# THE USE OF DIGITAL TECHNOLOGY AMONG UNIVERSITY STUDENTS IN MELAKA

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Report submitted in Partial Fulfilment of the Requirements for the Award of Bachelor of Technology Management (High Technology Marketing) with Honours



Faculty of Technology and Technopreneurship Management Universiti Teknikal Malaysia Melaka

2023

**DECLARATION OF ORIGINAL WORK**

"I hereby declare that the work of this exercise is mine except for thequotations andsummarize that have been duly acknowledge."

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**DEDICATION**

I would like to dedicate the appreciation to beloved parents who supported me from spiritually and financially. A special thanks to my supervisor and panel who guidedme throughout this research and thanks to my friends that helped and assisted me throughthe journey of research.

## ACKNOWLEDGEMENT

First of all, I am Meor Ahmad Azamudden bin Amaran who is one of the final year students at Universiti Teknikal Malaysia Melaka (UTeM) by following the Bachelor of Technology Management (High Tech Marketing) with honours I would like to express my deepest appreciation to my supervisor, Prof. Assoc. Dr. Haslinda binti Musa, with her guidance and guidance, I was able to complete my final year project titled the use of technology among university students in Melaka. I am also very grateful to her for giving a lot of encouragement and guidance throughout my final year project by giving comments and advice.

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## ABSTRACT

This study was conducted to determine the use of digital technology among university students in Melaka. The active use of digital technology can help university students in navigating the realm of education and their daily lives. However, the practice of digital use of technology should be used as best as possible. This is because digital misuse of technology will be detrimental and impact students. there is no doubt that the skills in the use of digital technology will be billed and demanded because of the era of digital use that is growing and used in every university as well as in the world of work later after students successfully graduate from university. In this study, researchers find out what are the factors of the use of digital technology among university students in Melaka.



Keywords: *digital technology, use of digital technology, digital technology factor, universities student in Melacca, artificial intelligence.*

## ABSTRAK

Kajian ini dijalankan untuk mengetahui penggunaan teknologi digital dalam kalangan pelajar universiti di Melaka. Penggunaan teknologi digital secara aktif dapat membantu pelajar universiti dalam mengharungi alam pendidikan dan kehidupan seharian mereka. Namun begitu, amalan penggunaan teknologi digital harus digunakan sebaik mungkin. Ini kerana penyalahgunaan teknologi digital akan merugikan dan memberi kesan kepada pelajar. tidak dinafikan kemahiran penggunaan teknologi digital akan ditagih dan dituntut kerana era penggunaan digital yang semakin berkembang dan digunakan di setiap universiti mahupun dalam alam pekerjaan nanti setelah pelajar berjaya menamatkan pengajian di universiti. Dalam kajian ini, penyelidik mengetahui apakah faktor penggunaan teknologi digital dalam kalangan pelajar universiti di Melaka.





Kata kunci: *teknologi digital, penggunaan teknologi digital, faktor teknologi digital, pelajar universiti di Melaka, kecerdasan buatan.*

## TABLE OF CONTENT

# CHAPTER 1

# INTRODUCTION



## 1.1 INTRODUCTION

The use of digital technology by university students is covered in the first chapter of this research study. In this chapter, the researcher also details the background of the study, the statement of the research problem, the research question, the research objective, the scope of the study, the significance of research and the summary for this chapter.

## 1.2 BACKGROUND OF STUDY

According to (Elizabeth et al, 2022), access to lecture materials, communication, and evaluation procedures are all increasingly controlled digital for everyday interactions with university-related information. This clearly states that the need to use digital technology among university students is not only for entertainment and communication, but in education and learning to access education and scientific materials from the portals provided as well as from other open sources. Skills in using and managing data with digital technology will be a necessity in the future. According to the (Ransome & Jean 2020) state that a number of research have looked into the elements that affect the adoption, upkeep, and usage of such technologies as well as their impact on student engagement and learning results. The incorporation of digital technology has reportedly superseded conventional learning environments in educational settings, according to (Alham 2021).

