

**THE STUDY ON FACTORS INFLUENCING E-
LEARNING READINESS TOWARDS LOCAL
UNIVERSITY STUDENTS IN MALAYSIA**

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UNIVERSITI
MALAYSIA

DEGREE OF ENTREPRENEURSHIP (COMMERCE)
WITH HONOURS)

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by

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A thesis submitted in fulfillment of the requirements for the degree of entrepreneurship
(commerce) with honours

**FACULTY OF ENTREPRENEURSHIP AND BUSINESS
UNIVERSITI MALAYSIA KELANTAN**

2023



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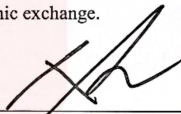
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ABSTRAK

E-pembelajaran berkembang dengan pantas sebagai bidang pengajian dan aplikasi. Di peringkat individu guru dan institusi, para pendidik sedang bereksperimen dengan teknik pengajaran dalam talian merentas disiplin dan topik. Hasil daripada kebiasaan ibu bapa mereka dengan teknologi digital, pelajar hari ini telah digelar sebagai "pribumi digital." Semua institusi pendidikan menukar strategi pengajaran mereka kepada platform dalam talian semasa pandemik COVID-19 2020. Bersedia untuk pembelajaran dalam talian. Walau bagaimanapun, tidak jelas bagaimana ini akan memberi kesan kepada kesediaan pelajar untuk pendidikan dalam talian. Kajian ini melihat sejauh mana pelajar bersedia untuk pembelajaran dalam talian di institusi pengajian tinggi berprestij di Malaysia. Oleh itu, kajian ini bertujuan untuk mengkaji Faktor-faktor yang Mempengaruhi Kesediaan E-pembelajaran terhadap pencapaian akademik pelajar di universiti tempatan di Kelantan. Kajian ini menggunakan reka bentuk penyelidikan kuantitatif bukan eksperimen. Reka bentuk kajian ini adalah soal selidik. Terdapat beberapa soalan telah dikemukakan dalam soal selidik berdasarkan pembolehubah bersandar dan pembolehubah bebas kajian ini. Borang soal selidik juga mengumpul data responden iaitu maklumat demografi. Data dikumpul daripada saiz sampel 384 responden dari universiti yang berbeza. Data dianalisis dengan menggunakan perisian statistik pakej untuk sains (SPSS) versi 27 ukuran model perisian untuk menentukan kesahan dan kebolehpercayaan analisis, analisis maklumat demografi, analisis deskriptif, ujian normaliti dan ujian hipotesis. Hasil kajian merumuskan kesemua pembolehubah bebas faktor ciri pelajar, penilaian penggunaan faktor teknologi, faktor sokongan institusi, interaksi dalam talian dan faktor sosial dan faktor persepsi kegunaan mempunyai hubungan yang signifikan dengan kesediaan E-pembelajaran terhadap pencapaian akademik pelajar di universiti tempatan. di Malaysia. Semua pembolehubah tidak bersandar mempunyai hubungan yang signifikan dengan pembolehubah bersandar kerana ujian normaliti ditolak dan korelasi adalah positif. Cadangan adalah menambah baik teknik kajian pendekatan kualitatif dan mengenal pasti cabaran yang dihadapi oleh pelajar semasa pengajian di samping kesan e-pembelajaran oleh penyelidikan masa depan.

Kata kunci: Kesediaan E-pembelajaran, ciri pelajar, penggunaan teknologi penilaian, sokongan institusi, interaksi dalam talian dan sosial, persepsi kebergunaan, pencapaian akademik pelajar.

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ABSTRACT

E-learning is quickly expanding as a field of study and application. At the individual teacher and institutional levels, educators are experimenting with online teaching techniques across disciplines and topics. As a result of their parents' familiarity with digital technology, today's students have been dubbed "digital natives." All educational institutions changed their teaching strategies to online platforms during the 2020 COVID-19 pandemic. Get ready for online learning. However, it is unclear how this will impact students' readiness for online education. This study looked at how well-prepared students were for online learning at prestigious tertiary institutions in Malaysia. Therefore, this study aimed to study the Factors Influencing E-learning Readiness towards students' academic achievement at local universities in Kelantan. This study employed the non-experimental quantitative research design. This research design is questionnaire. There are several questions have been asked in the questionnaire based on the dependence variables and independent variable of this study. The questionnaire is also collected the data of respondents which is the demographic information. Data were gathered from a sample size of 384 respondents from different universities. The data was analyze by using the statistical package for sciences (SPSS) version 27 software model measurement to determine the validity and reliability of analyses, demographic information analyses, descriptive analysis, normality test and hypothesis test. The results concluded all the independence variable of students' characteristics factors, evaluation use of technology factors, institutional support factors, online interaction and social factors and perceived usefulness factors have a significant relationship with the E-learning readiness towards students' academic achievement at local universities in Malaysia. All independent variables have the significant relationship to dependent variable as normality test are rejected and correlation are positive. The recommendation are improve the research technique on qualitative approach and identify the challenges of students face during their studies in addition to the impact of e-learning by future research.

Keywords: E-learning readiness, students' characteristics, evaluation use of technology, institutional support, online interaction and social, perceived usefulness, students' academic achievement.

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CHAPTER 1: INTRODUCTION

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1.1 Background of Study

Interaction between students, teachers, and educational resources constitutes the process of learning (UUSPN No.20, 2003). The classic disciplines that are frequently required of students and comprise our varied shared cultural intellectual heritage are included in a general education. Teach precise and efficient communication as well as critical thinking. According to Cronk (2004), an educated person is aware of the most important contemporary social and ethical concerns, sensitive to diversity, and aware of how social, technical, and scientific advancements affect people. This knowledge enables people to contribute significantly to society. The e-learning readiness related by some needed as shown in Figure 1.1.

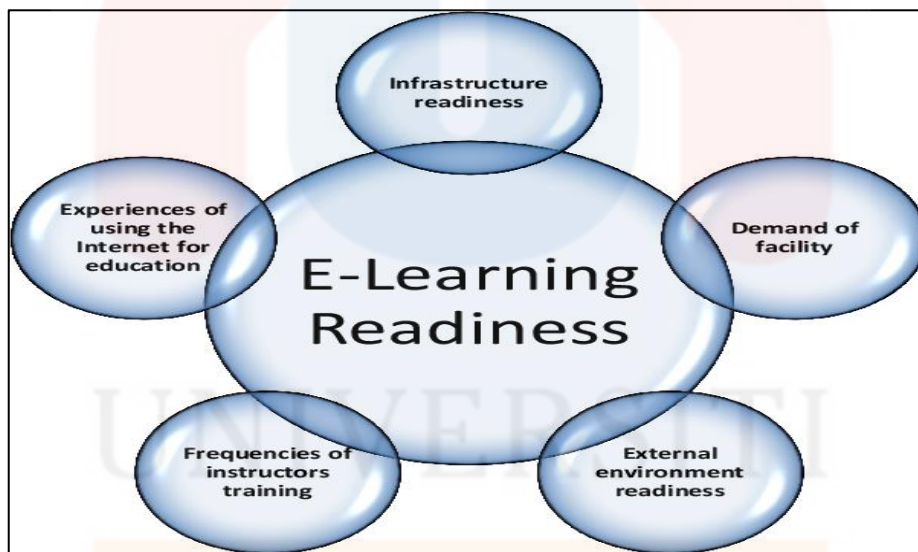


Figure 1.1: Overview of E-learning Readiness

The technique of learning and the media used on the internet to deliver the lesson are crucial components in achieving optimum outcomes. Today, web-based education is utilized to replace traditional classroom instruction. In fact, as the number of pupils has grown, so has its utilization. According to the DOSM report, the percentage of individuals using the internet was recorded as 89.6 percent in 2020. The quick growth of information technology has impacted the modern educational

system. E-learning has evolved into a new paradigm of contemporary education because of the Internet's and networks' explosive development in popularity (Purdue Online). According to Dabbagh and Kitsantas (2012), social and collaborative activities in online learning communities can assist students in self-regulating goal setting. Distance learning has become a trendy way to make education more accessible. It is a well-known fact that distance learners are everywhere (Bates, A.W. 2005).

The concept of e-learning, according to the Ministry of Education (MOE), encompasses systems capable of gathering, managing, accessing, and transmitting information in a variety of ways (Hassan, 2002). Public universities have paid particular attention to e-learning, a technique evolved from remote education, in the implementation of distance education courses. Distance learning techniques are being used by an increasing number of public and private colleges around the nation to provide academic programmes remotely or to assist their full-time students on campus. (OUM, 2004). Many institutions in Malaysia provide e-learning options due to the rising demand for higher education. The plan of the Ministry of Education to enhance the use of ICT in e-learning has served as a roadmap for Malaysian institutions as they aggressively reacted to this issue. (Hassan, 2002).

In the previous of regular face-to-face instruction, distance education encourages self-study or self-directed learning by distant learners (Simpson, 2001). A modern educational idea utilising Internet technology is called e-learning. It offers instructors and students a learner-centred environment while delivering digital information. The previous secretary of the Ministry of Education, Tan Sri Datuk Dr. Johari Mahathir, outlined the various advantages of e-learning for Malaysia's educational system. In 2005, Kanchana Chokriensukchai looked at the viability of postgraduate e-learning. It turns out that e-Learning reduces the time and cost of the school travel. Students lack both English and technical skills. They have a bad opinion of online learning. These lessons are not interesting.

First of all, adult learners who are past the age of formal education have more learning opportunities thanks to e-learning. Second, e-learning guarantees educational quality by enabling interactive and active learning. Third, e-learning may influence the environment more than traditional learning settings, moving away from bricks and clicks and toward clicks. (Mat, 2000). In the past, going to traditional campuses for lessons cost students a lot of time and money. Students no longer need to go far distances or be separated from their families in order to go to college. As a result, learning takes less time and money. This motivates more businesses to embrace online training for workers.

The initial step in most higher education institutions' e-learning programmes is to build out their ICT infrastructure to the point where they can provide students a top-notch e-learning platform. The ICT infrastructure's upgrading has been prioritised throughout the previous four years. For higher education institutions, e-learning delivery and management systems cost millions of ringgits to create and maintain. Most institutions of higher learning today have appropriate computer laboratories with wired high-speed Internet connectivity and some wireless mobile computing capabilities.

Due to the COVID-19 pandemic in 2020, which the government university students and even staff members had to cease attending face-to-face lessons for two weeks as former prime minister Tan Sri Muhyiddin revealed to the newspaper about Movement Control Command (The Star, 2020). We can observe the scene from here. Is taking classes more convenient for students than taking them online? It can also be a problem in which does the facility provided in university is convenient to students or they prefer to study at their own home to get the better performance in academic. Many people returned to their hometowns before the partial shutdown began on March 18 (The edge market, 2020).

The rapid use of technology by university students undeniably causes the Covid-19 pandemic. Due to the Covid-19 epidemic, students and faculty in higher education have seen a significant transformation. The Movement Control Order (MCO), unexpectedly implemented in Malaysia due to the Covid-19 outbreak that shook the world, has taken Malaysians by surprise. When the MCO was implemented, many change quickly to online. All public and private institutions in Malaysia will perform instructional activities through online learning until December 2020, according to a statement from the Ministry of Higher Education. (Malaysian Ministry of Higher Education, 2020).

Since then, e-learning has been embraced by several prestigious global universities to ensure academic continuity (Chung *et al.*, 2020). Based on Onyema, E. (2020), showed complete confidence and support in using online learning and collaboration tools to exchange digital information with peers. They also reported satisfaction with the assistance provided by the teachers and with online learning. In this research, we are going to analyze 20 Public Institution of Higher Education in Malaysia. All universities prioritize diploma, bachelor's degree, master, and PhD level. We would like to know how e-learning could affects their academic achievement.

In conclusion, with more than 80% of schools using e-learning to offer learning content, it is one of the most widely used teaching and learning methods. It's predicted that more than half of all students will be enrolled in e-learning by 2020. Although Malaysia's use of technology is constantly evolving, it has many years to go before it can fully utilize e-learning platforms. This study aimed to study e-learning readiness towards students' academic performance according of gender, age, level of education who attended at local university in Malaysia.

1.2 Problem Statement

Many global institutions have made e-learning available throughout the last two decades. However, most schools, colleges, and universities do not adopt this form of teaching, and staff are unfamiliar with the concept of online learning. Make use of practical models that are based on cognitive, emotional, and behavioural involvement. (Hartnett and Louwrens, 2015). When transitioning to a new learning environment, learners require additional social support to stay focused and engaged with online learning during such a severe crisis.

Online learning environments are becoming increasingly widespread in the realm of education. As the usage of these technologies' increases, instructional designers are under pressure to create effective ICT applications that will benefit students (Khalid *et al.*, 2006). Although its technology and software were not specifically designed for educational uses, they found their way into the field of education. Online resources must be effectively built for teaching and pedagogically sound to best support the achievement of learners. Since they consider e-learning makes learning more accessible to them, more and more people are choosing to engage in the system of online education. Because of the popularity and application of e-learning in academic contexts, academics unfortunately encounter several issues.

There are several problems identified in conflict in conducting out study using e-learning. Firstly, e-learning is still being used in Malaysia particularly in higher education (Jafar, A. *et al.*, 2022). Throughout the COVID-19 epidemic, Malaysia's education system has prioritised online learning along with technological improvements as an interactive style of instruction above conventional face-to-face instruction. Pupils study online from “pondok” in Kelantan, whose determining elements are the focus of the problem faced in Malaysia.

The rationale for doing this research is that in today's society, on-demand learning has

become a way of life. People are increasingly participating in the online education system because they feel it makes it easier for them to access knowledge. Unfortunately, the academic world is confronted with several challenges concerning the usage and success of online education in academic contexts. Researchers must understand how e-learning affects student performance and results.

The most recent Covid-19 discoveries demonstrate that the pandemic is an ongoing and getting worse issue. This unavoidably becomes a significant issue in Malaysia's decision to keep its e-learning system in place. To enable e-learning through web-based learning and transition from campus face-to-face learning to a distance education model, internet connections must be accessible and readily available. During a pandemic, e-learning technology is critical and an excellent alternative to the traditional classroom setting.

The issue with e-learning is that switching from a traditional classroom to it radically alters the learning process for the pupils. Students in conventional classes, on the other hand, only listen and take notes. From a "conventional" standpoint, pupils may find these alterations challenging. Students must be open-minded and accept the new environment to overcome the challenge of adjusting to online learning (Broadbent, J., 2015). Next, the lack of computer literacy is a major issue that affects both students and instructors. Many people still lack basic computer and office skills, and the variety of applications used to interact and deliver educational content, may not even be known to seasoned instructors and students. The solution like educational institutions should provide teachers and students with the materials and resources they need to improve computer literacy.

To summarize, online learning is insufficient for undergraduate students and teachers who are not computer proficient and are unfamiliar with the Internet. As a result, the emphasis of this research will be on the impact of e-learning adoption on academic performance of students at Malaysia's University of Kelantan.

1.3 Research Question

The following are the questions that researchers need to solve in conducting this research:

- a) Is there a significant connection between the academic performance of Malaysia's local Universities students and students' characteristics?
- b) Is there a significant connection between the academic performance of Malaysia's local Universities students and the evaluation use of technology?
- c) Is there a significant connection between the academic performance of Malaysia's local Universities students and institutional support?
- d) Is there a significant connection between the academic performance of Malaysia's local Universities students and online interaction and social?
- d) Is there a significant connection between the academic performance of Malaysia's local Universities students and perceived usefulness?

1.4 Research Objectives

Due to the internalization of Malaysia Higher Education is seen as a tool of developing institutional in Malaysia, the researchers is highlighted measure in selected universities. This study aims to investigate how students' academic performance at Malaysia's local Universities is affected by using e-learning. The following are the study's goals:

- a) To determine the connection between the academic performance of Malaysia's local Universities students and the students' characteristics.
- b) To determine the connection between the academic performance of Malaysia's local Universities students and the evaluation use of technology.
- c) To determine the connection between the academic performance of Malaysia's local Universities students and institutional support.
- d) To determine the connection between the academic performance of Malaysia's local Universities students and online interaction and social.
- e) To determine the connection between the academic performance of Malaysia's local Universities students and perceived usefulness.

