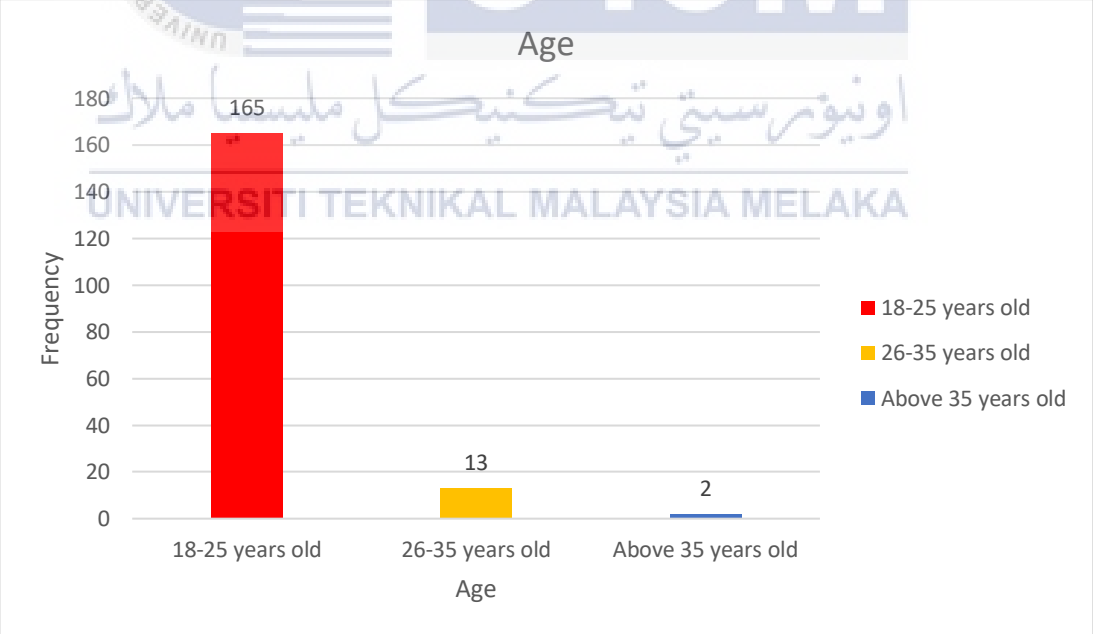


Figure 4.5 shows the age of respondent.

As can be seen in Table 4.6.2 up above, there are three distinct age groups among the respondents which are aged 18 to 25 years old, aged 26 to 35 years old, and aged 35 and beyond. In regard to the result that was presented earlier, it was made abundantly clear that the majority of the respondents are between the ages of 18 to 25 years old, where the number of respondents is 165 (91.7%), while the second highest number of respondents are between the ages of 26 to 35 years old, with the number of respondents being 13 (7.2%). In addition, just 2 of the respondents, or 1.1% of the total, are older than 35 years old.

4.6.3 Race

Race					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Chinee	64	35.6	35.6	35.6
	Indian	52	28.9	28.9	64.4
	Malay	64	35.6	35.6	100.0
	Total	180	100.0	100.0	

Table 4.14 shows the race of the respondent.

(Source: from SPSS 28 Output)

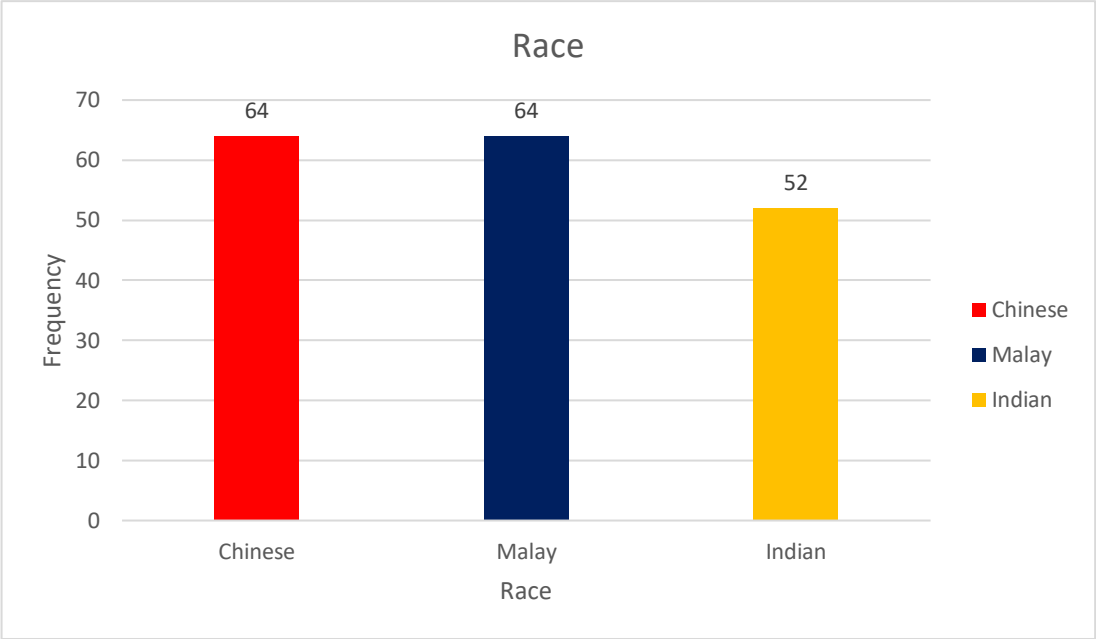


Figure 4.6 shows the race of the respondent.

According to the data presented in table 4.6.3, the results indicate that the highest percentage of respondents who are from Chinese and Malay ethnicity with the frequency of 64 respondents (35.6%), then followed by Indian ethnicity which is 52 respondents (28.9%).

4.6.4 Year of study

Year of Study					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Year 1	34	18.9	18.9	18.9
	Year 2	36	20.0	20.0	38.9
	Year 3	58	32.2	32.2	71.1
	Year 4	52	28.9	28.9	100.0
	Total	180	100.0	100.0	

Table 4.15 shows the year of study of respondent in public universities.

(Source: from SPSS 28 Output)

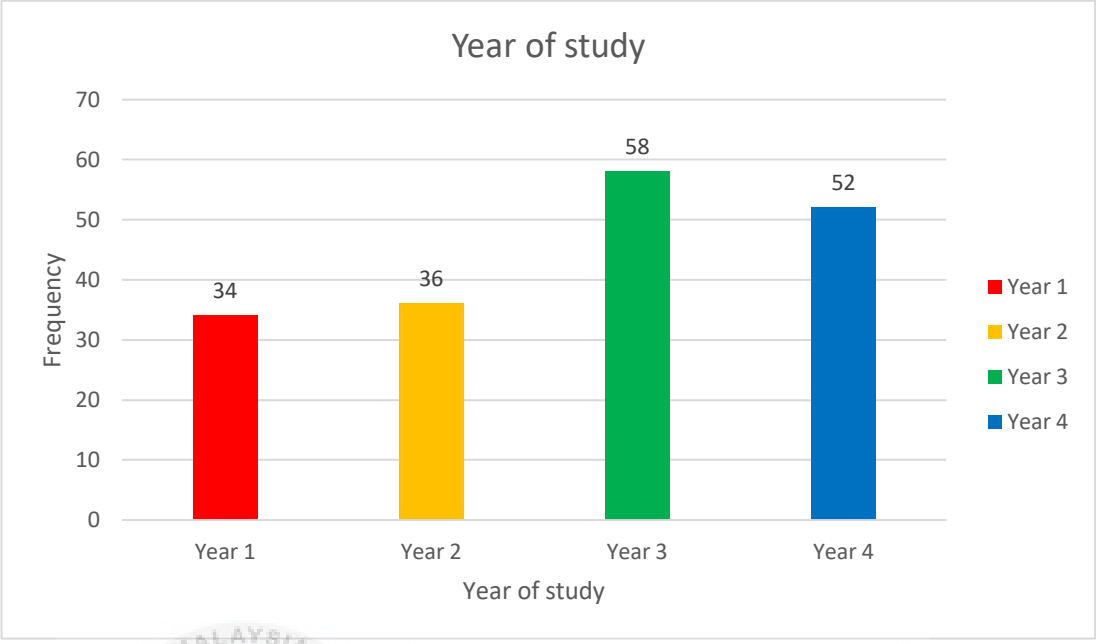


Figure 4.7 shows the year of study of respondent in public universities.