According to (Elizabeth et al, 2022), students, especially those leaving home, have technology tools to learn and emerging technological requirements. Authors are aware that social media, in particular, plays a significant role in students' social and academic identities and is crucial at key transition points (Dyer 2020; McLaughlin and Sillence 2018), but it is less clear how students gather digital data, how they feel about it, and the extent to which these feelings change over the course of their degree. This can be related to university students who have just entered the university world, finding and collecting authentic and true data and information is a challenge for them because there is no specific class and education on how to collect data and information accurately. Furthermore, managing digital data can be difficult for students, who find the process frustrating in the face of crowded information spaces, according to (Elizabeth et al., 2022). Survey studies by (Alon, Forkosh-Baruch, and Nachmias, 2020) also revealed that students frequently perceive a discrepancy between their actual Personal Information Management (PIM) practises and their ideal practises.

The digital technology is not use only for education among university student. (Wen, Yu Hong, and Lia 2021) claim that interactive technology (such as the Internet, social media, video games, etc.) is a crucial component of modern daily life, especially for young people. This is

largely because of the prevalence of smartphones, increasingly immersive video games, and constant access to the Internet. Entertainment is also important for university students while they are tired doing course work and studying. Digital technology also offers a variety of entertainment such as video games to play, social media to socialize online as well as music players to listen to music and more. Access to all of these can be connected not only using a computer but can be accessed using smartphones, tablets, and compatible devices that support the software. According to (China Internet Network Information Center, 2019) A recent survey in China found that more than 175 million Chinese teenagers have access to the Internet, and half of them spent more than two hours online each day.

From the perspective of the country, Malaysia has long been in the forefront of the digital transition, according to Thoughts by Bernama from September 2022. The obstacles associated with digitalization have been solved throughout the years by expanding countrywide connectivity, improving the flow and processing of data, and creating strong links between cutting-edge technology. Based on MDEC website on July 2021, there are various efforts carried out by the government in improving digital technology in the country for the benefit of the people including university students. One of them is an investment worth almost RM50 billion by the Malaysia Digital Economy Corporation (MDEC) which focuses on various purposes[1]. One of them is the creation of 50,000 high-value jobs in the MSC. This shows the importance of skills in the digital use of technology will be an important factor for university students after completing their studies. Employment opportunities will require digital technology skills as a prerequisite and added value to graduates for employment.



According to (Abid et al, 2021), digital learning is an excellent way to reduce costs, more effectively use resources, encourage sustainability, and increase both reach and impact for both students and educators. This is true of both handouts and books, which use less paper, as well as the time savings and convenience of research. Therefore, with the use of digital technology by university students can save costs for students. That said, not all university students come from rich families. All works and materials and data can be stored digitally or on cloud storage. Also, the environment also benefits because of the reduction in the use of paper by university students.

## 1.3 PROBLEM STATEMENT

Before deciding on the title of this research study, the researcher discovered a number of issues. The researcher has studied and checked out various studies and pieces of study from both open-access sites and the university library. and discovered that the study on digital technology use is the best option. It is based on the following problem statements.

According to (Lydiah, 2020) technology advances swiftly, therefore the research only represents findings from one context and time and cannot necessarily be transferred to future situations and eras. Thus, there is no study related to the use of digital technology among university students in Melaka. This results in no reading resources that can be used as a reference in the future related to the digital use of technology. The time and place is also just from a different time and culture location that is not the same as Melaka. Every year, technology advances and changes with the emergence of new technologies. University students who do not use digital technology in accordance with the circulation may be at a loss and fall behind in education or skills that will be needed over time.

Previous research that track assessments over time are required, per (Ruth Pat et al., 2020), in order to better understand how the pandemic has affected students' challenges and academic limitations. Covid-19 affects university students from various angles including the way students learn, the way students socialize, the way students interact with each other and the way students use digital technology. No research has been done on how digital technology use changes among university students after the end of Covid-19. During Covid-19 according to (Rahul, Neena, and Abhipsa 2020), practically all regions have enacted lockdowns due to the pandemic's spread, most individuals are now using the internet and internet-based services to communicate, engage, and carry out their work duties from home as a result of the lockdown. After Covid-19, there is no study on whether digital technology is still used by university students even though restrictions like during Covid-19 have been restored as before. The digital advantage of technology should not be used by university students just like the Covid-19 epidemic. It can continue to be used because of the existing and available technology.

According to the EduSpiral website, in May 2019, "recruitment businesses and analysts have stated that fresh graduates' starting salaries have plummeted because they lack digital skills in an increasingly competitive market and a difficult economy." This demonstrates how firms are accepting graduates with digital abilities as one of the qualifications for employment. There is no study on the factors influencing digital technology use among university students to determine the degree to which students apply and use digital technology. According to the New Strait Times website in March 2022, graduates now need to add digital skills in order to overcome problems. Before, abilities like communication, problem-solving, and interpersonal were necessary in order to secure a job. This shows that digital technology skills are very important among university students.