1.5 Scope of The Study

The study's scope may vary, with more general goals supporting more specific, focused ones at the topical level. On a larger scale, it is possible to determine if students have attained graduation requirements by looking at the degree to which they accomplish their learning objectives. Students graduate from the course with desirable traits, competencies, skills, and learning outcomes.

The study focuses on the factors of e-learning readiness on students' academic achievement at local university in Malaysia. The scope of study is opened to all the local universities provided by government in the whole area of Malaysia. The target respondents will be covered the diploma and equivalence level, bachelor's degree students, master students and PhD students who studied at local university in Malaysia. The target age of respondents is between 18 years old to 40 years old.

The scope of the study is limited to 384 respondents between the ages of 18 and above who still a student at the local universities that we collect the data. Fan and Yan (2010) comprehensively compiled parameters influencing online survey response rates after reviewing more than 300 research. The online survey procedure was broken down by the researchers into four phases: build, deliver, complete, and return. In order to improve response rates while conducting online surveys, this classification is done from the viewpoint of a researcher. But their research also provides a thorough justification for why individuals participate in online polls.

The length of a questionnaire seems to increase people's burden, according to the study. Participation in the survey was inversely connected with its length. According to Galesic and Bosnjak (2009), discovered that questionnaires that took 30 minutes to complete had a lower completion rate than those that only took 10 minutes. Since younger people would like to be faster, the questionnaire is provided 5 questions each part to students who answered the question can read the question carefully and write down the answers based on their personal thoughts. The questionnaire provided could be less than 10 minutes for respondents to give an answer on it.

The method that we use to collect the data is by using questionnaire. Questionnaire method is a study instrument that are include the chain of questions of the reason for data or information to be collect. This analysis period will last for a maximum of 2 months and will end when either 384 respondents have been answering or we reach the target respondents on the questionnaire. Each respondent to the study will be asked to complete a short questionnaire to evaluate their valuation. All the question are in short sentence in which each question must not more than 20 words. All respondents have been told to complete all the questions provided including the respondent's demographic information before submitting their survey answers.

Our category of respondents are students. Based on the target respondents which is students, as known that people nowadays that grew up in a technologically advanced society and social makes up this audience group. (Jung et al. 2008), focusing on how readily students adopt online learning, Surprisingly, few students are interested in finding out about online safety. So, our study is on adults' students who study at local universities to involve this research. Students are the main and only category to examine the level of e-learning readiness. In the technology rapid country, those adults spend many hours on internet. (Digital, 2022). Students are more likely to use the e-learning on their studying process. They would be using any electronic devices to access the notes online such as laptop, smartphone, tablet or even electric reading pen and educational learning machine.

In conclusion, this research will focus on the students of different level of education such as diploma and equivalent level, bachelor's degree, master and PhD for finely defined the Factors Influencing E-learning Readiness towards students' academic achievement at local universities in Malaysia. Target market of respondents could help research in the limitations of large population and save the time and money of researchers. Within the field of E-learning Readiness, there are many theories ad models to identify the student's academic achievement.

1.6 Significance of Study

The findings of this study are to identify relationship between the factors of e-learning readiness and students' academic achievement in university. The increased use of e-learning among students in university has led to a change in higher education. Online learning can also to some extent affect a student's academic achievement.

The importance of this study also aims to evaluate the academic performance of students who study online. We want to evaluate whether learning online can further improve academic achievement for a student or not. Maybe most of the students will perform better in learning online than in class. However, there are still those who prefer to learn face to face.

Although learning cannot be carried out face to face, online learning also has benefits that we get such as the evaluation of using the technology. With this, we will find that students will be more literate in the use of IT and more advanced with the times. In addition, with online learning we do not need to use a vehicle to go to class. In addition, it can reduce air pollution from vehicle smoke. Other factors that cause online learning to be implemented are such as institutional support, online learning satisfaction and students' characteristic.

This study is indeed essential to understand the relationship between e-learning readiness towards academic performance. The study may helpful for educational institute, colleges, universities, industry players and government. It helps the university to design and implement great syllabus of teaching to increase the student's academic achievement and quality of graduates towards the e-learning process. It may help government to consider the e-learning education as a university compulsory course at the higher learning institution. Moreover, it may also produce the alertness between students about the importance and benefits of e-learning education and attributes gained towards academic achievement.

1.7 Definition of Term

The definition of key terms used of fundamental guideline in this study are presented as the following explanation:

1.7.1 *Online learning* refers to the use of computer network technology, primarily over or through the internet, to provide individuals with information and instructions (Wang et al., 2010). There are numerous ways to define e-learning. E-learning is a distant learning educational solution made possible by the widespread use of the Internet as a means of communication, even though some experts interpret the term to represent an educational process that combines all types of technology. According to some experts, it shows how learning is quickly becoming a recognised form of education. Over the years, e-learning has made significant advancements (Raymond, 2000). According to Duderstadt et al. (2002), e-learning is used in study environments to learn with a special emphasis on the web to describe a wide range of electronic technology applications, including television, radio, CD-ROM, DVD, cell phone, Internet, and many more. According to Sharma and Kitchens (2004), e-learning includes learning via web-based training facilities such as virtual universities and classrooms that enable digital collaboration, tech-assisted distance learning.

1.7.2 *Learning readiness* is defined as level of attentiveness and enthusiasm to study. According to Hayden (2008), learning readiness denotes a state of mind and want to perform something. When an individual is ready to conduct an act of learning organically, they may learn more successfully and with higher joy, but when they are not ready to learn, all of their and others' efforts will be futile. The specific condition of a student in which he or she is physically, cognitively, and emotionally prepared to learn is referred to as student readiness.

1.7.3 *Local universities* are the public universities are academic institutions that are state-owned and funded by the government. There are 20 public universities in Malaysia, funded by the government but governed as self-managed institutions. The universities including University of

Malaya, University of Science Malaysia, National University of Malaysia, International Islamic University Malaysia, University of Malaysia Kelantan, University of Malaysia Pahang, University of Malaysia Perlis, University of Malaysia Sabah, University of Malaysia Sarawak, University of Malaysia Terengganu, Sultan Idris Education University, National Defense University of Malaysia, University of Putra Malaysia, Islamic Science University of Malaysia, Sultan Zainal Abidin University, Technical University of Malaysia Malacca, University Technology of Malaysia, MARA University of Technology, Tun Hussein Onn University of Malaysia and Northern University of Malaysia.

1.7.4 Academic achievements are a performance result that shows how well a person meets a set of objectives that are essential to learning and teaching activities, particularly in schools, colleges, and universities. School systems typically establish cognitive objectives that include a wide range of subjects (such as critical thinking) or concern knowledge acquisition and comprehension of certain fields of knowledge.

1.8 Organization of the Proposal

This study is structured into five chapters, as follows:

Chapter 1 provides a synopsis of the research proposition and research process. It provides a concise analysis of the research background, problem statements, research questions, research objectives, study scope, study significance, and definitions of terms used in this study.

Chapter 2 concentrates on a review of the literature. The purpose of this review was to help the researcher understand the factors of online learning readiness towards local university in Malaysian. It aided the researcher in understanding the critical issues of the study area and provided deep insight into the study. It also examines each case study organization and relationship and focuses on the research context and clarifies the research frameworks.

Chapter 3 deals with research methodology, research design, and data collection methods. It also includes the study population, sample size, and sampling techniques used in this study. This chapter also discusses the development of research instruments, measurement of variables, and data analysis procedures.

Chapter 4 will discuss and briefly describe the researcher's data collection results. To obtain the study results for further analysis, the researcher analyses the data collected using the Statistical Package for Social Science Version 26 (SPSS).

Chapter 5 concludes this report. The main research results were discussed and interpreted, and the study's results were presented. In the context of how online learning readiness towards local university in Malaysian, the study's implications and limits were also evaluated. Also, the recommendation for further research ends the chapter.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The potential use of information technology in education and training, shares the very characteristics of information technology that businesses have used to gain competitive advantage and allow a range of productive improvements: the interactivity of computers, the distribution of information, the provision of analytical tools, the elimination of distance barriers, and, to a lesser extent, the replacement of repetitive tasks (Kim & Kim, 2006; Leidner & Jarvenpaa, 1993).

The purpose of this study is to ascertain how academic success and happiness with online learning practises are impacted by the online learning environment for Malaysian university students. This study focuses on the core problem of e-learning provided for every student at a local university. Students at local universities appear to receive an excellent education in Malaysia. The reality that local university students are experiencing, however, might be a little different from what people may have assumed. This research was done for that reason.

This chapter will cover the research on the factors affecting the deployment of E-Learning on student academic attainment in Malaysian universities. This literature review will be published in the publication where the researcher will add additional variables to the piece. As a result, this chapter will go into deeper detail about the definition, related theories, model and approach, previous studies, dependent variable and independent variable.

2.2 Underpinning Theory

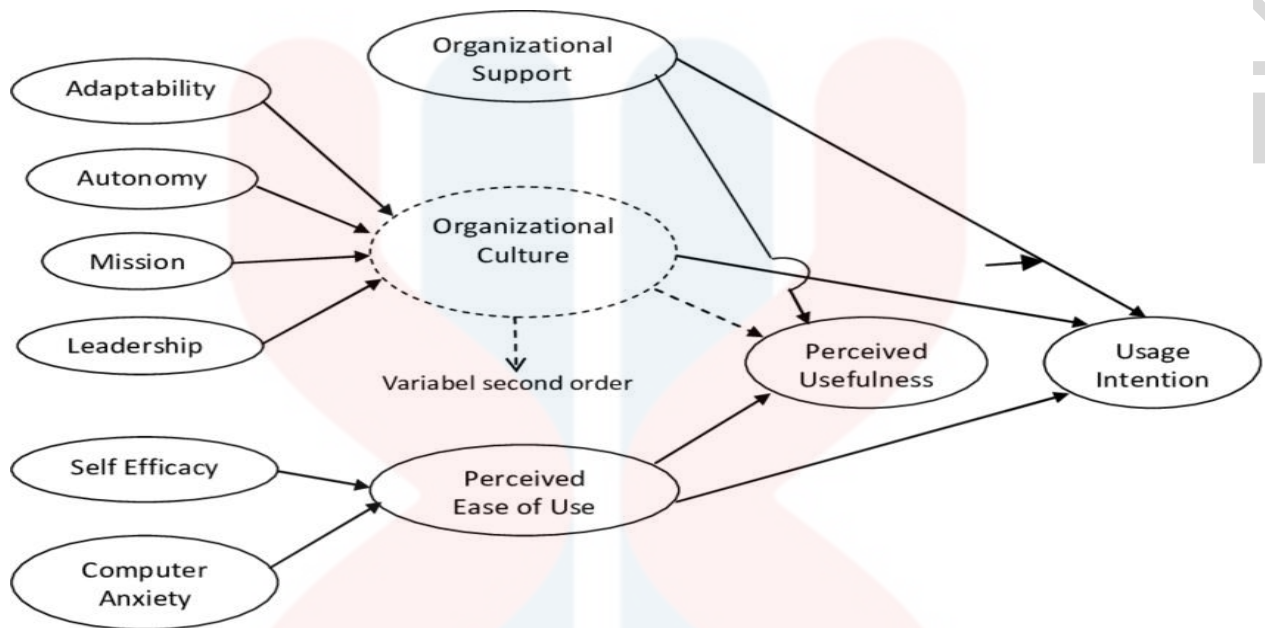


Figure 2.1: The Planned Technology Acceptance Model of E-learning

Technology Acceptance Model (TAM) has been proven to be a theoretical model to explain students' acceptance of online learning. Technology Acceptance Model (TAM) was founded to be used in many studies to explain the users' perceived acceptance of technology. Liu, Liao & Peng (2005) found the constructs in TAM could explain continuance intention in the context of education. Hence, TAM is more appropriate to be applied in online contexts because of TAM is specific on information system usage for applying the concepts of ease of use and usefulness. In Malaysia there are many studies used TAM as a model for investigating the factors that influence students' acceptance for online learning in higher education institution (Wong, Teo & Russo, 2012, Arumugam, 2011, Wong, 2013, Luan & Teo, 2009).

TAM has received a lot of help in understanding and managing the process of adopting new technologies (Chen, Chen, Lin & Yeh, 2007; Dillon & Morris, 1996; Masrom, 2007; Park, 2009). The core premise of TAM is that a user's behavioral intention determines his or her adoption of technology. TAM also implies that when consumers consider technology to be beneficial and simple to use, they have a favorable attitude toward it (Lee, Cho, Gay, Davidson & Ingraffea, 2003).

2.3 Previous Studies

The study that related to the particular issue recently does show a relating effect between the e-learning readiness towards students' academic achievement. There are several previous studies that related to this research as following. The researchers were use previous study on e-learning readiness towards students' academic achievement as a reference for the issue especially previous studies that are related to local universities students who are pursuing diploma and relevant level, bachelor's degree, master level and PhD level.

- **Institutional support**

Student support is a critical component of online student success (Rumble, 2000), which has previously been identified (Woodley & Simpson, 2014) and remains important in the study on student attrition, retention, and dropout (Rotar, 2020). Different support models provide useful conceptual frameworks for considering the approach to online student help (see Floyd & Casey-Powell, 2004; Ryan, 2004; Simpson, 2008). According to Ryan (2004), the "centrality of student-student contact for retention and study success" is promoted. He proposed a logical framework for maintaining support for online learners with a student as a centre of the model and argued that his framework "is best situated within the knowledge of the distance student's lifecycle, from initial interest in distance education as a possible avenue for study, to inquiry at a particular institution, through academic counselling, to study and eventual graduation".

It also allowed for the incorporation of social components, such as online interactions and involvement, into support interventions. "The online world itself gives new instruments for communication, knowledge and skill acquisition, and peer and group support that were not available to previous generations of distance students," write Zawacki-Richter and Anderson (2014).

Moore and Kearsley (2012) proposed a theory of transactional distance within the discourse on the affordances of the Internet, emphasizing the creation of an understanding of the fundamental

idea of online learner assistance. A novel method offered online student assistance as an intervention that aims to reduce the transactional distance between learners, tutors, and educational institutions while also assisting the learner in developing autonomy.

- **Student characteristics**

Learner characteristics are so diverse that they range from personal to academic. The former refers to traits like gender, language, age, and cultural background. Meanwhile, academic characteristics consist of logic, objectivity, intellect, insight, and practical applications. These combined qualities contribute significantly to the student learning process.

Student characteristics comprise both cognitive and motivational-affective components (Snow et al. 1996). Cognitive characteristics refer to students' general cognitive abilities as well as their acquired knowledge in subject domains. Motivational-affective components include aspects such as interest and self-concept of ability in subject domains. However, cognitive, and motivational-affective components do not necessarily develop uniformly. Students, for example, may have high cognitive abilities but low self-concept (Seidel 2006).

- **The evaluation of use of technology**

Learner qualities span from personal to academic in nature. Gender, language, age, and cultural background are examples of the former. Academic qualities include logic, objectivity, intellect, insight, and practical applications. These combined traits provide a major contribution to the student learning process.

Student traits include cognitive as well as motivational-affective components (Snow et al. 1996). Cognitive qualities pertain to pupils' overall cognitive aptitude as well as their topic domain expertise. Interest and self-concept of abilities in topic fields are examples of motivational-affective components. However, cognitive and motivational-affective components do not always develop in

the same way. Students, for example, may have strong cognitive ability but a negative self-image (Seidel 2006).

- **Online Interaction and Social**

According to Nichols (2001), there is a need for increased online engagement between professors and their students. Finally, the fundamental obstacles that today's teachers face are not technological, but rather social in nature. A number of critical technology concerns require immediate response. However, the greater issues will remain with professors who are attempting to establish dynamic online dialogs and encourage meaningful involvement in their lectures (Kolluck, 1998).