According to the data shown in Table 4.15, which can be seen up above, there are four different groups which are year 1, 2, 3, and 4. In regard to the result that was presented earlier, it was made abundantly clear that the majority of the respondents are from the year 3 group, where the number of respondents is 58 (32.2), while the second highest number of respondents are from the year 4 group, with the number of respondents being 52 (28.9%). In addition, the total number of respondents for year 2 is 36 (20%), while the total number of respondents for year 1 is 34 (18.9%), representing a difference of 1.1% between year 1 and year 2.

4.6.5 Public Universities

Public University					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Universiti Islam Antarabangsa Malaysia	15	8.3	8.3	8.3
	Universiti Kebangsaan Malaysia	20	11.1	11.1	19.4
	Universiti Malaya	9	5.0	5.0	24.4
	Universiti Malaysia Kelantan	11	6.1	6.1	30.6
	Universiti Malaysia Pahang	9	5.0	5.0	35.6
	Universiti Malaysia Perlis	3	1.7	1.7	37.2
	Universiti Malaysia Sabah	5	2.8	2.8	40.0
	Universiti Malaysia Sarawak	5	2.8	2.8	42.8
	Universiti Malaysia Terengganu	11	6.1	6.1	48.9
	Universiti Pendidikan Sultan Idris	4	2.2	2.2	51.1
	Universiti Pertahanan Nasional Malaysia	5	2.8	2.8	53.9
	Universiti Putra Malaysia	8	4.4	4.4	58.3
	Universiti Sains Islam Malaysia	4	2.2	2.2	60.6
	Universiti Sains Malaysia	8	4.4	4.4	65.0
	Universiti Sultan Zainal Abidin	5	2.8	2.8	67.8
	Universiti Teknikal Malaysia Melaka	18	10.0	10.0	77.8
	Universiti Teknologi Malaysia	11	6.1	6.1	83.9
	Universiti Teknologi MARA	5	2.8	2.8	86.7

	Universiti Tun Hussein Onn Malaysia	15	8.3	8.3	95.0
	Universiti Utara Malaysia	9	5.0	5.0	100.0
	Total	180	100.0	100.0	

Table 4.16 shows the public universities's name of respondent.

(Source: from SPSS 28 Output)

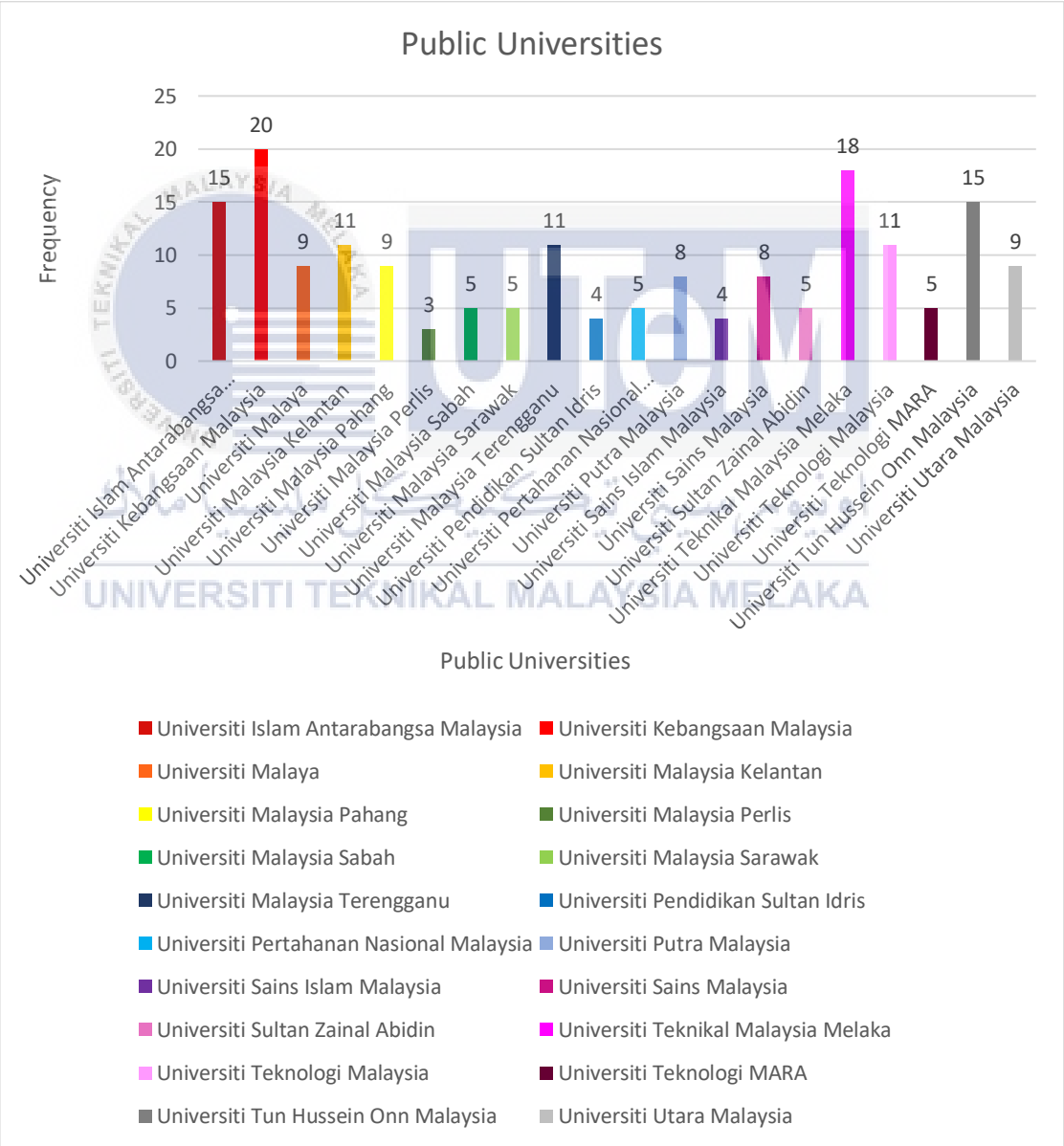


Figure 4.8 shows the public universities' name of respondent.

Based on table 4.16 above, the highest respondent using AI's application on education was from Universiti Kebangsaan Malaysia, where the number of respondents is 20 (11.1%). Moreover, than that, the second highest respondent using AI' s application on education was from Universiti Islam Antarabangsa Malaysia, Universiti Teknikal Malaysia Melaka, and Universiti Tun Hussein Onn Malaysia with the number of respondents being 15 (8.3%). Then, the university which take third place for high respondents to use AI's application on education is from Universiti Malaysia Kelantan, Universiti Malaysia Terengganu, and Universiti Teknologi Malaysia which the number of respondents is 11 (6.1%), while the fourth place was taken by Universiti Utara Malaysia, Universiti Malaysia Pahang and Universiti Malaya's respondent which stand for 9 respondents (5.0%) for using AI's application on education. Furthermore, Universiti Sains Malaysia and Universiti Putra Malaysia have 8 respondents (4.4%) who have use AI on education. Then, Universiti Teknologi MARA, Universiti Sultan Zainal Abidin, Universiti Pertahanan Nasional Malaysia, Universiti Malaysia Sarawak, and Universiti Malaysia Sabah have 5 respondent (2.8%) who use AI on education while only 4 respondents (2.2%) from Universiti Sains Islam Malaysia, and Universiti Pendidikan Sultan Idris use AI on education. Last but not least, only 3 respondents (1.7%) from Universiti Malaysia Kelantan use AI on education. Respondent from Universiti Malaysia Kelantan shows the least among other universities students who use AI on education.

4.6.6 Usage of AI's application before

Usage of AI's application before					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	28	15.6	15.6	15.6
	Yes	152	84.4	84.4	100.0
	Total	180	100.0	100.0	

Table 4.17 shows the statistics usage of AI used by respondents.