According to the website Techwire Asia in August 2022 by Aaron Raj and the Coursera Global Skills Report from 2021, “Malaysia is placed 46th overall, considerably behind the two higher-ranked ASEAN members, Singapore (10th) and Vietnam (20th). According to this survey, Malaysia is losing ground in terms of digital literacy.” The country's future will be affected by this because every university student has been cautioned that their digital technology abilities lag behind those of other ASEAN nations. Malaysia should require university students who will enter the workforce to have a strong set of digital skills as part of its plan to become a developed nation. Digital technology skills should begin in the educational sphere, or at the university level as students, when they are in the field of higher education.



According to the problem statement from the prior study, no research has been done on the use of digital technology by university students, particularly in Melaka. The youth, especially university students, are the nation's future prospects, thus a study on digital use is required to be able to recognise and identify the determinants of use and the degree of digital use among students for the benefit of university students.

## 1.4 RESEARCH QUESTIONS

The following research questions are those that have been identified by the researcher from the problem issues that have been found to obtain the objectives of the study and determine the use of digital technology among university students in Melaka:

1. What are the factors that make digital technology use by university students in Melaka?

2. Why digital technology use among university students in Melaka?

3. What are the main factors of digital technology being use among university students in Melaka?

## 1.5 RESEARCH OBJECTIVES

Digital technology has grown by leaps and bounds from year to year. Not taking advantage of these advances will only harm the available technological resources. This study was made to find and identify some of the following objectives:

1. To investigate what are the factors of the use of digital technology among university students in Melaka.

2. To analyze the use of digital technology among university students in Melaka.

3. To identify the main factors in the use of digital technology among university students in Melaka.

## 1.6 RESEARCH SCOPE

The study will concentrate on universities in Melaka. Malaysia Multimedia University (MMU) Melaka, University Teknikal Malaysia Melaka (UTeM), and University Teknologi Mara (UiTM) Melaka are the three universities in Melaka. The selection of these three universities is based on the ranking of the 20 best universities 2022 in Malaysia located in Melaka. UiTM is ranked number 2, MMU is ranked number 15 and UTeM is ranked number 17. The position of this university is taken based on the official website of 4Uni on 2022. Students from these universities would be the responders for this study. The survey will be conducted using a quantitative research technique. UTeM has two active campuses, the Kampus Induk in Durian Tunggal and the Kampus Teknologi in Ayer Keroh. Meanwhile, UiTM has three campuses in Melaka, namely Kampus Bandaraya Melaka, Kampus Jasin dan Kampus Alor Gajah. MMU is located in Bukit Beruang. Total number of student of these three university are 29,315 students. MMU student are 4,700 students, UiTM are 12,259 students and UTeM are 12,356 students. The information on the number of students is based on the official portals of these three universities in 2022.

## 1.7 SIGNIFICANCE OF RESEARCH



In this investigation, university students in Melaka's use of digital technologies is examined. When the researcher does this investigation, there are two areas that will gain:

### 1.7.1 Academic research

This research examines the use of digital technology among university students in Melaka and specializes in the factors of use as stated in the objective study. The academics who read this study obtain data and information about the use of digital technology used by university students in Melaka to conduct further research or assist in the academic studies being carried out by the academics. This study was conducted covering three universities in Melaka, if the academics are outside the Melaka area, this can help from the findings of the study and scholarly sources of reading.

### 1.7.2 Government

To the government, this study can help identify the main factors and use of digital technology among university students in Melaka. The government can improve infrastructure and digital technology facilities as well as increase the digital advancement of technology in the country for the use of university students. At the same time, from this research as well, the government can see the extent to which the digital use of technology is used by university students and may give some initiatives to increase the digital use of technology among university students in Melaka.

## 1.8 SUMMARY

In conclusion, this chapter explains the background of study, problem statement, research question, research objective, research scope and significance or research related to the researcher's study. Among the objectives of the study are to investigate what are the factors of the use of digital technology among university students in Melaka, to analyze the use of digital technology among university students in Melaka and to identify the main factors in the use of digital technology among university students in Melaka.