Researchers that define interaction as a social and psychological relationship that promotes learning examined the concept from two perspectives: learner and teacher. Sonnenwald and Li (2003, ET) operationalized the concept in terms of natural science students' social interaction learning style preferences (competitive, cooperative, or individualistic). Learners' need for interaction was characterized by Bernard, Brauer, Abrami, and Sturkes (2004, DE) in terms of their capacity to cooperate online and their pleasure of group work. Other research described interaction as social construction by evaluating the words of discourse participants to observe how themes were linked together during online talks, how learners formed conversation, and how they asked peer help (Bielman, Putney, & Strudler, 2003)

- **Online learning readiness**

Readiness is one of the characteristics contained in the learning principles, and it influences learning. It is defined as the set of abilities required for pupils to learn and is influenced by physical, social, and emotional development, learning methodologies, communication, and general knowledge (Wynn, 2002). Readiness is thought to be proportional to happiness with learning events

(Gunawardena & Duphorne, 2000). Readiness that works in face-to-face learning also works in online learning, e-Learning, and distance education.

Warner, Christie, and Choy (1998) defined online learning readiness as a three-dimensional term that includes student preferences for distribution methods, their trust in electronic communication, and their own learning abilities. These aspects were characterized by E. Smith (1999) as the requirement for skill, faith, and comfort in learning materials, as well as the need for self-control in learning. Individual comfort with e-Learning and self-control with learning.

- **Perceived usefulness**

The fundamentally important concept of purposeful conduct and the main driver of acceptance of IS/IT is perceived utility. This technology-related factor is developed from TAM theory and has been repeatedly proved to be significantly related to the adoption of new technologies, as well as capable of encouraging the success of powering information systems within various business landscapes (Davies et. al, 1989). Indeed, this concept is a key driver of new technology uptake and utilization. Furthermore, such a construct appears to motivate the attitude, intention, and action chain of human psychology toward adopting technology, according to Davies et al (1989). As a result, perceived usefulness has been widely employed in empirical studies of adoption decisions in numerous information technology fields.

Without a doubt, most empirical research studies on the adoption and acceptance of IT-related technologies and techniques have included this technology-related construct in the analysis and, in most cases, manifested as an influential variable in influencing technology adoption decision-making processes. Perceived usefulness (PU) is defined as an individual's belief that using a system will improve his or her work performance (Davis, 1989).

2.4 Hypotheses Statement

Hypotheses 1:

There is a significantly positive relationship between student characteristics and academic achievement of local universities students in Malaysia.

Hypotheses 2:

There is a significantly positive relationship between the evaluation of use of technology and the academic achievement of local universities students in Malaysia.

Hypotheses 3:

There is a significantly positive relationship between institutional support and the academic achievement of local universities students in Malaysia.

Hypotheses 4:

There is a significantly positive relationship between online interaction and social, and the academic achievement of local universities students in Malaysia.

Hypotheses 5:

There is a significantly positive relationship between perceived usefulness and the academic achievement of local universities students in Malaysia.

2.5 Conceptual Framework

E-learning has made its way into developing countries, where it is considered as having enormous promise to assist governments in their attempts to address expanding educational demands while also dealing with teacher shortages. Because it is a less expensive and more flexible choice, e-learning is considered as a strategy for increasing the number of students in higher education, particularly from minority groups and informal settings. It is critical for people interested in adopting e-learning in underdeveloped nations to grasp all the hurdles. E-learning is frequently transferred from developed nations, we need to know not only what issues developed countries have recognised and, to some extent, overcome, but also what extra obstacles, if any, poor countries may face.

This study proposes a pedagogical framework for evaluating online learning. Apply instructional design concepts. In addition, this study seeks to combine various assessment criteria from existing e-learning evaluation models from an educational standpoint. This study also seeks to create assessment criteria for e-learning in Malaysia's public sector, notably personal aspects, knowledge, learning, content, and teacher-student connection.

According to Hill, Lomas, and MacGregor (2003), the most significant aspects in providing great education are teacher quality and student support systems. A group of college students and a focus group were utilised in their experimental investigation. Previously, Laudon and Laudon (1998) highlighted essential variables for effective e-learning programme deployment. Administrative assistance, user interaction, the complexity and hazards of new technologies, and the function of project management in the implementation process are among them. Le Blanc and Wands (2001) divide the critical success criteria for e-learning into three categories: organisational, general, and cognitive. This study is aimed to focus on factors that affecting students' performance in e-learning which are students characteristics, the evaluation of use of technology, institutional support, online interaction, and perceived usefulness.

The conceptual framework for the influence of e-learning implementation on local universities students' academic performance which are students' characteristics, the evaluation of use of technology, institutional support, online interaction, and perceived usefulness is shown in Figure 1.

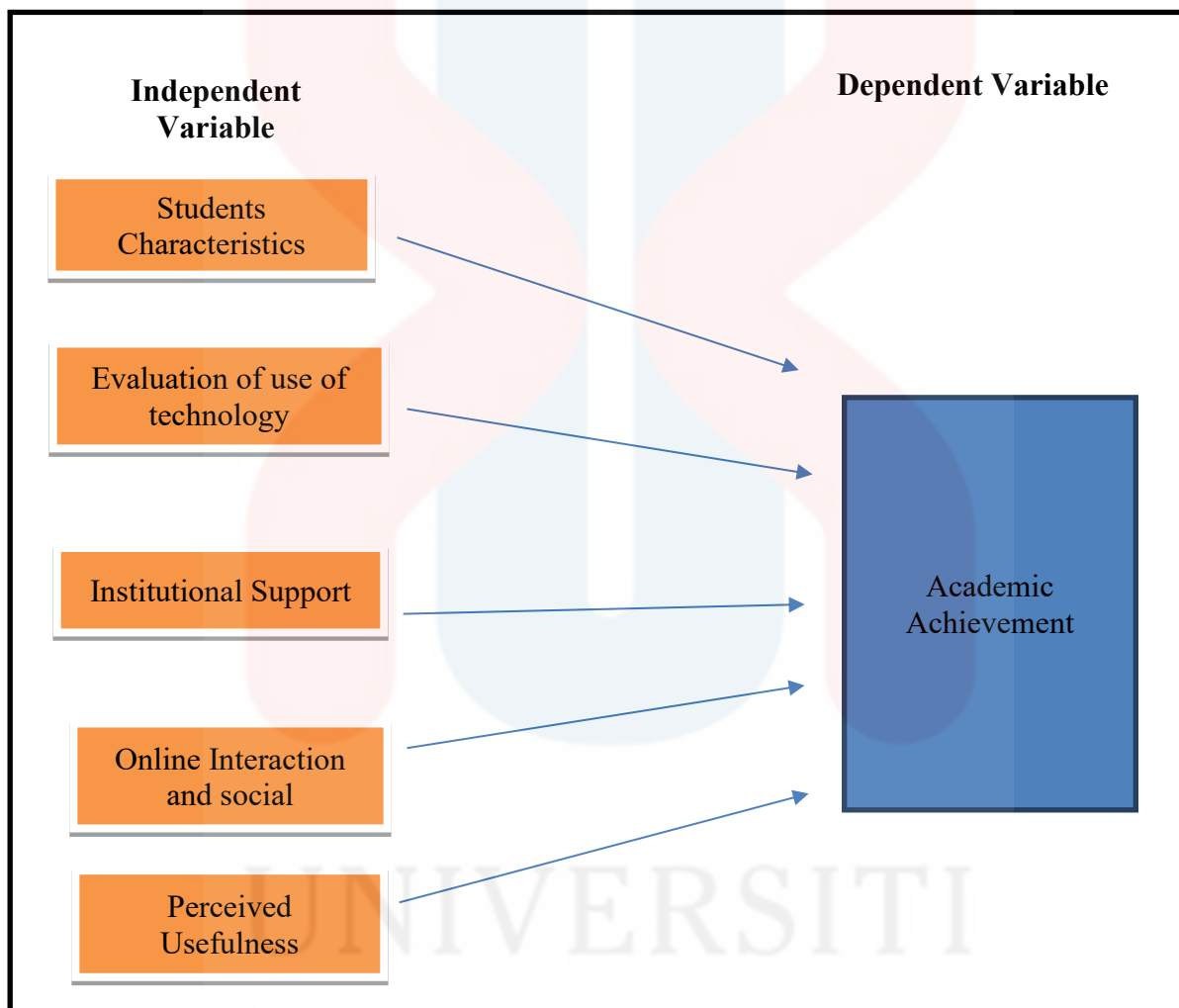


Figure 2.2: A research framework on Factors Influencing E-learning Readiness towards Local University Students

Source : Hoang, A. T., et L. (2021). "The Factors Affecting Students' Online Learning Outcomes during the COVID-19 Pandemic: A Bayesian Exploratory Factor Analysis"

Relationship between Academic Achievement and Students Characteristics

Roblyer's (1999) study explains the characteristics that influence community college and virtual high school students to choose online or traditional course formats. In addition to the student qualities stated above, research on self-efficacy is prevalent in distant education. Some of them are

summarised below: Joo, Bong, and Choi (2000) investigated the impact of student motivation on performance in Web-based instruction (WBI) and discovered that students' self-efficacy in independent learning was positively associated to academic achievement. own research Academic self-efficacy, strategy usage, and online self-efficacy. It is the student's confidence in their ability to learn and successfully complete the course. This survey investigates the association between a variety of motivational factors (including remote learning self-efficacy, self-regulation, and achievement objectives) and academic performance in distance learning institutions.

Relationship between Academic Achievement and Evaluation of use of Technology

This category stands for the letter "e" in e-learning and indicates technical requirements. The issues discussed were the choice of technology - radio, computer, audio tape, various learning management systems (LMS), etc.; the cost of using these technologies, how to access them and the languages in which they are available. The most mentioned factors are right to use. The use of ICT in distance education makes access to technology a positive or negative factor, and access issues in developing countries are often discussed in terms of usability. The importance of technology in education is evolving all the time. Technology has lately emerged as a new phenomenon that helps encourage, distinguish, and empower kids to perform and flourish in ways never previously imaginable. Computers and technology, according to Johnson (2003), may "spark the aspirations of forward-thinking educators who perceive the potential to change traditional concepts of teaching and learning" when utilised effectively.

Relationship between Academic Achievement and Institutional Support

Institutional support develops confidence and personal standing, allowing pupils to flourish later in life and preserve consistent knowledge. One of the reasons for the group's success is the availability of adequate physical infrastructure, such as textbooks, libraries, and teaching and learning materials (Harmon and Wales, 1999). Student success in online learning is determined by

better support service, and institutional support plays a larger role in explaining satisfaction (Ayuni & Muliana, 2019).

Relationship between Academic Achievement and Online Interaction and Social

One of the study's main areas of focus is how learners interact with content through website links, libraries, and e-labs and how that interaction affects their academic performance. According to Nasliha and Mustafa (2016), learner engagement with the material influenced success and achievement in distant learning. They contend that this is dependent on the type, volume, and calibre of interactions between teachers and students. Lamport et al. (2012) describe how social management techniques to teach excellent student behaviour can help teachers help students develop their social skills. The instructor needs to pay close attention in the classroom. According to the study's findings, educational institutions should encourage good social conduct among students. Negative student conduct can therefore be reduced.

Relationship between Academic Achievement and Perceived Usefulness

The e-learning platform's design is the main factor that significantly influences perceived usefulness. Students who excel in online courses are more confident in their perceived achievements. Other research have corroborated this (Rovai, 2004). However, learner satisfaction is influenced by perceived ease of use. Grasp user satisfaction requires an understanding of the user's sense of ease of use. According to Davis et al. (1989), a system is user-friendly if a particular job can be accomplished with minimum effort. Making e-learning systems available to users of all levels encourages them to learn the material rather than wasting time learning the tools. Overall, there will be increased learning pleasure.

2.6 Conclusion

As a conclusion, this chapter had discussed on the insight and review of the previous publication and research regarding to the topic of E- Learning readiness on student's Academic Achievement at Local Universities in Malaysia. The proposed theoretical framework was constructed based on the review of the research. The researcher would analyze the relationship links to hypotheses which is how dependent variable students' academic achievement could influence the independence variables of students' characteristics factors, evaluation use of technology factors, institutional support factors, online interaction and social factors and perceived usefulness factors. The study's overall conceptual framework was also addressed by the researchers.

This research review's purpose is to help the read understand the e-learning influence the students' academic achievements. This is research is significant because many graduates have different levels of achievement and attributes. The explanation on the e-learning readiness help to relate it with the students' achievement. There has not been much research and discussion conducted on this particular issue. More research and testing are required to gain better understanding of the e-learning readiness and students' achievement. It is important to conduct more studies to solve the literature gaps from the research.

CHAPTER 3: RESEARCH METHODS

EKFP

3.1 Introduction

Researchers from the local universities answered a questionnaire as the method of data gathering for this study. To achieve the research objectives, data collection for this study will be carried out utilizing trustworthy and known quantitative methodologies, which can give more reliable information from local university researchers. Researchers were asked to answer questions on their use of e-learning, including their impressions of it. This study seeks to provide a response to the following question: "What is the link between e-learning efficacy and desire to utilize e-learning?" The process used to respond to the preceding question is described in the section that follows.

This research uses a Google Form online survey to investigate the efficacy and efficiency of online learning among college students. Utilizing surveys created during the epidemic is the best method for gathering data (Ooi & Teoh, 2021). Based on their comments, their evaluations of the efficacy and efficiency of e-learning were evaluated using Google Sheets. This strategy is used to compile various comments and viewpoints for comparison and analysis (Akhtar, Azeem, Basiouni, Teoh, & Alvi, 2020). The first section of our questionnaire provides the demographic data of the respondents, and the second section contains the questions that the respondents responded using a Likert scale.

This section's main goal is to determine how respondents feel about e-learning by asking them how much they agree or disagree with each item on the list. We consulted articles in addition to the online poll to reinforce the data we collected. We also included data from other earlier e-learning research investigations. The survey, which was carried out using Google Sheets, gathered information mostly on Malaysian higher education students. A questionnaire with identical content and responses to general remarks was delivered to adults using the researcher's contact information.

The sample was chosen because it represented a group of persons with experience utilising e-learning portals and gaining access to materials, and respondents were picked at random. The poll investigates how well-liked electronic portals are among students. There are two sections to the questionnaire. Section A details the respondent's background, including his or her age, gender, race, and university. Part B asks questions about student acceptance and satisfaction, including their familiarity with the e-learning site and its contents, the technology and design of the portal, the learning activities they engaged in, and their perceptions of its strengths and weaknesses. Statistical Package for the Social Sciences was used to conduct frequency and percentage distribution analyses on the data (SPSS). Respondents were prompted to share details about their e-learning experiences. The findings were derived from the distributed surveys using IBM SPSS (version 27). Interviews with members from higher education produced excellent conversations and kindly received responses. The interviews help to paint a clearer picture of the available e-learning courses today. Additionally, a greater understanding of programme implementation and audience reaction was gained.

It is required that research data come from a higher education institution (HEI) that is recognized as a local university. In the quantitative portion of the study, higher education institutions were sampled using a one-stage cluster sample and an equitable choice design, and data were ultimately collected from 20 public universities.

In conclusion, this study is investigating the factors of E-learning readiness influencing students' academic achievement at local universities in Malaysia used to discover, interpret and develop methods and systems to complete the research. Data collection techniques is an essential to prove that this research is completely done in a way that research needed. All the research method will be describe in the form of research design, data collection methods which are primary data and secondary data, study population, sample size, sampling techniques, research instrument development, measurement of the variables and procedure for data analysis.

3.2 Research Design

A research design is essentially a study plan that describes the methods that researchers must follow in order to achieve their research aims or test the hypotheses offered for their investigations. The exploratory research design will be used by the researcher to conduct the investigation. This is significant, and the goal of this study is to determine the relationship between the elements that influence E-Learning implementation and student academic achievement at Malaysian universities. As a result, in order to get more knowledge, the researcher must collect more information related to these aims.

The researchers will use descriptive and correlational research under non-experimental research. According to Salkind (2008), descriptive research can be defined as describing the characteristics of an existing phenomenon meanwhile correlational research examines the relationship between variables.

In this study, the researcher will utilise this quantitative method to assess the feedback from respondents by distributing questionnaires online in order to obtain information and data that influence the variables. Following that, the statistical analysis of the data focuses on the hypotheses in order to create and offer support for the conclusion.

3.3 Data collection method

The process of data collecting is a means of acquiring information from all relevant sources. To uncover the answers to the research question, test the hypothesis and analyse the results. Data collection methods are classified into two types: primary data collection methods and secondary data collection methods. The study may employ both primary and secondary data collection methods in this study.