(Source: from SPSS 28 Output)

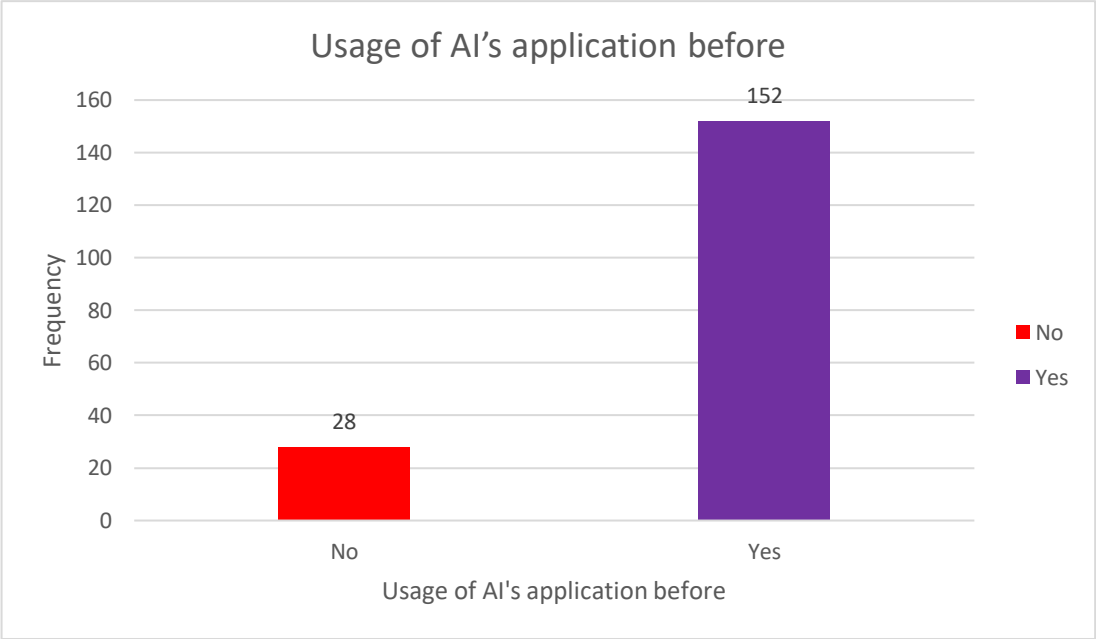


Figure 4.9 shows the statistics usage of AI used by respondents.

The utilisation of AI's application is shown in table 4.17, which is based on the responses from the respondents. According to this study, there are 152 respondents who have used AI's application on education previously, accounting for 84.4% of the total, while only 28 respondents, or for 15.6% of the total, have not used AI's application on education before

4.7 Descriptive Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Perceived ease of use	180	1.00	5.00	4.0444	.73159
Perceived usefulness	180	1.20	5.00	4.0422	.70115
Perceived innovativeness	180	1.00	5.00	4.1056	.73945
Perceived optimism	180	1.00	5.00	4.0533	.71804
Intention to use	180	1.00	5.00	4.0589	.69562
Valid N (listwise)	180				

Table 4.18 shows the Descriptive Analysis for All Interval Scale Variable.

(Source: from SPSS 28 Output)

The descriptive analysis of the mean and standard deviation for each variable among the 180 respondents was shown by the data in table 4.18, which can be found above. When analysing the variables, a Likert scale was used, and the mean result for all of them is more than 4.0. The mean for perceived innovativeness is the greatest, coming in at 4.106, followed by intention to use with 4.059, then perceived optimism with 4.053, and perceived ease of use, which is 4.044. In contrast, perceived usefulness turned out to be the lowest, as its mean just 4.042. Table 4.18 shows that the majority of respondents agree that perceived innovativeness and perceived optimism have affected public universities students' intention to use AI on education during Covid-19 pandemic. In addition to this, when looking at the standard deviation, perceived innovativeness comes out on top as having the highest value, which is 0.739. The second factor is the perceived ease of use, which received a score of 0.732. In addition to that, the score for perceived optimism was 0.718, the score for perceived usefulness was 0.701, and the score for intention to use was 0.696.

4.8 Multiple Linear Regression

In this area of investigation, a statistical method called multiple linear regression is used as a tool in order to provide an explanation for the connection that exists between two or more independent variables and one continuous variable. As a result, there are four independent factors such as perceived usefulness, perceived ease of use, perceived innovativeness and perceived optimism, with the intention to use serving as the dependent variable. The results of the data analysis were presented in the tables that followed.

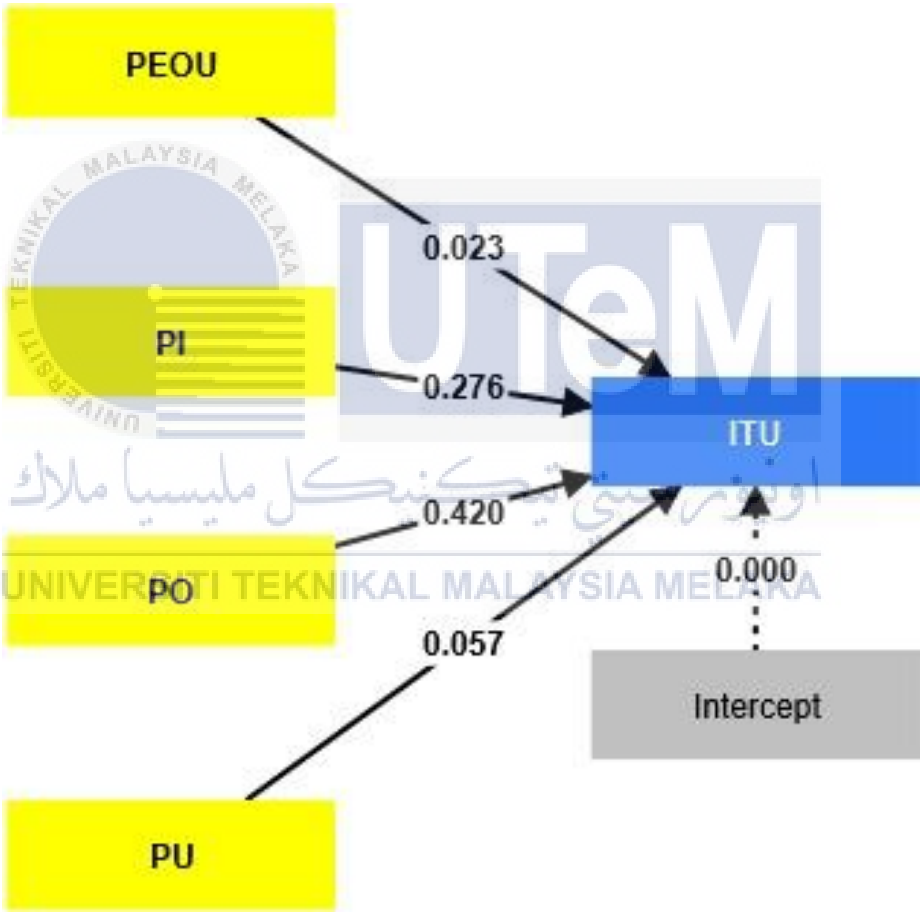


Figure 4.10 shows the Standardized coefficients

(Source: from Smartpls 4)

	ITU
R-square	0.552
R-square adjusted	0.542

Table 4.19 shows the r-square and r-square adjusted for multiple linear regression

(Source: from Smartpls 4)

According to the table 4.19 above, r-square is 0.552, which corresponds to a total variance of 55.2% in the intention to use that may be influenced by four independent factors, such as perceived ease of use, perceived usefulness, perceived innovation, and perceived optimism. Additionally, it might be noted that 100% -55.2 % = 44.8% is caused by other factors that might affecting the intention to use.

	Sum square	df	Mean square	F	P value
Total	86.616	179	0	0	0
Error	38.764	175	0.222	0	0
Regression	47.852	4	11.963	54.006	0

Table 4.20 shows the ANOVA of Multiple Linear Regression

(Source: from Smartpls 4)

Based on the table 4.20 above, which is ANOVA of the multiple linear regression, the f-value is 54.006. The significant level was reported to be 0.000 brought up a significant relationship between perceived ease of use, perceived usefulness, perceived innovativeness and perceived optimism as the p-value is smaller than ($p<0.05$) however, p-value in coefficient of multiple linear regression has different value for each factor.

Model	Unstandardized coefficients	Standardized coefficients	SE	T value	P value	2.50%	97.50%
PI	0.259	0.276	0.117	2.224	0.027	0.029	0.49
PU	0.056	0.057	0.109	0.517	0.606	-0.158	0.271
PO	0.407	0.42	0.11	3.681	0	0.189	0.625
PEOU	0.022	0.023	0.119	0.185	0.853	-0.213	0.257
Intercept	1.03	0	0.214	4.817	0	0.608	1.451

Table 4.21 shows the coefficient of Multiple Linear Regression

(Source: from Smartpls 4)

According to the information shown in table 4.21, which can be found above, each of the independent variables contributes an input, which is to determine the intention of public university students to use AI on education. Having said that, the most powerful predictor is perceived optimism, with a unstandardized coefficient is 0.407, t (180) = 3.681 and a significance level is 0 which less than 0.05. The reason why unstandardized beta (β) shows that perceived optimism has the largest positive value compared to other independent variables due to it is the most optimistic outlook. As a consequence of this, one's level of perceived optimism has the greatest impact on the strength of positive relationships with intentions to use AI in educational settings.