3.3.1 Primary Data Collection Method.

Primary data collecting methods are classified into two types: qualitative data collection and quantitative data collection. Quantitative data collection methods are based on statistical and analysis techniques such as closed-ended questionnaires, correlation and regression approaches, mean, mode, and median, and others. Furthermore, as compared to qualitative data collecting procedures that can be used in a shorter period of time, the quantitative data collection approach is less expensive to use. Furthermore, because the approach to quantitative methodologies is very standardised, it is simple to compare the results. The researcher employs the quantitative data collection strategy in this study.

3.3.2 Secondary Data Collection Method.

Secondary data is information that has been previously published in books, newspapers, periodicals, journals, and web sites. There are numerous sites that provide a wealth of data about this topic of research in business studies, essentially regardless of the field's existence. Furthermore, the usage of the suitable set of criteria to classify the secondary data that will be used in the study is critical to the correctness and reliability of the test results. These criteria include the author's qualification, the reliability of the source, the consistency of the discussions, the depth of the analysis, and the degree to which the text contributes to the advancement of the research area.

Previous researchers have frequently used the method of library study as their secondary method of acquiring data for the research, which includes magazines, newspapers, documents, literature review of previous studies, journals, statistical analysis, and so on.

The researcher is collecting data from both primary and secondary sources in this study. The researcher will utilise Google Forms to distribute the questionnaire for primary data collection. The researcher uses Google Scholar to obtain data and previous studies for the secondary data collection strategy.

3.4 Study Population

A population in research terminology refers to a massive gathering or collection of individuals or objects that are the focus points for any certain set of specific scientific study. Whether that group is a country or a collection who share common trait, a separate group of people, a population is the group of people from which a statistical sample is selected for research in statistics. As a result, a population may be defined as a collection of linked people by a common characteristic (Momoh, 2021). To obtain the successful of complete the research, a target population have been planned by the researchers.

In this research, the researcher determines the study population of local universities students in Malaysia by referring data in Table 3.1. Hence, the total of study population for this research is 584,576 students. In Malaysia, there are 20 local universities located.

Table 3.1: The Number of Public University Students 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

Source: Department of Statistics Malaysia, Education Statistics 2020

3.5 Sample size

The number of participants or observations in a research is referred to as the sample size. The process of selecting a group of people from a population to estimate the characteristics of the entire population is known as sampling. The sample size in this study is 384 students chosen from each local institution to reflect the whole population. According to Krejcie and Morgan (1970), a minimum of 384 responders is required to statistically represent 584,576 students. The population was used to determine the size of the sample. For analysis, the number of entities in a subset of a population is chosen.

Table 3.2: Determine Sample Size of a Know Population

Table 3.1									
<i>Table for Determining Sample Size of a Known Population</i>									
N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

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

Source: Krejcie & Morgan, 1970

3.6 Sampling techniques

The method of selecting a sample through a population is meant by sampling. As for the sampling method, it contains two types of sampling, namely probability and non -probability sampling methods. Probability sampling techniques will be used for this research study.

With probability sampling, every member of the population has a chance of being chosen. It is mostly employed in quantitative research. Probability sampling techniques are the best option for producing findings that are representative of the entire population. To generate or create a sample, probability sampling employs random sampling procedures. This strategy was used to choose 384 responders from various colleges. The situation-based likelihood that each member of each population has a known chance and multiple options to choose from is one of the reasons why this approach is adopted.

3.7 Research Instrument Development

The researcher uses an online questionnaire (Google Form) as the main instrument to collect the data that consists of a network of questions and other measures to collect the data from the population of local universities students in Malaysia. The part C to G using the Likert Scale format in which Likert Scale is widely used scale that requires the respondents to indicate a degree of agreement or disagreement with each of the series of statements about stimulus objects. One of the most fundamental and widely used psychometric instruments in social science and educational research is the likert scale.

The analysis and scoring of the scale are subject to several debates and disagreements at the same time. This essay attempts to incrementally construct a structure around the Likert scale in this context by studying the available literature and afterwards fusing the knowledge gained with a

cogent scientific thought. This analytical research, which focuses on complicated concerns like validity, reliability, and scale analysis, starts with the requirement for psychometric instruments like the Likert scale and associated variables.

Typically, each scale item has 5 response categories, ranging from “Strongly Disagree”, “Disagree”, “Neutral”, “Agree” and “Strongly Agree”. Strongly disagree represent 1 point, disagree represent 2 point and respectively is used to collect response from respondents. The questionnaire for this study is constructed based on the research needs. Furthermore, the questionnaire will conduct online as it is easier for the respondent to access. There are five parts in the questionnaire, which is Part A, B, C, D, E, F and G. The questionnaire will develop in English and Malay only.

Table 3.3: Measure of five scale of Likert Scale

Item	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Score	5	4	3	2	1

Part A will cover about the demographic components of the respondents (e.g., age, gender, education level). Part A will be consisting of open-ended questions that needs to be answered accordingly.

Part B will cover some questions of the factors influencing E-learning student academic achievement towards local university students in Malaysia. Part B will be using 5-point Likert Scale to get the answer from the respondents.

Part C is to answer the first research question and to achieve the first objective of this research which is to investigate the positive relationship between students’ characteristics and the online learning readiness towards local universities students in Malaysia. This part will be using 5-

point Likert Scale to get the answer from the respondents.

Part D is to answer the first research question and to achieve the first objective of this research which is to investigate the positive relationship between the evaluation use of technology and the online learning readiness towards local universities students in Malaysia. This part will be using 5-point Likert Scale to get the answer from the respondents.

Part E is to answer the first research question and to achieve the first objective of this research which is to investigate the positive relationship between institutional support and the online learning readiness towards local universities students in Malaysia. This part will be using 5-point Likert Scale to get the answer from the respondents.

Part F is to answer the first research question and to achieve the first objective of this research which is to investigate the positive relationship between online interaction and social and the online learning readiness towards local universities students in Malaysia. This part will be using 5-point Likert Scale to get the answer from the respondents.

Part G is to answer the first research question and to achieve the first objective of this research which is to investigate the positive relationship between perceived usefulness and the online learning readiness towards local universities students in Malaysia. This part will be using 5-point Likert Scale to get the answer from the respondents.

To collect the data on the effect of E-learning readiness towards local universities students' academic achievement in Malaysia, a set of questionnaires by part was developed and distributed to each randomly selected respondent. There are at least 10 respondents from each university answered the questionnaire. By answering the questionnaire, the respondents are agreeing with the data been collected for research purposes. All the demographic information of will not be misuse for other purposes except for this research.

3.8 Measurement of the variables

Researchers make our interpretation of the data from that variable based on the degree of measurement. This, in turn, can have an impact on the study's results, particularly when attempting to characterize the correlations between variables in the study. Variables are assessed at five different levels. Each measurement level gives a different amount of information. For quantitative research, we also employ an interval scale in this project. Interval variables provide the most accurate readings.

Due to their numerical values, interval and ratio variables are classified as continuous or quantitative variables. A research study will frequently incorporate various combinations of these factors.

Table 3.4: Variable Measurement

	Variables	Measurement	Scale of Measurement
Independent Variable	Students' Characteristics Factors	Interval	5-point Likert Scale
	Evaluation use of Technology Factors	Interval	5-point Likert Scale
	Institutional Support Factors	Interval	5-point Likert Scale
	Online Interaction and Social Factors	Interval	5-point Likert Scale
	Perceived Usefulness Factors	Interval	5-point Likert Scale
Dependent Variable	Factors Influencing E-learning Readiness	Interval	5-point Likert Scale

3.9 Procedure for data analysis

In this study, IBM SPSS statistics will be utilized for data analysis. The researcher will create a topic-related questionnaire from the beginning and provide it to the respondents for them to complete. So, when the respondents respond to the questions, the data will be collected. To conduct statistical analysis, the data from the target respondents acquired via the Google form will be sent to SPSS. Descriptive analysis, reliability analysis, and normality analysis are all parts of statistical analysis.

The following approaches were used to gather data: survey, collect data, and documents. Researchers will be able to evaluate and examine study findings utilizing various data sources thanks to the use of several data gathering methods (Patton, 1990).

Data analysis is an essential component of qualitative research. The correctness of interview transcripts was verified against the original recordings. To examine qualitative data from several sources throughout time, employ the static comparison approach (Glaser and Strauss, 1967). Data should be arranged around each study topic concerning how students experience online courses and the variables that affect those experiences.

Table 3.5 indicates the research objectives, concept or construct use to operationalize the objectives, capacity scale and the suitable statistical investigations are practice.

Table 3.5: Operationalize the objectives, capacity scale and statistic investigation

Research Objective	Concept / Construct	Scale	Statistic
To determine the connection between the academic achievement and the students' characteristics.	Students' characteristics influence academic achievement	Likert Scale	Hypothesis Testing Pearson Correlation
To determine the connection between the academic performance and the evaluation use of technology	Evaluation use of technology influence academic achievement	Likert Scale	Hypothesis Testing Pearson Correlation
To determine the connection between the academic performance and institutional support	institutional support influence academic achievement	Likert Scale	Hypothesis Testing Pearson Correlation
To determine the connection between the academic performance and online interaction and social	online interaction and social influence academic achievement	Likert Scale	Hypothesis Testing Pearson Correlation
To determine the connection between the academic performance and perceived usefulness	perceived usefulness influence academic achievement	Likert Scale	Hypothesis Testing Pearson Correlation

3.10 Conclusion

The effectiveness of e-learning depends on the quality and quantity of e-learning materials applied, the time required to complete the course and the results at the end of the course. Online learning is more efficient because less time is required to learn new information that a particular course provides, and the end result is better.

The number and quality of e-learning resources used, the time needed to finish the course, and the course's final outcomes all affect how successful e-learning is. Online education is more effective since it takes less time to acquire new material than in-person instruction and produces better results. Researchers from local universities responded to a questionnaire as part of the data collection process for this study. Data collection for this project will be carried out using dependable and well-established quantitative procedures to meet the research objectives and obtain more accurate data from academics at nearby universities.

Personalization in e-learning may be defined as the integration of practises, methodologies, and technologies that give students access to self-learning resources that will enable them to study in accordance with their individual aptitudes, learning preferences, backgrounds, and talents. Depending on their interests, requirements, and learning preferences, they may decide what kind of e-learning materials to use and how new content will be delivered.

In conclusion, the chapter goes into the quantitative reasoning methodologies employed in this research. There includes a thoughtful examination of quantitative data gathering methods, such as the usage of questionnaires. The study's aim, appropriate samples, used instruments, and data processing techniques are the first steps in the research phase.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter's primary objective is to describe the research behind the survey that was sent out to respondents in order to collect the data via online survey. With the help of SPSS, version 26.0, we were able to compile the survey data that was sent out to respondents.

Preliminary analysis, a respondent's demographic profile, descriptive analysis, a test of validity and reliability, a test of normalcy, and a test of hypothesis are the components of the Statistical Package for the Social Sciences (SPSS) software.

This chapter's primary objective is to describe the research behind the survey that was sent out to respondents in order to collect the data via online survey. Preliminary analysis, respondent's demographic profile, descriptive analysis, test of validity and reliability, test of normalcy, and test of hypothesis were all performed on data gathered from the survey using SPSS version 26.0.

4.2 Preliminary Analysis

An example of preliminary data would be the results of a pilot study conducted to determine whether or not to move forward with a larger study. The pilot data used to validate the methodologies with a small sample size and give proof for a working hypothesis theory in grant funding applications. Similarly, preliminary data might be used to prove the importance or potential impact of a study. During the planning stages of a research project, preliminary data analysis is performed to ascertain whether or not a proposed approach is viable and could provide adequate answers to the research issues at hand.

Due to the limitations inherent in studies of this size, often referred to as "pilots," they cannot be relied upon to give conclusive proof. This is useful for generating data, collecting samples, and exposing design flaws. The goal of the preliminary data analysis is to get the data ready for the more in-depth statistical analysis that will follow by providing a description of the data's key characteristics, an understandable overview of the data information, a graphical representation of the data, and so on.

Because of this, the researcher ran a pilot test to check the questionnaire's validity and reliability, making it simpler for the respondents to fill out and understand. Second, it allows the researcher to anticipate and address a plethora of potential issues with the questionnaire's design and implementation before the final questionnaire is even written. This is why the pilot test data was obtained from a total of 30 people, all of whom were reached via google form that the researcher had already circulated. Pilot test results of the Reliability Coefficient Alpha are shown in the table below for the independent and dependent variables.

Table 4.1: Result from Pilot Test for Independent and Dependent variables.

Variables	Cronbach's Alpha
Student Academic Achievement	0.866
Student Characteristics	0.778
The Evaluation Use Of Technology	0.901
Institutional Support	0.883
Online Interaction And Social	0.818
Perceived Usefulness	0.845

The findings of the pilot test for each component of the questionnaire are considered satisfactory because all of the values are greater than 0.700 for Cronbach's Alpha, as shown in Table 4.1, which can be found above. The result for the variable is represented by the Cronbach's Alpha value that is the highest. TECHNOLOGY'S Role in Evaluation Processes This comes out to 0.901%. Therefore, the value of 0.778 for the STUDENT CHARACTERISTICS variable, which is the lowest value of Cronbach's Alpha that predicts the outcome, was chosen. The researcher made the decision to preserve this questionnaire since it is dependable and can be utilised for this study because the total value of Cronbach's Alpha is acceptable for all variables.

4.3 Demographic Profile of Respondents

In this part, researchers will talk about descriptive analysis and how it relates to the data from Appendix 2. Demographic data will be presented as a graph, table, or bar chart, with mean, frequency, and percentage calculations. The questionnaire was made available to the public online. A total of 384 questionnaires that might be used were gathered. There was no missing information. The primary goal of descriptive analysis is to comprehend the respondent's profile. A summary of the description analysis is shown in Table 4.1 below. Based on Weiers (2008), The descriptive analysis is a discipline of analysis that focuses on the summarizing and description of survey data.

4.3.1 Profile of Respondents

This survey involved 384 respondents, all of whom were local university students enrolled in a university program in Malaysia. The data gathered from those who are willing to share pertinent information regarding the study. The responses were chosen at random, and they ranged from diploma and equivalent level students to PhD students. The survey made no distinctions based on gender, age, marital status, or level of education, and it also ignored the respondents' religious and political beliefs. The study had a total of 384 respondents, with all of them participating through questionnaire. Respondents completed all the indicated questions and obtained a 100% response rate

on 384 copies of the questionnaires provided. During the study, no data outliers were discovered.

Figure 4.3 depicts the demographic profile of the respondents.

4.3.2 Gender of Respondents

Table 4.2.1: Gender of Respondents

GENDER					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	272	70.83	70.83	70.83
	Male	112	29.17	29.17	100.0
	Total	384	100.0	100.0	

Source: Data generate by IBM SPSS Version 27

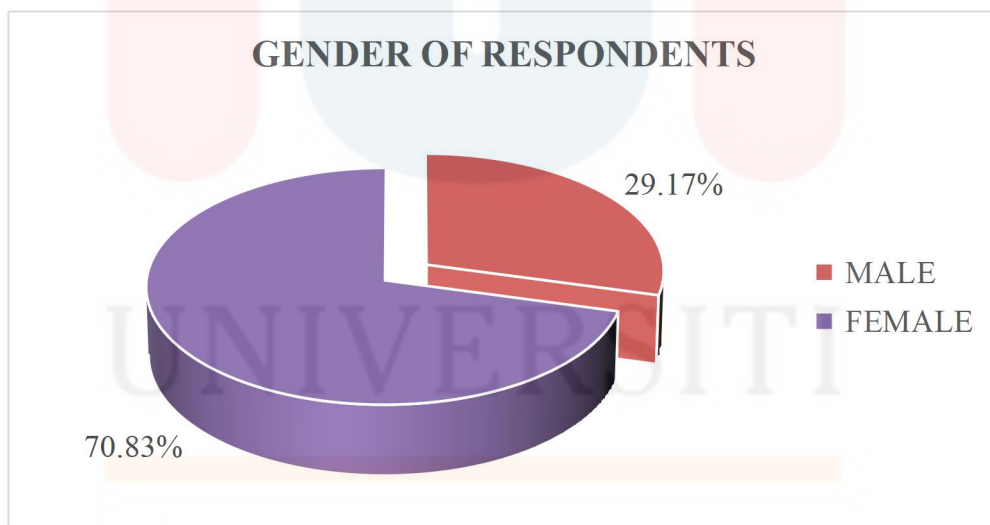


Figure 4.1: Percentage of respondents based on gender

Source: Developed for the research (2022)

Table 4.2.1 and figure 4.1 show, respondents have been analyzed according to gender of respondent. Researchers have been divided gender into two groups. The study intended to seek opinion from both males and females on the assessment of e-learning readiness towards academic achievement towards local university students in Malaysia.