Perceived innovativeness was placed as the second strongest predictor where unstandardized coefficients is 0.259, t (180) =2.224, and the p-value was less than 0.05 which is 0.027. Similarly, the unstandardized beta of perceived innovativeness would be in the second in terms of positive value in contrast with the most of independent variables. In addition to this, perceived usefulness was shown to be the third greatest predictor where unstandardized coefficients are 0.056, and t (180) = 0.517. Even though the unstandardized beta, for perceived usefulness reported to be the third highest value, but this factor does not have a significant relationship with the intention

to use AI in education. This is due to the fact that the p-value for perceived usefulness reveals a 0.606 for p-value, as was stated in table 4.21.

Last but not least, the lowest predictor among all independent variables is perceived ease of use, where unstandardized coefficients are 0.022, t (180) = 0.815, and P>0.05 which is 0.853. This meant that perceived ease of use does not have significant relationship with intention to use AI on education. From the finding, it has been concluded that every one of the independent variables has its own significant and not significant which make differences for predictor towards the public university students' intention to use AI on education. Based on the analysis from multiple regression, two of the independent variables which is perceived innovativeness and perceived optimism have significant relationship with the intention to use AI on education while another independent variables which is perceived ease of use and perceived usefulness does not have significant relationship with the intention to use AI on education among public university students.

4.9 Hypothesis Testing

Following a run of the partial least square algorithm in SmartPLS 4.0, the hypotheses may be tested to see whether they were supported. A Paired Sample t-test with a 5% significance level (= 0.05) was used to evaluate the hypotheses. Therefore, the hypothesis was accepted if the significance level (Sig.) was less than 0.05 and was rejected if the level was more than 0.05. Table 4.22 displays the results of all hypothesis tests.

Hypothesis	Relationships	Original sample (O)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	Results
HI	PEOU -> ITU	0.039	0.044	0.106	0.716	Not Supported
H2	PU -> ITU	0.058	0.059	0.589	0.556	Not Supported
H3	PI -> ITU	0.262	0.255	0.112	0.019	Supported
H4	PO -> ITU	0.42	0.418	4.004	0	Supported

Table 4.22 shows the Hypothesis testing results of Structural Model.

(source: SmartPLS 4)

In this research, the findings of testing hypotheses are detailed as follows:

Hypothesis 1: Perceived Ease of Use

H0: There is no significant relationship between the perceived ease of use and student's intention to use AI on education.

H1: There is significant relationship between the perceived ease of use and the student's intention to use AI on education

Based on the result, the perceived ease of use does not have a significant relationship with public universities students' intention to use AI on education. This indicates that there was a negative relationship between perceived ease of use and public universities students' intention to use AI on education, where t-value is 0.106 and p-value is 0.716 which is higher (> 0.05) than 0.05. Therefore, it can be concluded that the second hypothesis which stated " there is significant relationship between perceived ease of use and the students' intention to use AI on education" was not

supported and rejected however the first hypothesis which stated " there is no significant relationship between the perceived ease of use and student's intention to use AI on education" was accepted.

Hypothesis 2: Perceived Usefulness

H0: There is no significant relationship between the perceived usefulness and student's intention to use AI on education.

H2: There is significant relationship between the perceived usefulness and the student's intention to use AI on education.

Based on the result, the perceived usefulness does not have a significant relationship with public universities students' intention to use AI on education. This indicates that there was a negative relationship between perceived usefulness and public universities students' intention to use AI on education, where t-value is 0.589 and p-value is 0.556 which is higher (> 0.05) than 0.05. Therefore, it can be concluded that the second hypothesis which stated " there is significant relationship between perceived usefulness and the students' intention to use AI on education" was not supported and rejected however the first hypothesis which stated " there is no significant relationship between the perceived usefulness and student's intention to use AI on education" was accepted.

Hypothesis 3: Innovativeness

H0: There is no significant relationship between the innovativeness and student's intention to use AI on education.

H3: There is significant relationship between the innovativeness and the student's intention to use AI on education.

Based on the result, the perceived innovativeness has a significant relationship with public universities students' intention to use AI on education. This indicates that

there was a positive relationship between perceived innovativeness and public universities students' intention to use AI on education, where t-value is 0.112 and p-value is 0.019 which is lower (< 0.05) than 0.05. Therefore, it can be concluded that the second hypothesis which stated " there is significant relationship between perceived innovativeness and the students' intention to use AI on education" was supported and however the first hypothesis which stated " there is no significant relationship between the perceived innovativeness and student's intention to use AI on education" was rejected.

Hypothesis 4: Optimism

HO: There is no significant relationship between the optimism and student's intention to use AI on education.

H4: There is significant relationship between the optimism and the student's intention to use AI on education

Based on the result, the perceived optimism has a significant relationship with public universities students' intention to use AI on education. This indicates that there was a positive relationship between perceived optimism and public universities students' intention to use AI on education, where t-value is 4.004 and p-value is 0 which is lower (< 0.05) than 0.05. Therefore, it can be concluded that the second hypothesis which stated " there is significant relationship between perceived optimism and the students' intention to use AI on education" was supported and however the first hypothesis which stated " there is no significant relationship between the perceived optimism and student's intention to use AI on education" was rejected.

4.10 Summary

In summary, this chapter has discussed on the result and data that has been developed using SmartPLS 4 software and SPSS software. This software was chosen by the researcher for the purpose on making data analysis on 180 respondents to research about public universities students' intention to use AI on education. Primarily, reliability research was used mainly to assess the reliability of questionnaire which involved independents factors (perceived usefulness, perceived ease of use, perceived security and perceived innovativeness) and one dependent factor (intention to use). 25 respondents have been chosen ahead to make pilot test and the result showed that this research has reached its validity test and reliability standard which used by SmartPLS. Moreover, a detailed review of demographic background of respondents is performed using descriptive analysis with SPSS software. Then, t-value and p-values was used to evaluate the hypothesis. According to the hypothesis result, it showed that perceived optimism and perceived innovativeness have a significant relationship with the public universities students' intention to use AI on education meanwhile another 2 independent variables which are perceived ease of use and perceived usefulness does not have a significant relationship with public universities students' intention to use AI on education.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This is the last chapter of this research project, and in it, the researcher will be addressed on the summary of results in relation with the study goals based on the data that was evaluated. In this chapter, the researcher will provide a short explanation not only of the implication of the study but also of the limitations of the research. In addition to that, a proposal for the future study will be offered, and a conclusion will be drawn based on the analysis of the data.

5.1 Summary of Findings

Objective 1: To investigate the ways of AI in application on education help in enhancing public universities students' life.

The goal of the study was successfully completed by examining the data using a descriptive analysis, which allowed the researcher to convey the findings using a more straightforward interpretation. There are four independent variables, such as perceived usefulness, perceived ease of use, perceived optimism, and perceived innovativeness in application to artificial intelligence as a means to improve the lives of public university students. Table 4.18 of the descriptive analysis indicated that the results showed that all of the variables were being examined using a Likert scale, and the majority of the variables claimed that they were over 4.0. This was shown by the results of the table.

First and foremost, the perceived level of innovativeness has the greatest mean, which comes in at 4.11, and the standard deviation has a value of 0.74. According to research carried out in 2014 by Parasuraman, A., and Colby, C. L., innovativeness serves as one of the "motivators" that contributes to TR (Technology Readiness). Example of AI innovative when interactive learning environment (ILE) use resources that students already engage with in their daily lives, such as Facebook and Twitter, stated by Roll, I., & Wylie, R. in 2016. According to Zang, G., Liu, M., & Yu, B. in 2022 mentioned that new information technologies, such as artificial intelligence and communication networks of the fifth generation (also known as 5G), are two examples of innovations in AI that have helped and accelerated educational reform and advancement.

Next, perceived optimism placed as a second place for highest mean, which has a mean of 4.05 and standard deviation of 0.72. In a study that was conducted out in 2014 by Parasuraman, A., and Colby, C. L., the researchers found that optimism is one of the "motivators" also which that contributes to TR (Technology Readiness). A number of scholars make use of technology optimism as a tool for analysing the influence of technology optimism on the intention to utilise technology (e.g. Panday & Rachmat, 2019; Buyle et al., 2018; Nugroho & Fajar, 2017). The optimistic outlook on the development of new technologies is one definition of technological optimism. In the context of artificial intelligence technology, this means that the technology can

help humans operate more independently, productively, and flexibly (Parasuraman, 2000).