Based on the results of the study, out of 384 respondents who were answered the survey, there are a total of 272 people comprising 70.83% of total sample are identified as a respondent who categorized in female gender group. While the male gender represented the minority that was 112 people which is recorded as 29.17%. The different between both group is 41.66% in which female group shows 41.66% higher than male group. This indicates that the numbers of females participated in the research was large compared to that male.

4.3.3 Age of respondents

Table 4.2.2: Age of Respondents

		AGE			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	18 - 20 years old	262	68.23	68.23	68.23
	21 - 30 years old	120	31.25	31.25	99.58
	31 - 40 years old	2	0.52	0.52	100.0
	Total	384	100.0	100.0	

Source: Data generate by IBM SPSS Version 27

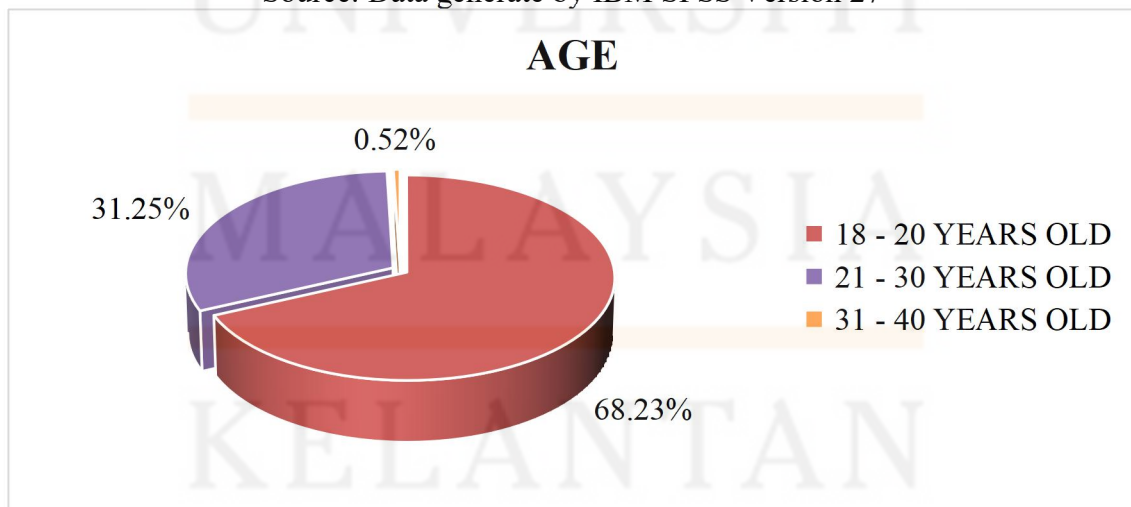


Figure 4.2: Percentage of respondents based on age

Source: Developed for the research (2022)

Table 4.2.2 and figure 4.2 show the age according to target respondent. Researchers have divided age into three groups. These are 18 – 20 years old, 21 – 30 years old and 31 – 40 years old.

From the data collected, there are a total of 384 respondents who were participate in answered the questionnaire. The largest number of age group there are 18 - 20 years old a total of 262 respondents comprising to 68.23% of total sample. While the second largest is recorded respondent who aged between 21 – 30 years accounted for 120 respondent (31.25%). However, the third age group of 31 – 40 years old are recorded 2 respondents (0.52%).

4.3.4 Race of Respondents

Table 4.2.3: Race of Respondent

RACE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	247	64.32	64.32	64.32
	Chinese	80	20.83	20.83	85.25
	Indian	32	8.3	8.3	93.5
	Others	25	6.5	6.5	100.0
	Total	384	100.0	100.0	

Source: Data generate by IBM SPSS Version 27

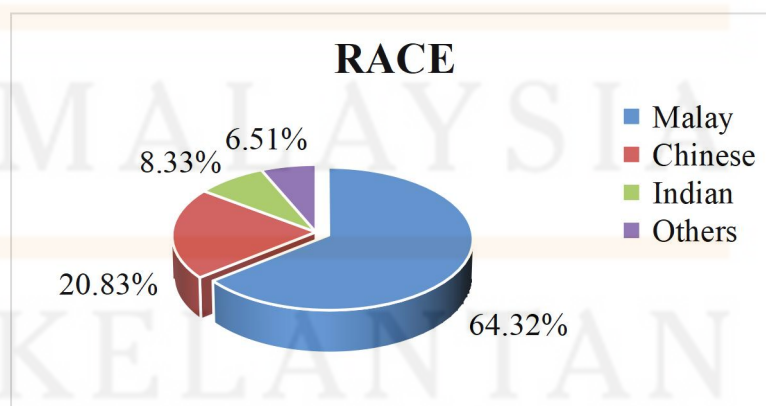


Figure 4.3: Percentage of respondents based on race

Source: Developed for the research (2022)

Table 4.2.3 and figure 4.3 showed the race with the total of 384 respondents. Researchers have been divided race into four groups. There are four groups: Malay, Chinese, Indian and others.

According to the results, Malay respondents comprise the majority of respondents, contributing about 64.32% of total sample which represented 247 respondents. Chinese and Indian respondents recorded with the number of 80 people (20.83%) and 32 people (8.3%) respectively. However, Others which is only 25 respondents equivalent to 6.5%.

4.3.5 Marital Status of Respondent

Table 4.2.4: Marital Status of Respondents

		MARITAL STATUS			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Divorced	1	0.26	0.26	0.26
	Married	4	1.04	1.04	1.3
	Others	2	0.52	0.52	1.82
	Single	377	98.18	98.18	100.0
	Total	384	100.0	100.0	

Source: Data generate by IBM SPSS Version 27

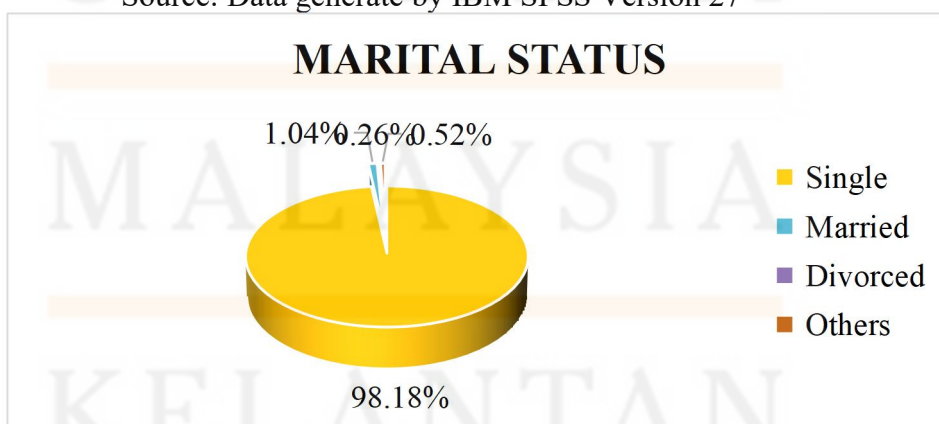


Figure 4.4: Percentage of respondents based on Marital Status

Source: Developed for the research (2022)

Table 4.2.4 and figure 4.4 show, respondents have been analyzed according to race of respondent. Researchers have been divided marital status into four groups. There are four groups: Single, Married, Divorced and Others. Others could be represented widowed person and so on.

Based on the results of the study, there are a total of 384 respondents who were participate in answered the questionnaire. The majority of respondents about 377 of the participants (98.18%) were single while married and divorced recorded 4 respondents (1.04%) and 1 respondent (0.26%) respectively. Participate who is categories on Others are the third group of marital status had 0.52% or more minority respondents represent the 4 people.

4.3.6 Educational Level of Respondent

Table 4.2.5: Educational Level of Respondents

EDUCATIONAL LEVEL					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma and relevant level	28	7.29	7.29	7.29
	Bachelor Degree	348	90.63	90.63	97.9
	Master	8	2.08	2.08	100.0
	Total	384	100.0	100.0	

Source: Data generate by IBM SPSS Version 27

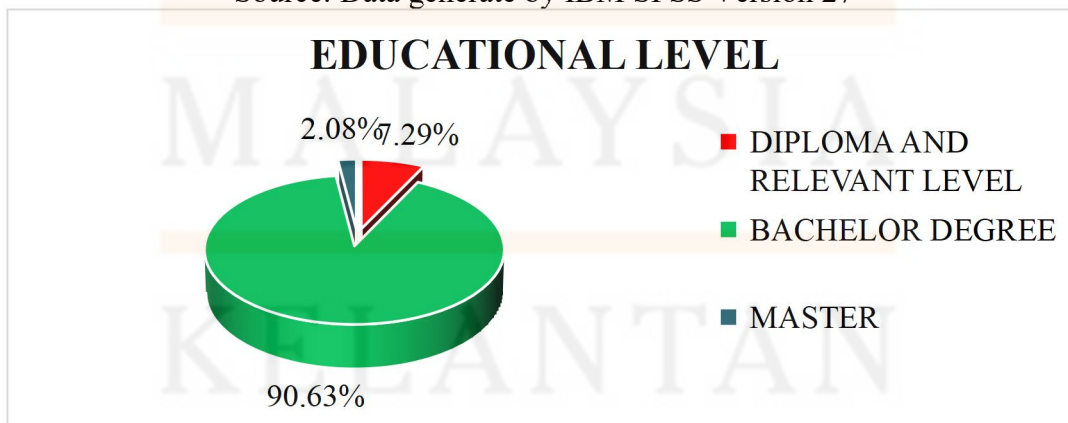


Figure 4.5: Percentage of respondents based on Educational Level

Source: Developed for the research (2022)

Table 4.5 and figure 4.5 indicated respondents have been analyzed according to educational level of respondent. Researchers have been divided educational level into four groups. There are four groups: Diploma and equivalent level, Bachelor Degree level, Master level and PhD level.

There are a total of 384 respondents who were participate in answered the questionnaire. It was evident that majority of participants were Bachelor Degree level. It recorded 348 respondents, comprising 90.63% of the total sample. The second largest sample is the respondents with diploma and equivalent level. The number of diploma and equivalent level respondents were 28 participants, making up 7.29%. The third group of educational level is master level which it comprises 8 respondents with the equivalent of 2.08%. However, there was no respondents from PhD level.

4.3.7 University Name of Respondents

Table 4.2.6: University Name of Respondent

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	UIAM	10	2.6	2.6	2.6
	UITM	10	2.6	2.6	5.2
	UKM	31	8.1	8.1	13.3
	UM	12	3.1	3.1	16.4
	UMK	34	8.9	8.9	25.3
	UMP	20	5.2	5.2	30.5
	UMS	11	2.9	2.9	33.3
	UMT	10	2.6	2.6	35.9
	UNIMAP	34	8.9	8.9	44.8
	UNIMAS	11	2.9	2.9	47.7
	UNISZA	27	7.0	7.0	54.7
	UPM	23	6.0	6.0	60.7
	UPNM	10	2.6	2.6	63.3
	UPSI	11	2.9	2.9	66.1
	USIM	24	6.3	6.3	72.4
	USM	21	5.5	5.5	77.9
	UTEM	33	8.6	8.6	86.5
	UTHM	13	3.4	3.4	89.8
	UTM	17	4.4	4.4	94.3
	UUM	22	5.7	5.7	100.0
	Total	384	100.0	100.0	

Source: Data generate by IBM SPSS Version 27

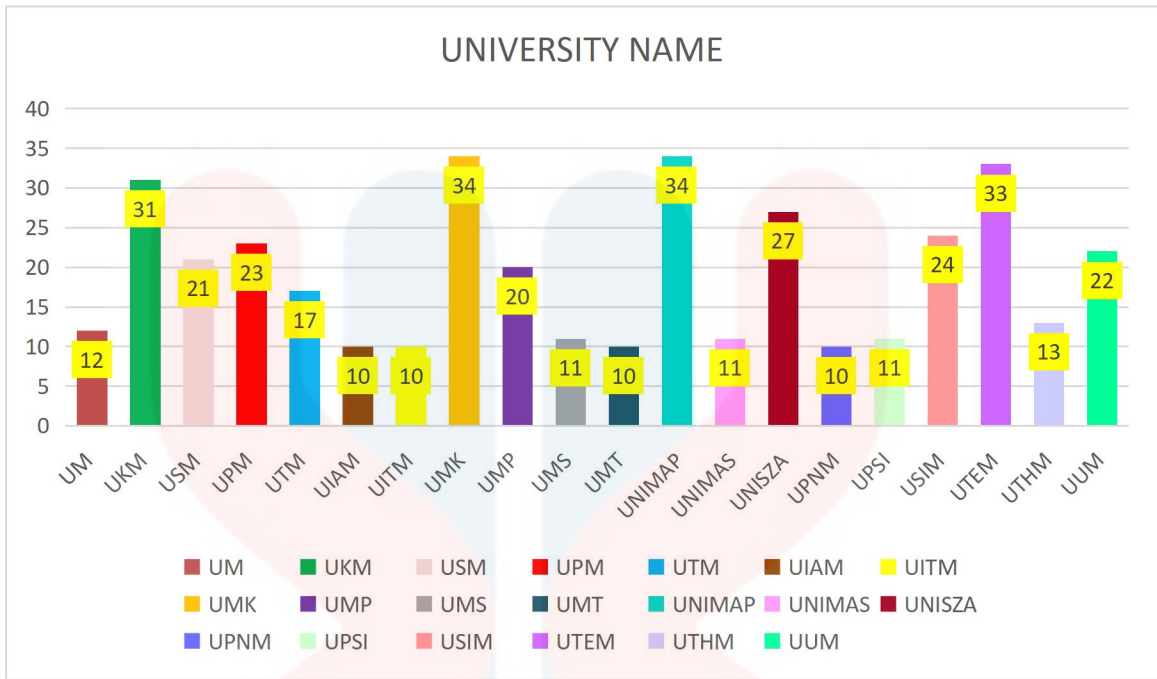


Figure 4.6: bar graph of respondents based on University Name

Source: Developed for the research (2022)

Table 4.6 and figure 4.6 show university name of respondent enrolled. Researchers have been divided university name into 20 groups.

Based on the results of the study, there are a total of 384 respondents who were participate in answered the questionnaire. The majority of respondents are from UMK and UNIMAP. Both universities have 34 respondents comprising 8.85% of total sample. The second largest is UTEM respondent which recorded is almost as compared to UMK and UNIMAP. There is only 1 different amount in which UTEM recorded 33 participants making up 8.59%. On the other hand, 31 respondents of all participants accounted for UMK which equivalent to 8.07%. There are 27 respondents from UNISZA, 24 respondents from USIM and 23 respondents of the total sample from UPM which represents 7.03%, 6.25% and 5.99% respectively. However, the respondents from UUM contributing about 22 participants which equivalent to 5.73%, more than respondents in USM which only have 21 participants recorded as 5.47%. There are universities with the less than or equal to 20 respondents such as UMP, UTM and UTHM. Participants from three of the universities recorded 20 respondents, 17 respondents and 13 respondents of all sample which equivalent to 5.21%, 4.43% and

3.39% respectively. UM participants recorded the minority with 12 respondents moving up 3.13%. There are three universities have a same number of participants with 11 respondents of total sample comprising 2.86% which is USM, UNIMAS and UPSI. The most minority participants in this study were UIAM, UITM and UPNM respondents with only 10 respondents participated in the research which equivalent to 2.6%. Most of the respondents are UMK as most of the questionnaires were collected online especially in UMK students' group.

4.4 Descriptive Analysis

In descriptive analysis, the researchers have come out with this analysis to find the mean for every section of independent variables.