The authors of the aforementioned study, Parasuraman and Colby (2001), state that an optimistic outlook fosters the notion that technology is beneficial and user-friendly. According to Chai et al., in 2020 clarified that anticipation of preparedness in technological optimism provides an explanation for why people have a favourable view on their use of technology in the future. There is no escaping the inevitability of this optimism or expectation when it comes to predicting people's future actions in relation to AI mentioned by Chai et al., in 2020. This concept of readiness that Chai et al. (2020) are projecting especially into technological optimism indicates that a favourable attitude toward technology utilisation in the future is founded on anticipation, which feeds readiness. This is what Chai et al. Because of this expectation or optimism, it is inevitable that one will have a behavioural intention toward AI (Chai et al., 2020).

Then, perceived ease of use has a mean of 4.04 and standard deviation of 0.73. The perceived ease of use of a piece of technology is the degree to which its consumers believe they can use it with little effort or time spent learning how to utilise it (Davis, 1986; Davis, 1989). Davis (1989) argues that a person's propensity to adopt new technologies depends on their belief that such technologies are simple to use. Wu et al. (2007) and Smit et al., in 2018 both found that users' perceptions of how simple something is to use have a significant effect on whether or not they plan to utilise it (2018). The findings of Damerji's (2019) investigation also supported its accuracy.

Last but not least, perceived usefulness has a mean of lowest than other independent variables which is 4.04 and standard deviation is 0.70. This is because of a person's notion that they will be able to do their job duties more efficiently if they make use of technological tools is what we mean when we talk about perceived usefulness (Davis, 1986; Davis, 1989). According to Davis (1989), the chance of a subject adopting new technology increases in proportion to the subject's perception of the utility of the technology in question. This discovery was verified by further study (e.g. Bagozzi et al., in 1992; Adams et al., in 1992; Larasati et al, in 2017 and Nugroho & Fajar, 2017). This impact was likewise substantial in the applied research conducted by Damerji (2019), as was also the case in the study conducted by Smit et al. (2018).

Objective 2: To examine the factors that affecting public universities student's intention to use AI on education.

The researcher has reached the second research objective by using path coefficients by Smartpls software. Besides that, according to the findings, a positive association exists between the dependent variable known as intention to use and all of the independent variables that were investigated. These independent variables include perceived usefulness, perceived ease of use, perceived optimism, and perceived innovativeness. Based on table 4.10, the path coefficients for p value shows that two variables have significant relationship with intention to use AI on education while another does not have significant relationship with intention to use due to p-value more than 0.05.

Firstly, the path coefficients' p-value for perceived innovativeness and perceived optimism shows 0.019 and 0, this can define that p-value for each variable shows the positive value and significant with intention to use AI on education. Furthermore, the existence of this connection was shown in Larasati et al. (2017) and Damerji (2019) plus Shin and Lee in 2014 of which found that the results for optimistic and innovativeness components had a substantial positive link with the desire to utilise AI. Researchers Larasati et al. (2017) and Damerji (2019) found that students' levels of optimism impact their desire to employ AI technology for learning purposes. Besides that, according to Shin and Lee in 2014 conducted a research on the intention of Korean students to utilise artificial intelligence technology (NFC mobile payment), and their findings verified the favourable influence that innovativeness has on intention to use.

Next, the path coefficients towards the intention to use AI on education does not have a significant relationship with perceived ease of use, this is because of the p-value for path coefficients is 0.716, which is higher than 0.05. It also higher than perceived usefulness. According to the findings of Melas et al. (2011), the influence of perceived ease of use on technology adoption was shown to be larger than the impact of perceived usefulness on one's desire to utilise technology. Shroff et al. (2011) provided evidence that this conclusion is accurate. Even though, some studies and research show that perceived ease of use has significant relationship with intention to

use, the p-value for path coefficients for this perceived ease of use has a higher value, which more than 0.05.

Last but not least, the path coefficients' p value for perceived usefulness is show 0.556. It also higher than significant value which is >0.05. According to Shin and Lee in 2014, the researcher reached their conclusion after analysing the influence of these two perception elements on the acceptability of NFC mobile payment technology among college students in South Korea. They found that perceived usefulness had a favourable effect on the students' desire to utilise or use AI technology. However, Shroff et al. in 2011, discovered in their research on bachelor's degree students in Hong Kong that perceived usefulness did not alter students' desire to utilise technology, namely an e-portfolio learning system which is related to AI. This was the conclusion of their study. All of these above, researcher concluded that, two of factors which are perceived innovativeness and perceived optimism that will eventually bring impact to public students' intention to use AI on education while another two factor which are perceived ease of use and perceived usefulness did not bring impact to public universities students' to use AI on education.

Objective 3: To analyse the best fit factor for public universities students to select and use AI on education.

Utilizing the resources provided by the smartPLS software to do further evaluations with the help of multiple linear regression allowed the third study aim to be successfully completed. Table 4.21 demonstrates that unstandardized beta revealed that felt optimism has turned out to be the most important factor which the unstandardized coefficients is 0.407 which was greater as compared to other independent variables. This indicates that perceived optimism has turned out to be the most significant component. This demonstrated that this aspect is the one that would impact or effect the desire of students attending public institutions to make use of AI in educational settings. The next piece of evidence that backed up the discovery was the significant value for perceived optimism, which was found to be 0.000, with a p-value that was lower than 0.05. Moreover, than that, in related with this study, Larasati et al. in 2017 and Damerji in 2019 clarified that students' optimism impacts their desire

to employ AI technology in connection to their educational pursuits. The language of technological optimism often focuses on the positive features of technology, which are typically associated with its utility, performance (continuous with high precision), and the ease with which it can be controlled by a relatively small workforce. It may also refer to the role that advances in artificial intelligence have had in enhancing people's quality of life, as well as their living standards and their performance at work mentioned by Parasuraman & Colby, in 2001. In a conclusion, researcher conclude that the best fit factor for public universities students to select and use AI on education is perceived optimism.

5.2 Implication of the research

In order to accomplish the goals of the study, which included investigating the variables that affecting public universities students' intention to use AI on education, analyses of the collected data were carried out. The researcher was successful in achieving all of the objective by using descriptive analysis, path coefficients, multiple linear regression, and hypothesis testing to investigate the relationship between perceived usefulness, perceived ease of use, perceived optimism, and perceived innovativeness as they affecting public university students' intention to use AI in education. In summary, two of the factors which are perceived innovativeness and perceived optimism has significant with intention to use AI on education while another two of factor which are perceived ease of use and perceived usefulness does not significant relationship with intention to use AI on education.

From the view of conceptual framework, researcher used TAM framework and TRI framework in considering public universities students' intention to use AI on education. According to King & He in 2006, the key benefits of TAM are its simplicity and adaptability, both of which make it possible to apply the model to a broad range of different settings and forms of technology. In the field of education, which has been greatly benefited by the rapid progression of technology, TAM-based models that have been expanded with constructs from other theories have been widely applied to analyse the adoption process of technologies such as mobile devices (Al-Emran et al., 2020) , learning management systems (Al-Gahtani, 2016) , or augmented reality (Ibili et al., 2019) by both students and teachers (Teo et al., 2017) . However, because the use of

AI for the assessment is still in the very early stages of development, the development of TAM-based models for the analysis of the adoption process of these technologies among educational agents constitutes an unexplored line of research.

This is because the use of AI for the assessment is still in the very early stages of development. When using the TR model, Lee and Jun in 2007 recommended that it is required to analyses various external elements that may impact intention to adopt a certain technology. This is because the TR model takes into account only internal aspects. As a consequence of this, following study resulted in the development of the Technology Readiness and Acceptance Model (TRAM model), which incorporates aspects of both the TR model and the TAM model (Damerji, 2019; Buyle et al., 2018). This model attempts, despite the fact that some of the elements are different, to estimate the influence that intention to use has on actual utilization of technology. The key findings of this study indicate that 55.2% of variation might potentially influence or affecting public universities students' intention, with perceived optimism, perceived ease of use, perceived usefulness, and perceived innovativeness as the most influential factors. In the meanwhile, it was determined that 44.8% of additional potential variables would be affected for further research. This study will provide academics with a good understanding of the elements that impact the intention of students at public institutions to employ AI in education.