Table 4.3: Level of mean

Mean Value	Interpretation of Precautions
Below 1.5	Very Low
1.5 to 3.0	Low
3.0 to 4.5	High
Above 4.5	Very High

Source: Formed for this research

Table 4.3 determines the level of mean for every factor. The level of mean was range from 0.00 to above 4.50. If the mean was below 1.5 means the respondents were strongly disagreed with the question. However, above 4.50 means strongly agreed.

4.4.1 Descriptive Statistics of Students' Characteristics Factors

Table 4.4.1: Students' Characteristics Factors

No. item statistics	N	Mean	Std. Deviation
C1: Students having strong self-efficacy and self-regulation	384	3.52	1.055
C2: Online study appears to be more strongly motivated than traditional classroom students	384	2.78	1.211
C3: Online university students seem to direct and control their learning processes, time, and resources	384	3.48	1.006
C4: Students having a strong persistence and firmly to a purpose	384	3.53	1.019
C5: Students with good time management through online courses and with a high ability for self-direction	384	3.83	0.999

Source: Data generate by IBM SPSS Version 27

Table 4.4.1 shows that the descriptive variables of Students' Characteristics Factors towards students' academic achievement. As the above table shown, most of the data implicated that mean are 3.0 which is high. The lowest mean score recorded 2.78 in the item of 'Online study appear to be more strongly motivated than traditional classroom'. It shows that most respondent disagree with online study could more motivated. High mean which is 3.83 in which more respondents agree that students with good time management through online courses and with a high ability for self-direction'. The mean for C1, C3 and C4 are 3.52, 3.48 and 3.53 respectively. Moreover, the standard deviation shows that C2 is the highest which recorded 1.211 however C5 contributed the lowest which is 0.999. It shows the low-variance in C5 and higher-variance in C1, C2, C3 and C4 because those standard deviation are higher than 1.

4.4.2 Descriptive Statistics of The Evaluation Use of Technology Factors

Table 4.4.2: The Evaluation Use of Technology Factors

No. item statistics	N	Mean	Std. Deviation
D1: Do technology made certain study tasks quicker and easier	384	4.30	0.800
D2: Technology would made education more widely accessible for everyone	384	4.40	0.758
D3: Pre-recorded class can also upload to a platform for students to review the lesson	384	4.49	0.758
D4: Technology can improve the education process for students	384	4.17	0.842
D5: Every university students need a device to complete the assignment task	384	4.45	0.770

Source: Data generate by IBM SPSS Version 27

Table 4.4.2 shows that the descriptive analysis The Evaluation Use of Technology Factors towards students' academic achievement. All the data implicated that mean are more than 4.0 which means most respondents agree with all these statements. The highest score of mean is in D3, 4.49. It shows that respondents agree pre-recorded class help students to review the lesson. The lowest mean is 4.17 in D4. The respondents stated that technology can improve the education process for students. The mean score of D1, D2 and D5 contributed the 4.30, 4.40 and 4.45 respectively. However, all the standard deviation shows that less than 1 which consider as the low-variance. The data of standard deviation is the highest which recorded 0.842 in D4 and the lowest in D2 and D3 which making up 0.758 standard deviation.

4.4.3 Descriptive Statistics of Institutional Support Factors

Table 4.4.3: Institutional Support Factors

No. item statistics	N	Mean	Std. Deviation
E1: The institution needs to provide assistance to students who do not have devices such as tablets or laptop to study online	384	4.46	0.875
E2: Institutions cooperate with telecommunications companies to provide cheaper internet plans for students	384	4.48	0.833
E3: Those who having stress problems studying online, institutions can provides a platform under guidance for counselling	384	4.38	0.843
E4: The college provides facilities such as WIFI in the residential college to students for online learning	384	4.57	0.782
E5: Online education research support	384	4.30	0.898

Source: Data generate by IBM SPSS Version 27

Table 4.10 shows that the descriptive variables of Institutional Support Factors towards students' academic achievement. All the data implicated that mean are more than 4.0 which means most of the respondents agree with the statement. The highest mean score is in E4 in the terms of 'The college provides facilities such as WIFI in the residential college to students for online learning' with 4.57. It means most of the respondents strongly agreed that facilities provided in residential college would help students achieve academic for e-learning. E3 recorded the lowest mean in 4.30. It means many respondents agreed Online education research support could help students to achieve academic in e-learning. For E1, E2 and E5 recorded the mean score of 4.46, 4.48 and 4.38 respectively. By looking at the standard deviation, all shows less than 1 which consider as low-variance. E5 shows the highest standard deviation of 0.898 and E4 is the lowest showing that 0.782.

4.4.4 Descriptive Statistics of Online Interaction and Social Factors

Table 4.4.4: Online Interaction and Social Factors

No. item statistics	N	Mean	Std. Deviation
F1: Do online interaction through tools such as Google Meet allows students to interact with instructor well	384	3.63	1.088
F2: Students can privileged to exchange knowledge and ideas with peers, instructors, faculty members and engage with the learning environment	384	3.93	0.910
F3: Interacting online would help students to focus, practice and master their learning	384	3.48	1.124
F4: Instructors can help students develop their social skills by using social management techniques to teach excellent student behavior	384	3.85	0.992
F5: The educational institutions should encourage good social conduct among students	384	4.27	0.800

Source: Data generate by IBM SPSS Version 27

Table 4.11 shows that the descriptive variables of Online Interaction and Social Factors towards students' academic achievement. All the data implicated that mean score are more than 3.0. It shows that most of the respondents agreed with this independence variable and all the statement stated F5 with the statement of 'The educational institutions should encourage good social conduct among students' distributed the highest mean score of 4.27. It shows that most of the respondents agree that institution should encourage students to have a good social in order to achieve the academic. However, the lowest score is in F3 with the score of 3.48. It means many respondents agreed that interaction online would help students in e-learning achievement. The rest in F1, F2 and F4 shows the mean score of 3.63, 3.93 and 3.85 respectively. Moreover, the standard deviation shows that F3 is the highest which recorded 1.124 in the item of 'Interacting online would help

students to focus, practice and master their learning’ however F5 contributed the lowest which is 0.800 in the item of ‘The educational institutions should encourage good social conduct among students’. It shows the low-variance in F5, F4 and F2. The higher-variance in F1 and F3 recorded 1.088 and 1.024 respectively.

4.4.5 Descriptive Statistics of Perceived Usefulness Factors

Table 4.4.5: Perceived Usefulness Factors

No. item statistics	N	Mean	Std. Deviation
G1: E-learning web base provide student with sources of learning material	384	4.02	0.778
G2: E-learning helps students to be more independent	384	4.06	0.903
G3: E-learning improve students' self-confidence in expressing ideas and opinions	384	3.78	0.992
G4: The e-learning web based module improve students' ICT skills	384	4.15	0.833
G5: Students can more understanding a topic with the e-learning module	384	3.83	0.976

Source: Data generate by IBM SPSS Version 27

Table 4.4.5 shows that the descriptive variables of Perceived Usefulness Factors towards students’ academic achievement. All the data implicated that mean score are more than 3.0. It shows that most of the respondents agreed with all the statement stated. The highest mean score is G4 moving up 4.15. It means most respondents agreed that students with e-learning web based module could improve the skills of ICT. Meanwhile, the lowest mean score is G3 which recorded 3.78. It means most respondents agreed that e-learning could improve self-confidence in expressing the ideas and opinions.

4.4.6 Descriptive Statistics of Independent Variable

Table 4.4.6: Summary of the means according to variable

Factors Influencing E-learning Readiness	N	Mean	Std. Deviation
Students' Characteristics Factors	384	3.4286	0.73617
The Evaluation Use of Technology Factors	384	4.3615	0.60664
Institutional Support Factors	384	4.4385	0.69461
Online Interaction and Social Factors	384	3.8323	0.72824
Perceived Usefulness Factors	384	4.0042	0.67803

Source: Data generate by IBM SPSS Version 27

All calculated items have a mean above 3.00. These results show that respondents consider all the factors listed above to have a certain level of importance to their e-learning to academic achievement. The table above shows that, the highest mean score is 4.44 the lowest recorded 3.43 mean score. Most of the respondents agree with all the independent factors with 3.43 mean score, the evaluation use of technology factors with 4.36 mean score, institutional support factors with 4.44 mean score, online interaction and social factors with 3.83 mean score and perceived usefulness factors with 4.00 mean score.

4.5 Validity and Reliability Test

According to Fiona Middleton (2021), the concepts of reliability and validity are used to evaluate research quality. They reflect the precision with which a method, approach, or test measure something. The consistency of a measure refers to its reliability, whereas the correctness of a measure refers to its validity.

The measurement is reliable if the same results are obtained using the same procedures under the same conditions (Middleton, 2021). The validity of a technique is determined by how accurately it measures what it is designed to measure. When research has high validity, the findings correlate to

true qualities, attributes, and changes in the physical or social environment. One evidence that measurement is valid is high reliability. (Middleton, 2021).

Table 4.5: Validity and Reliability Result

Variables	Number of Item	Cronbach's Alpha Coefficient
Student Characteristics	5	0.814
Evaluation of Use of Technology	5	0.813
Institutional Support	5	0.814
Online Interaction and Social	5	0.811
Perceived Usefulness	5	0.812

Source: Data generate by IBM SPSS Version 27

The table above indicates the overall reliability for the independent variable for pilot test from 25 questionnaires collected. All reliability more than 0.8 which is very good. Student Characteristics, Evaluation Use of Technology, Institutional Support, Online Interaction and Social and Perceived Usefulness which shows the Cronbach's Alpha value of 0.812, 0.813, 0.814, 0.811 and 0.812 respectively which is acceptable and very good. This shows the questionnaire is reliable. As a result, the reliability has proven that the respondent understood about the question provided in the questionnaire and this made the questionnaire has been accepted.

4.6 Normality Test

The term "normality" refers to a statistical distribution known as the normal distribution, often known as the Gaussian or bell-shaped curve (iSixSigma.com, 2021). The mean and standard deviation of the data define the normal distribution, which is a continuous asymmetrical distribution. According to iSixSigma.com (2021), there is the formula for normality. Many theoretical processes assume that the data, or test statistics obtained from a sample of data, are normally distributed (The Institute for Statistics Education at Statistics, 2021). As a result, in practical statistics, data are frequently examined for normality.

In order to assess the normality of the data acquired, the values of skewness and kurtosis were

examined. Statistics uses the term "skewness" to describe the asymmetry of a random variable's probability distribution around its mean (Klima, 2021). Skewness, or the degree and direction of skew, is another term for this (departure from horizontal symmetry). The skewness value can be either positive or negative, or it could be undefined, the author further stated. The data are perfectly symmetrical if the skewness is zero, which is very unusual for data from the real world.

Table 4.6.1: Rules of Thumb about Cronbach's Alpha Coefficient Size

Alpha Coefficient Range	The Strength of The Relationship
More than 0.9	Excellent
0.80 to 0.90	Very Good
0.7 to 0.80	Good
0.60 to 0.70	Moderate
Less than 0.60	Poor

Source : (Hair. et al., 2003). Essential of Business Research Method

Table 4.6.2: Normality Analysis of The Model

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Students' Characteristics	.115	384	.000	.948	384	.000
Students' Characteristics	.081	384	.000	.984	384	.000
Evaluation Use of Technology	.146	384	.000	.870	384	.000
Institutional Support	.209	384	.000	.777	384	.000
Online Interaction and Social	.083	384	.000	.965	384	.000
Perceived Usefulness	.102	384	.000	.938	384	.000

a. Lilliefors Significance Correction

Source: Data generate by IBM SPSS Version 27

Based on the table shows the test of normality, there are two types of test which is Kolmogorov-Smirnov test and Shapiro-Wilk test. The significance value of both test shows the value of all variables are abnormal data ($p=0.00$) which is less then 0.05. This means that the variables are not normally distributed and the null hypothesis for each variable is rejected.

4.7 Hypothesis Testing

Positive or negative correlation coefficients exist between the two variables (Sekaran and Bougie 2013). A positive correlation indicates that as X increases, so do Y, and vice versa. According to Sekaran and Bougie (2013), the strength of the association between the variables will be stronger if the scatter of points is close to a straight line. The Pearson correlation coefficient (r) is a measure of the strength of the relationship between two variables. For interval-level data, Pearson's

correlation coefficient (r) ranges from -1 to +1. The stronger the relationship between two variables, the closer the scatter points are to the straight line.

Table 4.7: The Size of Correlation Coefficient

Alpha Coefficient Range	The Strength of The Relationship
More than 0.9	Excellent
0.80 to 0.90	Very Good
0.7 to 0.80	Good
0.60 to 0.70	Moderate
Less than 0.60	Poor

Source : (Hair. et al., 2003). Essential of Business Research Method

4.7.1 Hypothesis 1

Table 4.7.1: Correlation between Student Characteristics and Student Academic Achievement

Correlations			
		Student Characteristics	Student Academic Achievement
Student Characteristics	Pearson Correlation	1	.468**
	Sig. (2-tailed)		< .001
	N	384	384
Student Academic Achievement	Pearson Correlation	.468**	1
	Sig. (2-tailed)	< .001	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Data generate by IBM SPSS Version 27

The table above shows the correlation between Student Characteristics and Student Academic Achievement. The value of the correlation coefficient is 0.468 indicated that there is a moderate relationship between both of it. As result, there is a positive relationship between Student Characteristics and Student Academic Achievement. Based on the result the relationship between Student Characteristics and Student Academic Achievement is significant because the p-value 0.000 (p-value <0.01). So H1 is accepted.

H1: There is a positive and significant relationship between Student Characteristics and E-learning readiness among Local University students in Malaysia in online learning.

4.7.2 Hypothesis 2

Table 4.7.2: Correlation between The Evaluation Use of Technology and Student Academic Achievement

Correlations			
		The Evaluation Use of Technology	Student Academic Achievement
The Evaluation Use of Technology	Pearson Correlation	1	.510**
	Sig. (2-tailed)		< .001
	N	384	384
Student Academic Achievement	Pearson Correlation	.510**	1
	Sig. (2-tailed)	< .001	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Data generate by IBM SPSS Version 27

The table above shows the relationship between The Evaluation Use of Technology and Student Academic Achievement. The correlation coefficient of this relationship is 0.510 indicated that there is a moderate relationship between both of it. As result, there is a positive

relationship between The Evaluation Use of Technology and Student Academic Achievement. Based on the result the relationship between The Evaluation Use of Technology and Student Academic Achievement is significant because the p-value 0.000 (p-value <0.01). So, H2 is accepted.

H2: There is a positive and significant relationship between The Evaluation Use of Technology and the E-learning readiness among Local University student in Malaysia in online learning.

4.7.3 Hypothesis 3

Table 4.7.3: Correlation between Institutional Support and Student Academic Achievement

Correlations			
		Institutional Support	Student Academic Achievement
Institutional Support	Pearson Correlation	1	.280**
	Sig. (2-tailed)		< .001
	N	384	384
Student Academic Achievement	Pearson Correlation	.280**	1
	Sig. (2-tailed)	< .001	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Data generate by IBM SPSS Version 27

The table above shows the relationship between Institutional Support and Student Academic Achievement. The correlation coefficient of this relationship is 0.280 indicated that there is a weak relationship between both of it. As result, there is a positive relationship between Institutional Support and Student Academic Achievement. Based on the result the relationship between Institutional Support and Student Academic Achievement is significant

because the p-value 0.000 (p-value <0.01). So, H3 is accepted.

H3: There is a positive and significant relationship between Institutional Support and the E-learning readiness among Local University student in Malaysia in online learning.

4.7.4 Hypothesis 4

Table 4.18: Correlation between Online Interaction and Social and Student Academic Achievement

Correlations			
		Online Interaction and Social	Student Academic Achievement
Online Interaction and Social	Pearson Correlation	1	.511**
	Sig. (2-tailed)		< .001
	N	384	384
Student Academic Achievement	Pearson Correlation	.511**	1
	Sig. (2-tailed)	< .001	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Data generate by IBM SPSS Version 27

The table above shows the relationship between Online Interaction and Social and Student Academic Achievement. The correlation coefficient of this relationship is 0.511 indicated that there is a moderate relationship between both of it. As result, there is a positive relationship between price and Student Academic Achievement. Based on the result the relationship between Online Interaction and Social, and Student Academic Achievement is significant because the p-value 0.000 (p-value <0.01). So, H4 is accepted.