The purpose of this study is to determine, based on the managerial ramifications, which factors have the most effect on the desire of students at public institutions to use AI in education. This research aims to provide an in-depth knowledge and assessment of the antecedents that impact or affect public university students' intentions. First, based on regression analysis, perceived optimism is the most influential factor on the intention of students at public universities to utilise AI. According to Parasuraman and Colby (2001), perceived optimism fosters the belief that technology is beneficial and humane. This, in turn, influences the desire to use AI in education. In the context of AI technology, this means that the technology can help individuals operate more independently, productively, and flexibly (Parasuraman, 2000). This study emphasizes the value of AI optimism in education.

Concurrently, the general public has developed a dearth of awareness and expertise about the use of AI to educational settings. Not everyone is up to date and

knowledgeable on the most recent advances in technology. Knowledge on artificial intelligence technology should be encouraged in order to assess the prospective advantages as well as to put this technology into practice in a more general sense. People such as universities students would be motivated to embrace such technology by the friendly pressure of their peers and their environmental consciousness. This would be owing to the perceived optimism and innovativeness of the technology. This approach has a substantial effect on the students' intentions to employ AI in the educational setting at public institutions. People that possess the innovativeness attribute are more inclined to embrace something new themselves before trying to persuade others to do the same. In the end, researchers predict that students at colleges and universities will gradually be impacted by and value added to the AI technology that is used to education.

5.3 Contribution for Research

5.3.1 Contribution for Government

This study can serve as a reference for governments entrusted with assisting organizations in defining the sorts of knowledge supplied via the development of a variety of seminars and courses for executives in the education sector. This report presents recommendations to the agency responsible for collecting all such data supplied by other education sectors. This technique for collecting data may be preserved and recorded in a variety of media, including text, audio, and video. This collected data may be utilised to construct a database that will aid the education sector in enriching the lives of students through the application of AI in education.

According to Statesman, in 2021, AI has been used to education mostly in the form of tools that aid in skill development and assessment systems. Artificial Intelligence may promote efficiency, individualization, and the simplification of administrative procedures, allowing instructors the time and flexibility to give comprehension and adaptation. Besides that, using the greatest qualities of machines and teachers, the objective for Artificial Intelligence is for them to collaborate to get the best results for pupils. According to Chin, in 2019 declared that in the beginning 2020, the subject of Design and Technology which known as RBT related to Artificial Intelligence (AI), computer programming and robotics will be introduced to Year Four Pupils. Thus, it means that students in primary school will start to have knowledge on AI, and when they enter University, they won't have any problem regarding of AI understanding.

Furthermore, all AICTE-accredited schools have been advised to include Artificial Intelligence as an elective in their B.Tech. programmes and to launch a B.Tech. programme in Artificial Intelligence and Data Science in order to increase the human resource in Artificial Intelligence and Data Analytics mentioned by Statesman in 2021. For instance, as far as the Indian Institutes of Technology (IITs) are concerned, their Acts and Statutes permit them to have their own curriculum, academic and research partnership with institutions and universities worldwide stated by Statesman in 2021.

5.3.2 Contribution to Policy Maker

This research makes a contribution to policymakers and may be utilised as a helpful guide for the development of policies with "pleasant design." The purpose of this is to increase the number of students at public institutions who intend to apply AI in education. According to Trends, in 2022, The United Nations Educational, Scientific, and Cultural Organization (UNESCO) has established guidelines for policymakers in AI and education, produced training for youth on AI and human rights, and will teach over 2,000 judicial operators globally on AI and the rule of law by the start of 2022.

Besides that, according to new research (UNESCO Adopts First Global Standard on the Ethics of Artificial Intelligence, 2022), the General Conference of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) met in November 2021 and accepted the Recommendation on the Ethics of Artificial Intelligence, the first global standard-setting instrument on the topic. This landmark text defines values, concepts and policies that will assist governments in creating legal frameworks to guarantee that AI is employed as a force for the common good.

Furthermore, UNESCO and UNITAR together developed a new microlearning course on AI and Human Rights for teenagers aged 16 to 24. The course simplifies advanced ideas in AI with exercises based on common uses of technology. In this course, we'll examine how the employment of AI affects our constitutionally protected freedoms of speech, privacy, and equal protection under the law. Through a series of interactive activities, participants will get an understanding of how AI could affect their rights to freedom of speech, privacy, and equality. They will also be able to identify and critically engage with real-world applications of AI that raise ethical concerns, mentioned by International Telecommunication Union, in 2022.

Lat but not least, as part of its Innovation for Policy initiative, UNESCO is holding public discussions and writing a white paper to advise nations on how to create AI policies that are inclusive and driven by a wide range of stakeholders (International Telecommunication Union, 2022). A study titled "Activating Collective Intelligence for Artificial Intelligence Policy Frameworks" will be produced by i4Policy and UNESCO via a series of iterative multi-stakeholder learning and co-creation workshops. It uses existing AI and innovation community networks in low-income

countries to help shape international standards for AI policymaking stated by International Telecommunication Union, 2022.

5.3.3 Contribution to Education Sector

Recently, several AI applications for the education sector have been created. And so many procedures have gotten more streamlined and efficient. Students may engage in online courses uninterruptedly and have access to all learning materials through computers, laptops, and smart devices, allowing them to quickly join classes and eliminate the need to attend physical classrooms. AI handles a variety of automated duties, therefore streamlining the process and saving time and money, mentioned by (Desk, 2022).

For instance, learning through chatbots is the one that AI contribute to education systems or education sector. Chatbots are accessible 24 hours a day, seven days a week to answer students' and prospective students' questions about admission, fees, courses, professors, etc. It aids pupils in answering questions at any time of day. The Education chatbot is very effective and efficient in its operation. Students are introduced to a given subject using text, graphics, videos, or a mix of these. After studying a subject, students take quizzes and turn in their scores to their lecturers stated by Desk in 2022.

Besides that, according to Rahman (2023) in Star newspaper, the entry of ChatGPT, an artificial intelligence (AI) chatbot, will be a game-changer in the worldwide education sector, as well as in Malaysia. This is because stduents can no longer provide take-home examinations or assignments, according to Kevin Bryan, an associate professor at the University of Toronto who leads an AI-based entrepreneurship programme stated by Rahman (2023) in Star newspaper.

There are continuing digital micro-credentialing initiatives in higher education during Covid-19 pandemic, in addition to massive open online courses (MOOCs). ChatGPT, however, is able to not only accelerate the promise of education technology but also fill in the gaps and handle emerging difficulties (such learning losses and scaling costs), confirmed by Rahman (2023) in Star newspaper.

5.3.4 Contribution to Researcher

Researchers, and especially students who are involved in education systems, can make a significant contribution to the field by developing and utilising TAM and TRI frameworks in their studies to increase the use of AI in education. These frameworks include perceived innovativeness, perceived ease of use, perceived usefulness, and perceived optimism. Researchers can make this contribution by encouraging students to participate in the development of these frameworks. This research also includes information on the ways that the use of AI in education might assist improve students' lives.

The elements that are already solid need to be clarified from the findings. As a consequence, this research has a contribution, such as presenting empirical proof of whether or not there is a substantial association between perceived innovativeness, perceived optimism, perceived ease of use, perceived usefulness with the desire to utilise AI on education. In the realm of education, artificial intelligence technology is beneficial to both students and instructors mentioned by Dang in 2020. For example, it assists with research, helps to preserve information, and offers ideas for search terms stated by Godoe et al., in 2012. In addition, because it is now possible to convert both images and voices into digital signals, the ideas of "voice recognition," "face recognition," and "fingerprint recognition" are ushering in a new era in a variety of business sectors while also presenting fresh opportunities in the field of education.

Furthermore, in the context of higher education, AI may improve the quality of lectures by including supplementary papers, so assisting students in better comprehending the subject matter that is being presented mentioned by Li in 2020. AI technologies not only make it easier for people to work together, but they also give students more flexibility in terms of the location and timing of meetings. Through the use of online meetings and conferences, students are able to discuss projects while receiving intelligent assistance from virtual tutors declared by Dang in 2020. Next, this guarantees that the task will be finished on time. In addition to this, artificial intelligence makes it easier for students to plan for their futures by being able to recommend acceptable learning routes, as well as courses and activities that are in accordance with their long-term objectives mentioned by Ayoub in 2020.

5.3.5 Contribution to knowledge.

This research adds to our knowledge of the elements that influence public university students' adoption of AI in education. On the basis of past research' key findings, it has identified important aspects that influence public university students' usage of AI in education. This research found, based on TAM and TRI, that perceived innovativeness and perceived optimism influence public university students' intent to employ AI in education.