H4 : There is a positive and significant relationship between Institutional Support and the E-learning readiness among Local University student in Malaysia in online learning.

4.7.5 Hypothesis 5

Table 4.7.5: Correlation between Perceived Usefulness and Student Academic Achievement

Correlations			
		Perceived Usefulness	Student Academic Achievement
Perceived Usefulness	Pearson Correlation	1	.491**
	Sig. (2-tailed)		< .001
	N	384	384
Student Academic Achievement	Pearson Correlation	.491**	1
	Sig. (2-tailed)	< .001	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Data generate by IBM SPSS Version 27

The table above shows the relationship between Perceived Usefulness and Student Academic Achievement. The correlation coefficient of this relationship is 0.491 indicated that there is moderate relationship between both of it. As result, there is a positive relationship between Perceived Usefulness and Student Academic Achievement. Based on the result the relationship between Perceived Usefulness and Student Academic Achievement is significant because the p-value 0.000 (p-value <0.01). So, H5 is accepted.

H5: There is a positive and significant relationship between Perceived Usefulness and the E-Learning readiness towards local university students in Malaysia in online learning.

4.7.6 Overall Pearson's Correlation

Table 4.7.6 : Overall Pearson Correlation.

Research Question and Objective	Pearson's Correlation	
Is there any significant influence between student characteristics and students' academic achievement?	P = 0.00 (p < 0.01) R = 0.468	significant
Is there any significant influence between the evaluation use of technology and student academic achievement?	P = 0.00 (p < 0.01) R = 0.510	significant
Is there any significant influence between institutional support and student academic achievement?	P = 0.00 (p < 0.01) R = 0.280	significant
Is there any significant influence between online interaction and social, and students' academic achievement?	P = 0.00 (p < 0.01) R = 0.511	significant.
Is there any significant influence between perceived usefulness and student academic achievement?	P = 0.00 (p < 0.01) R = 0.491	significant

Source: developed from research

There is a positive and significant relationship between student characteristics, the evaluation use of technology, institutional support, online interaction and social, perceived usefulness, and student academic achievement. All the hypotheses were accepted at 0.01 significant levels.

4.8 Summary / Conclusion

In conclusion, this chapter presented the details of the data analysis of the study including the background of the respondents then discusses how to conduct analytical data that is relevant, acceptable, understandable, and evaluated correctly using some tests chosen by the researcher. The reliability tests, which determine the level of knowledge of respondents when answering questions and the feasibility of the questionnaires provided, are part of the data analysis. The descriptive tests are then used to understand each data point that has been entered into the SPSS program. Each test and analysis performed was to test the level of effectiveness of the data obtained by 384 respondents. The future will be further discussed in Chapter 5 about how the results of this research can be important and beneficial for university students to learn using the online platform in the future.

CHAPTER 5: DISCUSSION AND CONCLUSION

FKP

5.1 Introduction

This report is concluded in the following chapter. The key findings of this study were presented, and the study's conclusions were discussed and evaluated. The study's implications and limitations were also examined in the context of online learning readiness towards local university in Malaysia. The chapter concludes with recommendations for further research end of the chapters. The scope of the following conclusions is limited to the academic achievement and the factors influencing e-learning readiness towards local university students in Malaysia.

5.2 Key Findings

This current study aims to investigate how students' academic performance at local universities in Malaysia is affected by using e-learning. Moreover, this study has provided some views on all the independent variable of student characteristics, evaluation of use of technology, institutional support, online interaction and social and perceived usefulness to have a significant relationship with e-learning readiness towards students' academic achievement at local universities in Malaysia. From this study, it has been proved that all variables play an essential role in proving that e-learning readiness towards students' academic achievement at local universities in Malaysia is initiating.

The previous chapter highlighted the results of the findings based on the data collection of 384 respondents from different universities. There were at least 10 respondents of each local universities represented in this research. The data was analyzed by using the statistical package for science (SPSS). From the results and the data analysis, this study's hypotheses and objectives were realized. The researcher conducts hypothesis testing using Pearson's Correlations Coefficient and Multiple Linear Regression to test the relationship between the independent variables of this study

and the dependent variable of this study. The table shows that the analysis for the study's hypotheses was fully supported. The overall online learning readiness among respondents were measured by calculating the composite mean for the five dimensions of online learning readiness towards students' academic achievement at local universities in Malaysia. All calculated items have a mean above 3.00. These results show that respondents consider all the factors listed above to have a certain level of importance to their e-learning to academic achievement.

This study proposed to test the relationship between the e-learning readiness and the contextual factors (students' characteristics, evaluation use of technology, institutional support, online interaction and social and perceived usefulness). Researchers would like to summarize the reliability and hypothesis in this section.

5.3 Discussion

Reliability Analysis of Cronbach's alpha shows in students' characteristics factors and institutional support factors which is 0.814 while the evaluation use of technology factors is the second highest which is 0.813, followed by perceived usefulness factors (0.8120) and online interaction and social factors (0.811). All variables are score more than 0.7 and this indicates that all the variables are good internal-consistency reliability.

Table 5.1: Summary of Person Correlation Coefficient result

No.	Research Question	Hypothesis	Result
1	Is there a significant connection between the academic achievement of Malaysia's local Universities students and students' characteristics?	H1: There is a positive relationship between students' characteristics and academic achievement of Malaysia's local Universities students	There is a positive relationship $r = 0.468$ $p = <0.01$
2	Is there a significant connection between the academic	H2: There is a positive relationship between evaluation	There is a positive

	performance of Malaysia's local Universities students and the evaluation use of technology?	use of technology and academic achievement of Malaysia's local Universities students	relationship $r = 0.510$ $p = <0.01$
3	Is there a significant connection between the academic performance of Malaysia's local Universities students and institutional support?	H3: There is a positive relationship between institutional support and academic achievement of Malaysia's local Universities students	There is a positive relationship $r = 0.280$ $p = <0.01$
4	Is there a significant connection between the academic performance of Malaysia's local Universities students and online interaction and social?	H2: There is a positive relationship between online interaction and social and academic achievement of Malaysia's local Universities students	There is a positive relationship $r = 0.511$ $p = <0.01$
5	Is there a significant connection between the academic performance of Malaysia's local Universities students and perceived usefulness?	H2: There is a positive relationship between perceived usefulness and academic achievement of Malaysia's local Universities students	There is a positive relationship $r = 0.491$ $p = <0.01$

5.3.1 Students' Characteristics and Academic Achievement

H1: There is a positive relationship between students' characteristics and academic achievement of Malaysia's local Universities students

Based on the table 5.1, the researchers identified that there is a relationship between the students' characteristics and academic achievement towards local universities students in Malaysia. The significant of the p-level is 0.00 which is less than 0.01 ($p < 0.01$) and Pearson Correlation Coefficient indicates that 0.468, which show the moderate positive linear correlation. The hypothesis one is accepted. Future studies should focus on the impact of students' characteristics. They learn about identity, diverse teaching experiences that overlap or do not intersect with learning experiences, and the emotions that go with them. Students with a higher level of prior knowledge

discussed the right answer less frequently with their peers and picked the step size more intentionally. Students with stronger intrinsic motivation also picked their step size more carefully and made more use of information sources. Some pupils may have already encountered this form of adaptive e-learning content. It has been noted that beginners interact with e-learning material differently than more experienced pupils (Winne, 1995). Concerning the negative features recognised by students in online education in comparison to the traditional educational environment, the components cited are connected to communication, cooperation, and socialising issues in the academic environment. A lack of human touch between professors and students, as well as among students, was specifically mentioned, as was difficulties concentrating and engaged in class, and a lack of physical presence on campus. (Karalis, T. et al., 2020).

5.3.2 The Evaluation Use of Technology and Academic Achievement

H2: There is a positive relationship between the evaluation use of technology and academic achievement of Malaysia's local Universities students

Based on the table 5.1, the researchers showed that the evaluation use of technology has significant relationship with academic achievement towards local universities students in Malaysia. The significant of the p-level is 0.00 which is less than 0.01 ($p < 0.01$) and Pearson Correlation Coefficient indicates that 0.510, which show the moderate positive linear correlation. The hypothesis two is accepted. This study has same results from previous research in Comprehensive evaluation of the use of technology in education that indicates the majority of participants gave generally positive responses to the variables included in the study model on use of technology. This implies that when there is an evaluation in technology used, the students will enhance their intention to engage in academic achievement. Our findings also agree with those of previous research. According to Taradi and colleagues (2005), discovered that using technology improved learning results in acid-base physiology. Students are more likely to remain interested, and technology aids in making learning more meaningful than it would be otherwise.

5.3.3 Institutional Support and Academic Achievement

H2: There is a positive relationship between the institutional support and academic achievement of Malaysia's local Universities students

Based on the table 5.1, the researchers identified that there is a relationship between the institutional support and academic achievement towards local universities students in Malaysia. The significant of the p-level is 0.00 which is less than 0.01 ($p < 0.01$) and Pearson Correlation Coefficient indicates that 0.280, which show the positive linear correlation. The hypothesis three is accepted. It is because for institutions, the quality of online education highly depends on their ability to give teachers and students the technical assistance they need to access the online education infrastructure, technology, and network. Additionally, technological assistance needs to be updated and changed often to match the demands of the institution's academics and employees.

5.3.4 Online Interaction and Social and Academic Achievement

H4: There is a positive relationship between the institutional support and academic achievement of Malaysia's local Universities students

Based on the table 5.1, the researchers identified that there is a relationship between the institutional support and academic achievement towards local universities students in Malaysia. The significant of the p-level is 0.00 which is less than 0.01 ($p < 0.01$) and Pearson Correlation Coefficient indicates that 0.511, which show the moderate positive linear correlation. The hypothesis three is accepted.

5.3.5 Perceived Usefulness and Academic Achievement

H5: There is a positive relationship between the perceived usefulness and academic achievement of Malaysia's local Universities students

According to table 5.1, the researchers discovered a link between institutional support and academic achievement towards local universities students in Malaysia. The significant of the p-level

is 0.00 which is less than 0.01 ($p < 0.01$) and Pearson Correlation Coefficient indicates that 0.491, which show the moderate positive linear correlation. The hypothesis three is accepted. This illustrate that local universities students are assertive, dominant, energetic, active, positive emotions and enthusiastic. Students who want to learn how to solve problems and explore new ideas should have an open-minded mindset as they embark on their academic and e-learning adventures. Individuals that exhibit good facial expression, are naturally upbeat, feel at ease in large groups, and seek enjoyment are likely to succeed academically. Based on the observations, most of the respondents agreed with e-learning module would help students in improving their ICT skills because they are more vulnerable to studying characteristics based on their involvement in various e-learning module at the universities.

5.4 Implication of the study

In this research, there are five independent variables namely (Student Characteristics, The Evaluation Use of Technology, Institutional support, Online Interaction and Social, and Perceived Usefulness) and the dependent variable (Student Academic Achievement). The study is focused on online learning readiness for local university students in Malaysia during the covid-19 pandemic. From this study, we will know what the implications to the students are when they learn using an online platform. Is there any improvement in their study or do they prefer to not learn using an online platform. This study will help academicians to foster an environment of interaction in their online classes.

The implication of this study is we can analyze what actually that they need and what they want to make better learning using online platforms. This research can help the educator and university to improve the quality of online learning and also to help students who have a problem with online learning. Students perceive interaction as part of their learning and expect some kind of socialization with their peers and instructors. Social intimacy is a part of social interaction where a

person feels comfortable sharing their ideas and thoughts with the people around them. We should make sure that they provide an ecosystem of social intimacy where every member of the classroom should feel comfortable sharing ideas. As online learning pushes people to isolation, an interaction may help them to feel connected with people around them and become part of the socialized culture in the classroom. We do this research also to know, how to make a variety of ways to make online classes more interesting and enjoyable for students.

Other than that, students also need support for online learning from their institution such as wifi, or the university can work together with telecommunication to make internet plans for students. So, they do not need to pay expensive one for internet. From this alternative, we can reduce expenses for students.

5.5 Limitation of the study

For this study, has its own limitations that give challenge the researcher to complete this study. There are several limitations in this study and one of that is the respondents. In this study, the researcher has limitations in selecting respondents, which not all students at University Malaysia Kelantan can be respondents. This is because this research is from all local universities in Malaysia. We must take a survey from other universities. Therefore, the survey is only for students.

Next, time management to collect the data. Time management is challenging when the researcher wants to take respondents who are willing to fill out a questionnaire as well as make a quantitative study. Which, not all respondents who wanted to answer the question, accept, or open the link of the questionnaire provided by the researcher. In addition, there are also those who are busy with their work or just ignore answering the questionnaire provided. Due to their attitude, this will indirectly give some difficulty or problem to the researcher to complete this assignment or study as soon as possible at the scheduled time or set because of difficulties in collecting information or data from respondents. Which, the researcher had to take a long time to obtain and

collect the respondents' feedback on the questionnaire form for their study.

However, the process of getting respondents in this study went well because many students from many universities gave their commitment well and they also know the importance of the questionnaire given by the researchers to them. This is because they also have experience in doing research and they are also doing their research. Therefore, they know the importance of answering the questionnaire to the researcher and the difficulties experienced by the researcher in conducting the study.

Other than that, the accuracy and sincerity of the respondents are also the boundaries of the study. It is difficult for the researcher to ensure that the respondents will give the correct response when filling out the questionnaire because, in this study, the researcher only uses or conducts an online survey that is the Google Forms questionnaire for data collection methods. Therefore, the researchers did not know that the answers given by the respondents were honest views or opinions from them or they only answered them because they felt compelled to answer. As a result, it will render research findings unpredictable and possibly invalid. This is because the researcher cannot verify the information provided by the respondents is valid or invalid. This is because most of them may not read the given question carefully

5.6 Recommendation

The first suggestion made for more study is to make use of a new kind of research technique, namely one that takes a qualitative approach. This is due to the fact that the qualitative method provides a supporting word or action that handles insight into. The effects of E-implementation Learning's on students' academic performance in Malaysia's traditional educational institutions. In addition, the basic data that are gathered for the study has to include not only the quantitative approach but also the qualitative way such as an interview. The high level of dependability that may be generated by qualitative data obtained from interview sessions is due to the fact that there is contact in both directions between the researchers and the respondents. This may increase the

likelihood that the respondents will have a complete understanding of the study as it progresses.

The next recommendation for future research is to identify the other challenges that students might face during the course of their studies in addition to the impact of E-Learning implementation on student's academic achievement at local Universities in Malaysia. This recommendation is in response to the question "What other challenges might students face during the course of their studies?" This is due to the fact that I feel that the future researcher will be able to learn more the more expansive the scope of the investigation is. Find out what additional difficulties the pupils are having in their lives outside of their academic achievement.

The researcher has the opportunity to gain a broader study scope as a result of this.

5.7 Overall conclusion of the studies.

Students at local universities in Malaysia have a bit of a reputation when it comes to E-Learning, including the variables that influence the challenges that online studies present to academic performance in local universities. This reputation includes a lack of familiarity with the factors that affect E-Learning.

Due to the fact that the value of the Cronbach Alpha coefficients is more than 0.7, the fundamental need of the reliability analysis has been satisfied as a result of the examination of all of the variables. The substantial association between the independent variables and the dependent variable was shown by factors such as the evaluation use of technology, academic achievement by students, and institutional support.

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APPENIDICES

APPENDIX A



Date:

Dear respondent,

“THE STUDY ON FACTORS INFLUENCING E-LEARNING READINESS TOWARDS LOCAL UNIVERSITI STUDENTS IN MALAYSIA”

The purpose of this research is to study the relationship between e-learning readiness and students' academic achievement towards local university in Malaysia. The main objective of the study is to find out the factors that represents students in order to achieve the academic achievement. We do believe that you are the best person who can give us the insights on this study. We hope that you will provide us the information by completing this questionnaire. I do appreciate if you could take a few minutes of your valuable time in completing this questionnaire. Your responses gathered will be treated with strict confidentiality.

Your cooperation in this matter is very much appreciated.

Thank you.