In addition, the contribution is to broaden the use of TAM and TRI framework to examine the factors that affecting public universities students' intention to use AI on education. It is discovered through the study's highlight, the primary advantages of TAM are its simplicity and versatility, which allow the model to be used to a wide variety of situations and kinds of technology, according to King & He in 2006 meanwhile Lee and Jun (2007) suggested that, while using the TR model, it is necessary to analyse a variety of external factors that may influence the desire to adopt a certain technology. There is still less research that apply this idea to explain factors that affecting public universities students' intention to use AI.

In conclusion, the purpose of this research is to investigate the variables that influence the desire of students attending public universities to employ AI in educational settings. Perceived innovativeness, such as testing out new technology, and perceived optimism, such as artificial intelligence (AI), both contribute to a better quality of life. Additionally, positive thoughts about information about AI's impact on education affect students' intention to use AI more, as stated by Larasati et al. in 2017 and Damerji in 2019.

5.4 Limitations of the study

In this section, the researcher will address the difficulties that were encountered while carrying out this investigation. The gathering of data is by far the most common challenge. During the course of this investigation, it will be necessary for the researcher to contend with a number of constraints. Internet surveys are a challenge for researchers, and that's not even the least of it. In addition, the researcher used the strategy of handing out questionnaires and sending them through Instagram and Messenger; nevertheless, the respondents did not react to the researcher's requests for responses via Instagram and Messenger. Nevertheless, there were some respondents that replied, but they did not wish to answer the questionnaire. Furthermore, some of the respondents answered the questionnaire, but left part of the questions blank. In addition, another limitation is that the responder had to leave a bluetick on WhatsApp over WhatsApp once the researcher had given the link with them. As a consequence of this activity, the researcher found it impossible to identify whether or not the responder had completed the Google form.

Another limitation is that the researcher is also a student, which means that a significant amount of work and assignments need to be completed. In order for researchers to do their work in a timely way, they need to create timetables. In addition, there is a dearth of study in this area, particularly concerning the impact of AI technology on instructional practices. Analysis of the relevant literature is an essential component of every research project since it enables researchers to determine the nature of the research that was carried out. The literature review offers researchers a solid starting point from which to go on and accomplish their study objectives. Another problem is that very few people have any understanding of how artificial intelligence works. The researcher has to talk about the study in order to make certain that the participants are aware of it.

5.5 Recommendations

5.5.1 Recommendations for future studies

There are a few recommendations that may be given for possible investigations, and they are as follows: The fact that the variations identified in this research (R square) were approximately 44.8% suggests that there is a chance that additional relevant variables might alter user intention. It is for this reason that it has been suggested that an expansion of this study will be studied in the process of finding probable causes. In addition, the goal of a subsequent research project is to enhance the TAM and TRI frameworks in such a way as to find more independent variables that are included into the original construct. Besides that, in the course of this investigation, the concepts of perceived optimism and perceived innovativeness emerged as novel discoveries and were subsequently included into the TRI framework as independent variables. Researcher should add education level in demographic part in survey to find out more on student's education level in university such as STPM, diploma, degree, master, and PhD.

In additional, in the future, it is important to encourage other antecedents to do further exploring. In the next step, it is advised that a qualitative research approach be used, such as face-to-face interviews, in order to collect specific perspectives from the students attending public universities in the future. By conducting semi-structured interviews with respondents or even utilizing the Delphi technique, we may collect data from them in order to find out their thoughts on the use of AI in the field of education.

5.5.2 Recommendations for students

Students should use AI tools to their benefit in the classroom, but they should take care to avoid developing a reliance on such tools. Because of this, they should never stop actively combining its usage with more conventional forms of education. Second, it's crucial that students cultivate an optimistic outlook on technology and have an open, constructively critical mind as they investigate and experiment with new tools for education. Since it is highly likely that, given the rapid pace of innovation, students will have to learn, adopt, and adapt to a wide range of new technologies, including radical innovation, throughout the course of their professional lives, it is imperative that they gain a head start by mastering cutting-edge AI technology that

improves their educational experience as early as possible. For this reason, they should have an open mind and be willing to take advice from others, even if they are younger than them but have a deeper understanding of AI.

5.5.3 Recommendations for University

Universities should provide assistance for students who are ready to accept artificial intelligence (AI) technology in the classroom, as well as encouragement for students who are still reluctant to use it. They should provide assistance to them in further developing their understanding of AI and encourage the establishment of support groups on social networks. This might greatly contribute to boost their confidence in utilizing this technology in the learning process. In addition to that, they should maintain a consistent update schedule for information on developments and work to improve the lecturers' degree of expertise in AI technology. Universities might arrange programmers to let students experience the advantages of being pioneers in adopting AI technology in order to encourage students to be inventive. This is because innovativeness can significantly improve student intention.

This might be accomplished via the involvement of major industry players as well as with their financial support and sponsorship. The instructors of the students should promote the usage of artificial intelligence (AI) technology as part of the students' tasks and honor those students who resort to innovative applications. Drills that require the usage of artificial intelligence technology might become an integral component of the curriculum and be rated as fundamental evaluations of how well students do in order to relieve some of the stress. Lastly, the ethical concerns that arise from the use of AI technology should be brought into the public discourse.

5.6 Conclusion

In conclusion, the purpose of this paper is to supply all individuals with the means to cultivate an in-depth understanding about the desire to apply AI on educational institutions. Besides that, the researcher may draw the following conclusion based on the findings of this study: There is a substantial association between two of the criteria, which are perceived innovativeness and perceived optimism towards the intention to use, according to table 4.10. As a result, this research offers vital insights into the effects of AI on education and serves as a conceptual foundation for this emerging area of research. In additionally, for this chapter, the researcher's list of research objectives are to investigate the ways of AI in application on education help in enhancing public universities students' life, to examine the factors that affecting public universities student's intention to use AI on education during Covid-19 pandemic and to analyse the best fit factor for public universities students to select and use AI on education during Covid-19 pandemic. Moreover, than that, the researcher who is carrying out this research outlines the restrictions that were placed on the investigation. In conclusion, but certainly not least, the study makes several recommendations for more research that may be carried out over an extended period of time.

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APPENDICES A

Gantt Chart of Final Year Project 1

BIL	ACTIVITY	WEEK														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Discussion and finalize the topic															
2	Prepare and identifying the RO and RQ															
3	Identifying the variables and developing framework															
4	Research the sources of secondary data															
5	Determining the methodology to be used in the research															
6	Drafting the research proposal															
7	Submit the draft to the supervisor															

8	Re-draft the research proposal															
9	Correction and submission the final draft for supervisor's review															
10	Proposal presentation and proposal defense															

APPENDICES B

Gantt Chart of Final Year Project 2

BIL	ACTIVITY	WEEK														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Spread Questionnaire															
2	Pilot Testing															
3	Data Gathering															
4	Analysis Data															
5	Chapter 4: Data Finding and Analysis															
6	Chapter 5: Conclusion and Recommendations															
7	References															
8	Editing for FYP Report 2															

9	Proposal Presentation														
10	FYP Report Submission														

APPENDICES C

SURVEY ON FACTORS AFFECTING PUBLIC UNIVERISTIES STUDENTS' INTENTION TO USE AI ON EDUCATION DURING COVID-19 PANDEMIC.

Instruction / Arahan

This questionnaire is designed to obtain primary data for my Final Year Project. The purpose of this research is / *Soalan kaji selidik ini direka untuk memperoleh data utama bagi Projek Sarjana Muda saya. Tujuan kajian ini dijalakan adalah:*

i. **To investigate the ways of AI application on education help in enhancing public universities students' life. /** *Untuk menyiasat cara aplikasi AI dalam membantu pendidikan dalam meningkatkan kehidupan pelajar universiti awam.*

ii. **To examine the factors that affecting public universities student's intention to use AI on education during Covid-19 pandemic. /** *Untuk mengkaji faktor-faktor yang mempengaruhi hasrat pelajar IPTA untuk menggunakan AI dalam Pendidikan semasa semasa pandemik Covid-19.*

iii. **To analyse the best fit factor for public universities students to select and use AI on education during Covid-19 pandemic**. / *Menganalisis faktor kesesuaian terbaik untuk pelajar universiti awam memilih dan menggunakan AI dalam pendidikan semasa pandemik Covid-19.*

The data collected is used for academic purpose only / Data yang dikumpul digunakan untuk tujuan akademik sahaja.

For further information and clarification, please contact: /

Unutk maklumat lanjut dan penjelasan, sila hubungi:

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PART A: DEMOGRAPHIC

Please tick (✓) your answer in the following box /

Sila tandakan (✓) jawapan anda dalam kotak tersebut.

1. Gender / *Jantina*:

   Male ☐ Female ☐

2. Age / *Umur*:

   18 – 25 ☐ Above 35 ☐

   26 – 35 ☐

3. Race / *Bangsa*:

   Malay ☐ Indian ☐

   Chinese ☐ Others ☐

4. Year of study / *Tahun Pengajian*:

   Year 1 ☐ Year 3 ☐

   Year 2 ☐ Year 4 ☐

5. Public University / *IPTA*:

   Universiti Islam Antarabangsa Malaysia ☐

   Universiti Kebangsaan Malaysia ☐

   Universiti Malaya ☐

   Universiti Malaysia Kelantan ☐

   Universiti Malaysia Pahang ☐

   Universiti Malaysia Perlis ☐

   Universiti Malaysia Sabah ☐

   Universiti Malaysia Sarawak ☐

   Universiti Malaysia Terengganu ☐

   Universiti Pendidikan Sultan Idris ☐

Universiti Pertahanan Nasional Malaysia	☐
Universiti Putra Malaysia	☐
Universiti Sains Islam Malaysia	☐
Universiti Sains Malaysia	☐
Universiti Sultan Zainal Abidin	☐
Universiti Teknikal Malaysia Melaka	☐
Universiti Teknologi Malaysia	☐
Universiti Teknologi MARA	☐
Universiti Tun Hussein Onn Malaysia	☐
Universiti Utara Malaysia	☐

6. Have you been using AI's application on education before? *Adakah anda pernah menggunakan aplikasi AI untuk pendidikan sebelum ini?*

Yes ☐ No ☐

PART B: THE ARTIFICIAL INTELLIGENCE FACTORS

This section is to collect your data on factors that affecting public university students' intention to use AI on education during Covid-19 pandemic. Kindly answers all questions and circle the appropriate options/ number for each statement. each number is a representative of the following scale: *Bahagian ini adalah untuk mengumpul data mengenai faktor-faktor yang mempengaruhi niat pelajar universiti awam untuk menggunakan AI dalam pendidikan semasa pandemik Covid-19. Sila jawab semua soalan dan bulatkan pilihan / nombor yang berkenaan bagi setiap kenyataan. Setiap nombor adalah wakil kepada skala yang berkenaan:*

1) **Strongly Disagree /** *Sangat Tidak Setuju*
2) **Disagree /** *Tidak Setuju*
3) **Neutral /** *Neutral*
4) **Agree /** *Setuju*
5) **Strongly Agree /** *Sangat Setuju*

Perceived Ease of Use / *Kemudahan yang dirasakan:*

No	Question					
1	Using AI on education make me feel understandable. / *Menggunakan AI dalam pendidikan membuatkan saya berasa mudah difahami.*	1	2	3	4	5
2	Using AI on education make me more flexible to learn than the traditional one. / *Menggunakan AI dalam pendidikan menjadikan saya lebih fleksibel untuk belajar daripada yang tradisional.*	1	2	3	4	5
3	It would be easy for me to become skilful in the use of AI on education. */ Mudah bagi saya untuk menjadi mahir dalam penggunaan AI dalam pendidikan.*	1	2	3	4	5

4	I would find AI technology is easy to use on education. / *Saya akan mendapati teknologi AI mudah digunakan dalam pendidikan.*	1	2	3	4	5
5	I would find it easy to get AI technology to do what I want to do in education especially on learning. / *Saya akan mendapati mudah untuk mendapatkan teknologi AI untuk melakukan apa yang saya mahu lakukan dalam pendidikan terutamanya dalam pembelajaran.*	1	2	3	4	5

Perceived Usefulness / *Kegunaan yang dirasakan:*

No	**Question**					
1	Using AI on education enables me to learn quickly. / *Menggunakan AI dalam pendidikan membolehkan saya belajar dengan cepat.*	1	2	3	4	5
2	Using AI on education improves my performance in learning. / *Menggunakan AI dalam pendidikan meningkatkan prestasi saya dalam pembelajaran.*	1	2	3	4	5
3	Using AI on education increase my productivity in learning. / *Menggunakan AI dalam pendidikan meningkatkan produktiviti saya dalam pembelajaran.*	1	2	3	4	5
4	Using AI on education enhances my effectiveness in learning. / *Menggunakan AI dalam pendidikan meningkatkan keberkesanan saya dalam pembelajaran.*	1	2	3	4	5

5	I would find AI useful in my future studies. / *Saya akan mendapati AI berguna dalam pengajian masa depan saya.*	1	2	3	4	5

Perceived Innovativeness / *Inovatif yang dirasakan*

No	**Question**					
1	I would search for opportunities to explore with new technologies if I heard about them. / Saya akan mencari peluang untuk meneroka dengan teknologi baharu jika saya mendengar tentangnya.	1	2	3	4	5
2	I enjoy testing out new technology. / saya seronok menguji teknologi baharu.	1	2	3	4	5
3	I frequently test out new information technologies ahead of my peers. / Saya kerap menguji teknologi maklumat baharu mendahului rakan sebaya saya.	1	2	3	4	5
4	I'm interested in news and articles on innovations or discoveries in the field of education. / Saya berminat dengan berita dan artikel mengenai inovasi atau penemuan dalam bidang pendidikan.	1	2	3	4	5
5	Technology gives people more control over their daily life. / *Teknologi memberi orang lebih kawalan ke atas kehidupan seharian mereka.*	1	2	3	4	5

Perceived Optimism / *Optimisme yang dirasakan*

No	Question					
1	I have positive thought of information about AI on education. / *Saya mempunyai pemikiran positif tentang maklumat tentang AI tentang pendidikan.*	1	2	3	4	5
2	I am hopeful about my future in a world where AI is commonly used on education. / *Saya berharap tentang masa depan saya di dunia di mana AI biasanya digunakan dalam pendidikan.*	1	2	3	4	5
3	I always look on the beneficial side of things in the emerging AI world. / *Saya sentiasa melihat pada sisi yang bermanfaat dalam dunia AI yang sedang muncul.*	1	2	3	4	5
4	Overall, I expert more good things than bad things to happen to me in the AI enabled world. / *Secara keseluruhan, saya pakar lebih banyak perkara yang baik daripada perkara buruk yang akan berlaku kepada saya dalam dunia yang didayakan oleh AI.*	1	2	3	4	5
5	New technologies such as AI contribute to a better quality of life. / *Teknologi baharu seperti AI menyumbang kepada kualiti hidup yang lebih baik.*	1	2	3	4	5

PART C: THE INTENTION OF STUDENTS IN PUBLIC UNIVERSITY

This section is to collect your data on intention of students in public university to use AI on education. Kindly answers all questions and circle the appropriate options/ number for each statement. Each number is a representative of the following scale: *Bahagian ini adalah untuk mengumpul data mengenai niat pelajar*

universiti awam untuk menggunakan AI dalam pendidikan. Sila jawab semua soalan dan bulatkan pilihan / nombor yang berkenaan bagi setiap kenyataan. Setiap nombor adalah wakil kepada skala yang berkenaan:

1) **Strongly Disagree /** *Sangat Tidak Setuju*
2) **Disagree /** *Tidak Setuju*
3) **Neutral /** *Neutral*
4) **Agree /** *Setuju*
5) **Strongly Agree /** *Sangat Setuju*

Intention to Use */ Niat untuk digunakan*

No	Question					
1	I would like to use more AI technology especially on education in the future. / Saya ingin menggunakan lebih banyak teknologi AI terutamanya pada pendidikan pada masa hadapan.	1	2	3	4	5
2	I will strongly recommend other students to use AI on education. / Saya amat mengesyorkan pelajar lain untuk menggunakan AI dalam pendidikan	1	2	3	4	5
3	AI technology on education should implemented by everyone. / Teknologi AI pada pendidikan harus dilaksanakan oleh semua orang.	1	2	3	4	5
4	I hope more opportunities will be provided for me to experience AI on education in future studies. / Saya berharap lebih banyak peluang	1	2	3	4	5

	akan diberikan untuk saya mengalami AI dalam pendidikan dalam pengajian masa depan.					
5	Using AI on education is worthwhile. / *Menggunakan AI dalam pendidikan adalah berbaloi.*	1	2	3	4	5