Tujuan kajian ini adalah untuk mengkaji hubungan antara kesediaan e-pembelajaran dengan pencapaian akademik pelajar terhadap universiti awam di Malaysia. Objektif utama kajian adalah untuk mengetahui faktor-faktor e-pembelajaran pelajar bagi mencapai pencapaian akademik. Kami percaya bahawa anda adalah orang terbaik yang boleh memberi kami pandangan tentang kajian ini. Kami berharap anda dapat memberikan maklumat kepada kami dengan melengkapkan soal selidik ini. Saya amat menghargai jika anda boleh meluangkan beberapa minit berharga anda untuk melengkapkan soal selidik ini. Respons anda yang terkumpul akan dilayan dengan kerahsiaan yang ketat.

Kerjasama tuan/puan dalam perkara ini amat kami hargai.

Terima kasih.

The students are as follows/ Pelajar-pelajar adalah seperti berikut:

DINISH A/L ANANTHAN
NABILAH BINTI RAMLI
NG CHUN SIONG
NUR ZAKIAH BINTI MOHD YAHYA

Bachelor in Entrepreneurship with Honours (Commerce)
Faculty of Entrepreneurship and Business
University Malaysia Kelantan, Pengkalan Chepa, Kelantan.

**QUESTIONNAIRE FORM FOR STUDY ON FACTORS
INFLUENCING E-LEARNING READINESS TOWARDS LOCAL
UNIVERSITY STUDENTS IN MALAYSIA**
**BORANG SOAL SELIDIK KAJIAN FAKTOR-FAKTOR YANG
MEMPENGARUHI KESEDIAAN E-PEMBELAJARAN TERHADAP
PELAJAR UNIVERSITI TEMPATAN DI MALAYSIA**

PART A: RESPONDENT'S DEMOGRAPHIC INFORMATION

BAHAGIAN A: MAKLUMAT DEMOGRAFI RESPONDEN

Please tick [√] in the space provided and answer all the questions.

Sila jawab dengan menandakan [√] pada kotak kosong yang berkenaan.

- | | |
|--|---|
| <p>1. Gender/ Jantina</p> <p>Male/ <i>Lelaki</i> ()</p> <p>Female/ <i>Perempuan</i> ()</p> <p>2. Age/ Umur</p> <p>18 – 20 ()</p> <p>21 – 30 ()</p> <p>31 – 40 ()</p> <p>3. Race/ Kaum</p> <p>Malay/ <i>Melayu</i> ()</p> <p>Chinese/ <i>Cina</i> ()</p> <p>Indian/ <i>India</i> ()</p> <p>Others/ <i>Lain-lain</i> ()</p> | <p>4. Marital Status/ Status perkahwinan</p> <p>Single/ <i>Bujang</i> ()</p> <p>Married/ <i>Kahwin</i> ()</p> <p>Divorced/ <i>Bercerai</i> ()</p> <p>Others/ <i>Lain-lain</i> ()</p> <p>5. Level of Education/ Tahap pendidikan</p> <p>Diploma ()</p> <p>Degree/ <i>Sarjana Muda</i> ()</p> <p>Master/ <i>Sarjana</i> ()</p> <p>PhD ()</p> <p>6. University Name/ Nama Universiti</p> <p>_____</p> |
|--|---|

DEPENDENT VARIABLE

1. Which factors are you considering that E-learning would change the students' academic achievement? / *Faktor manakah yang anda mempertimbangkan dalam e-pembelajaran dapat mengubah pencapaian akademik pelajar?*

- | | |
|--|--------|
| Students Characteristics Factors/ <i>Faktor Tingkah Laku Pelajar</i> | () |
| The Evaluation Use of Technology Factors/ <i>Faktor Penilaian Penggunaan Teknologi</i> | () |
| Institutional Support Factors/ <i>Faktor Sokongan Institusi</i> | () |
| Online Interaction and Social Factors/ <i>Faktor Interaksi Dalam Talian dan Sosial</i> | () |
| Perceived Usefulness Factors/ <i>Faktor Kebergunaan yang Dipersepsikan</i> | () |

PART B:

BAHAGIAN B:

Based on the measurements below, give your perception of the level of satisfaction by marking [√] in the space provided.

Berdasarkan ukuran di bawah, berikan persepsi anda tentang tahap kepuasan dengan menandakan [√] pada ruang yang disediakan.

Item	Strongly Agree <i>Sangat Setuju</i>	Agree <i>Setuju</i>	Neutral <i>Neutral</i>	Disagree <i>Tidak Setuju</i>	Strongly Disagree <i>Sangat Tidak Setuju</i>
Score <i>Skor</i>	5	4	3	2	1

No	FACTORS INFLUENCING STUDENT ACADEMIC ACHIEVEMENT FAKTOR-FAKTOR YANG MEMPENGARUHI PENCAPAIAN AKADEMIK PELAJAR	5	4	3	2	1
1	E-learning can change the way of study in order to get the good academic achievement <i>E-pembelajaran boleh mengubah cara belajar agar mendapat pencapaian akademik yang baik</i>					
2	The clearer picture of explanation on internet helps students more understand the information <i>Gambaran penerangan yang lebih jelas di internet membantu pelajar lebih memahami maklumat tersebut</i>					
3	The different use of technology devices helps e-learning could run smoothly <i>Penggunaan peranti teknologi yang berbeza membantu e-pembelajaran dapat berjalan dengan lancar</i>					

KELANTAN

PART C: STUDENT CHARACTERISTICS FACTORS
BAHAGIAN C: FAKTOR TINGKAH LAKU PELAJAR

Based on the measurements below, give your perception of the level of satisfaction by marking [√] in the space provided.

Berdasarkan ukuran di bawah, berikan persepsi anda tentang tahap kepuasan dengan menandakan [√] pada ruang yang disediakan.

Item	Strongly Agree Sangat Setuju	Agree Setuju	Neutral Neutral	Disagree Tidak Setuju	Strongly Disagree Sangat Tidak Setuju
Score Skor	5	4	3	2	1

No	STUDENT CHARACTERISTICS TINGKAH LAKU PELAJAR	5	4	3	2	1
1	Students having strong self-efficacy and self-regulation <i>Pelajar mempunyai efikasi sendiri dan peraturan sendiri yang kuat</i>					
2	Online study appears to be more strongly motivated than traditional classroom students <i>Belajar dalam talian lebih bermotivasi daripada pelajar bilik darjah tradisional</i>					
3	Online university students seem to direct and control their learning processes, time, and resources <i>Pelajar universiti dalam talian seolah-olah mengarahkan dan mengawal proses pembelajaran, masa dan sumber mereka</i>					
4	Students having a strong persistence and firmly to a purpose <i>Pelajar mempunyai ketekunan yang kuat dan teguh kepada sesuatu tujuan</i>					
5	Students with good time management through online courses and with a high ability for self-direction <i>Pelajar dengan pengurusan masa yang baik melalui kursus dalam talian dan dengan keupayaan tinggi untuk hala tuju diri</i>					

PART D: THE EVALUATION USE OF TECHNOLOGY

BAHAGIAN D: FAKTOR PENILAIAN PENGGUNAAN TEKNOLOGI

Based on the measurements below, give your perception of the level of satisfaction by marking [√] in the space provided.

Berdasarkan ukuran di bawah, berikan persepsi anda tentang tahap kepuasan dengan menandakan [√] pada ruang yang disediakan.

Item	Strongly Agree Sangat Setuju	Agree Setuju	Neutral Neutral	Disagree Tidak Setuju	Strongly Disagree Sangat Tidak Setuju
Score <i>Skor</i>	5	4	3	2	1

No	THE EVALUATION USE OF TECHNOLOGY <i>FAKTOR PENILAIAN PENGGUNAAN TEKNOLOGI</i>	5	4	3	2	1
1	Do technology made certain study tasks quicker and easier <i>Adakah teknologi menjadikan tugas belajar tertentu lebih cepat dan mudah</i>					
2	Technology would made education more widely accessible for everyone <i>Teknologi akan menjadikan pendidikan lebih mudah diakses oleh semua orang</i>					
3	Pre-recorded class can also upload to a platform for students to review the lesson <i>Kelas prarakaman juga boleh dimuat naik ke platform untuk pelajar mengulang balik penerangan semasa pelajaran</i>					
4	Technology can improve the education process for students <i>Teknologi boleh meningkatkan proses pendidikan bagi pelajar</i>					
5	Every university students need a device to complete the assignment task <i>Setiap pelajar universiti memerlukan peranti untuk menyelesaikan tugas tugas</i>					

PART E: INSTITUTIONAL SUPPORT FACTORS

BAHAGIAN E: FAKTOR SOKONGAN INSTITUSI

Based on the measurements below, give your perception of the level of satisfaction by marking [√] in the space provided.

Berdasarkan ukuran di bawah, berikan persepsi anda tentang tahap kepuasan dengan menandakan [√] pada ruang yang disediakan.

Item	Strongly Agree Sangat Setuju	Agree Setuju	Neutral Neutral	Disagree Tidak Setuju	Strongly Disagree Sangat Tidak Setuju
Score <i>Skor</i>	5	4	3	2	1

No	INSTITUTIONAL SUPPORT FAKTOR SOKONGAN INSTITUSI	5	4	3	2	1
1	The institution needs to provide assistance to students who do not have devices such as tablets or laptop to study online <i>Institusi itu perlu memberi bantuan kepada pelajar yang tidak mempunyai peranti seperti tablet atau komputer riba untuk belajar secara dalam talian</i>					
2	Institutions cooperate with telecommunications companies to provide cheaper internet plans for students <i>Institusi bekerjasama dengan syarikat telekomunikasi untuk menyediakan plan internet yang lebih murah untuk pelajar</i>					
3	Those who having stress problems studying online, institutions can provides a platform under guidance for counseling <i>Mereka yang mempunyai masalah tekanan belajar dalam talian, institusi boleh menyediakan platform di bawah bimbingan untuk kaunseling</i>					
4	The college provides facilities such as WIFI in the residential college to students for online learning Pihak kolej menyediakan kemudahan seperti WIFI di kolej kediaman kepada pelajar untuk pembelajaran dalam talian					
5	Online education research support <i>Sokongan penyelidikan pendidikan dalam talian</i>					

PART F: ONLINE INTERACTION AND SOCIAL FACTORS

BAHAGIAN F: FAKTOR INTERAKSI DALAM TALIAN DAN SOSIAL

Based on the measurements below, give your perception of the level of satisfaction by marking [√] in the space provided.

Berdasarkan ukuran di bawah, berikan persepsi anda tentang tahap kepuasan dengan menandakan [√] pada ruang yang disediakan.

Item	Strongly Agree Sangat Setuju	Agree Setuju	Neutral Neutral	Disagree Tidak Setuju	Strongly Disagree Sangat Tidak Setuju
Score Skor	5	4	3	2	1

No	ONLINE INTERACTION AND SOCIAL FAKTOR INTERAKSI DALAM TALIAN DAN SOSIAL	5	4	3	2	1
1	Do online interaction through tools such as Google Meet allows students to interact with instructor well <i>Lakukan interaksi dalam talian melalui Google Meet membolehkan pelajar berinteraksi dengan pensyarah dengan baik</i>					
2	Students can privileged to exchange knowledge and ideas with peers, instructors, faculty members and engage with the learning environment <i>Pelajar boleh mendapat keistimewaan untuk bertukar pengetahuan dan idea dengan rakan sebaya, pensyarah, ahli fakulti dan melibatkan diri dengan persekitaran pembelajaran</i>					
3	Interacting online would help students to focus, practice and master their learning <i>Berinteraksi dalam talian akan membantu pelajar untuk fokus, berlatih dan menguasai pembelajaran mereka</i>					
4	Instructors can help students develop their social skills by using social management techniques to teach excellent student behavior <i>Pensyarah boleh membantu pelajar mengembangkan kemahiran sosial mereka dengan menggunakan teknik pengurusan sosial untuk mengajar tingkah laku pelajar yang cemerlang</i>					
5	The educational institutions should encourage good social conduct among students <i>Institusi pendidikan harus menggalakkan tingkah laku sosial yang baik di kalangan pelajar</i>					

PART G: PERCEIVED USEFULNESS

BAHAGIAN : FAKTOR KEBERGUNAAN YANG DIPERSEPSIKAN

Based on the measurements below, give your perception of the level of satisfaction by marking [√] in the space provided.

Berdasarkan ukuran di bawah, berikan persepsi anda tentang tahap kepuasan dengan menandakan [√] pada ruang yang disediakan.

Item	Strongly Agree Sangat Setuju	Agree Setuju	Neutral Neutral	Disagree Tidak Setuju	Strongly Disagree Sangat Tidak Setuju
Score Skor	5	4	3	2	1

No	PERCEIVED USEFULNESS FAKTOR KEBERGUNAAN YANG DIPERSEPSIKAN	5	4	3	2	1
1	E-learning web base provide student with sources of learning material <i>Pangkalan web e-pembelajaran menyediakan pelajar dengan sumber bahan pembelajaran</i>					
2	E-learning helps students to be more independent <i>E-pembelajaran membantu pelajar untuk lebih berdikari</i>					
3	E-learning improve students' self-confidence in expressing ideas and opinions <i>E-pembelajaran meningkatkan keyakinan diri pelajar dalam meluahkan idea dan pendapat</i>					
4	The e-learning web based module improve students' ICT skills <i>Modul berasaskan web e-pembelajaran meningkatkan kemahiran TMK pelajar</i>					
5	Students can more understanding a topic with the e-learning module <i>Pelajar boleh lebih memahami sesuatu topik dengan modul e-pembelajaran</i>					

– End of The Question –

Thank You for Your Participation

Terima kasih atas Penyertaan Anda

APPENDIX B - GANTT CHART

NO	ACTIVITIES / WEEK								
		1	2	3	4	5	6	7	8
1	PPTA course coordinators select students and faculty based on student enrolment and majors								
2	<ul style="list-style-type: none"> ● Final Year Research Project Briefing I and II ● Distribution of Final Year Research Project Guidelines / online 								
3	<ul style="list-style-type: none"> ● Meetings and discussions with Supervisors ● Verification of the appropriate field/title of the research project 								
4	Writing a draft of a Research Project Proposal								
5	<ul style="list-style-type: none"> ● Submission of draft Research Project Proposal to Supervisor ● Review by Supervisor ● Correction by students 								
6	Submission of second draft of Research Project Proposal Reports to the PPTA supervisor and examiner								
7	Presentation and assessment for PPTA 1								

From the chart above:

- **Week 1** : Online classes by coordinator Madam A'mirah for briefing the Final Year Project and created a WhatsApp group for discussion.
- **Week 2** : Meeting with supervisor Dr. Wan Nazrol to discuss the title of research
- **Week 3-5** : Doing a draft of research proposal PPTA 1 from chapter 1 to chapter 3
- **Week 6** : Submit for reviewing the draft of research proposal PPTA 1 to Dr. Wan Nazrol and do the correction based on the suggestion by supervisor.
- **Week 7** : Submit the second draft of research proposal PPTA 1 to supervisor by put all the files and the video presentation with the slide presentation in a google drive for supervisor and examiner to access.

NO	ACTIVITIES / WEEK								
		8	9	10	11	12	13	14	15
1	Create questionnaire and target it for universities students to answer	■							
2	<ul style="list-style-type: none"> Collect the data of respondents Transform to SPSS software 		■						
3	<ul style="list-style-type: none"> Meetings and discussions with Supervisors Verification from supervisor of data collected and generated by SPSS 		■						
4	Writing a draft of Final Year Project			■	■	■			
5	<ul style="list-style-type: none"> Submission of draft Final Year Project to Supervisor Review by Supervisor Correction by students 						■		
6	Submission of second draft of Final Year Project to the PPTA supervisor and examiner							■	
7	Presentation and assessment for Final Year Project								■

From the chart above:

- **Week 8** : Create questionnaire from google form and target it for universities students to answer
- **Week 9** : Collected data from the 384 respondents and transform the data from google form to SPSS software and meeting with supervisor Dr. Wan Nazrol to discuss SPSS results
- **Week 10-12** : Doing a draft of final year project from chapter 4 to chapter 5
- **Week 13** : Submit for reviewing the draft of final year project to Dr. Wan Nazrol and do the correction based on the suggestion by supervisor.
- **Week 14** : Submit the second draft of final year project to supervisor by put all the files and the video presentation with the slide presentation via email for supervisor.