# CHAPTER 2

# LITERATURE REVIEW



## 2.1 INTRODUCTION

The second chapter is a review of the literature for key terms in this study. All of these important terms are explained in detail, with previous findings, information, or data used to back up the statement that is related to the specific term. This chapter contains some definitions of digital technology and example of digital technology. The whole structure for this study will be revealed to readers at the end of this chapter.

## 2.2 DIGITAL TECHNOLOGY

In September 2019, the Department of Education of the Victoria State Government defined digital technologies as electronic tools, systems, devices, and resources that produce, store, or process data. Examples that are widely recognised include social media, online gaming, multimedia, and mobile phones. Since it encompasses a variety of technologies that are employed digitally, the term "digital technology" is fairly wide. Digital technologies are described as including hardware like laptops and tablets, tools like cameras, calculators, and digital toys, systems like software and apps, augmented and virtual reality, and less tangible forms of technology like the Internet on the website of The Australian Research Council in May 2022.

According to Hernández-Sellés et al. (2019), interactions between and within student groups are positively correlated with the usage of online collaboration tools (virtual campus, chat, and discussion forum). An example of how cutting-edge technology may improve social presence is the usage of VoiceThread, an online service that also allows students to record narration in presentation slides while they upload Power Point (Thompson et al., 2017). The use of digital technology among university students is very beneficial to students. In April 2020, the World Economic Forum voiced concerns about how university students used digital technology to complete their education. Many people across the world are questioning if the acceptance of online learning will continue to endure post-pandemic and how such a shift will effect the global education sector in light of this abrupt move away from the classroom. According to (Fiona, Peter, and Rovincer, 2018) digital technologies provide potential that support mixed, online, and mobile learning. Regarding their applicability and acceptance at higher education institutions with limited resources, however, nothing is known. Digital technology helps university students a lot in doing research at the university as well as connecting between instructors and students digitally. In November 2021, the Australian College of Skills and Education said that able to make better judgements faster. User will be able to benefit from enormous datasets if they place data and analytics at the centre of their digital transformation journey.

## 2.3 DIGITAL TECHNOLOGY AS ENTERTAINMENT FOR UNIVERSITY STUDENTS

According to (Matthew, Adebowale, and Sarhan, 2017), cable TV providers may bring digital entertainment to homes. To employ a digital entertainment system, a home does not need to be entirely rewired. Now, students no longer need to go anywhere to find entertainment. They can access entertainment only through the devices they have either with or without an internet connection. it is very easy. According to Cheng and Wang (2021), the incorporation of entertainment design and digital technology enhances the fundamental value of information dissemination in the exhibition space itself, creates a better platform for information exchange, and benefits culture, education, and the industrial economy. Entertainment can be accessed based on the interests of the students themselves. It is not only entertainment in the country, it can also be accessed by students abroad. However, this also causes some effects such as uncensored content because it is on the internet. However, good entertainment can enhance creativity and fulfill human nature.

## 2.4 KNOWLEDGE AND DIGITAL SKILLS OF TECHNOLOGY BECOME AN ASSET OF UNIVERSITY STUDENTS



According to (Kira Allmann & Grant Blank, 2021) It's critical to comprehend the kind of digital abilities required to manoeuvre through this pervasive and complicated digital ecosystem. Research on the digital divide has, appropriately, continued to emphasise digital skills as access has increased. Skills and knowledge about digital technology can be obtained by university students in various ways either through learning or experience. There are many websites and videos on the internet that provide knowledge about digital technology from free to paid. Sometimes it is up to individual university students whether they want to improve their skills and knowledge or vice versa. According to Precious Azuonwu on Linkedin, 2022 "Companies now anticipate that the great majority of their employees possess the more advanced digital abilities necessary in the workplace. Our lives revolve on technology, and as our reliance on the internet and digital communications grows, we must stay up with the shifting skill requirements."

According to Mara (2022) claims that "Technology develops more rapidly the more people who are exposed to it. The culture of the picture interlaced with the oral and written belongs to the contrasts that stand out between students and how professionals educate " This explains that the more often and the longer a person accesses and uses digital technology, the more his skill in using it increases. (Digital Marketing Institute, 2021) claims "According to UNESCO, "a spectrum of abilities to use digital devices, communication apps, and networks to acquire and manage information" is what is meant by "digital skills." In order to engage in productive and creative self-fulfillment in life, study, business, and social activities, they enable individuals to create and share digital information, communicate and cooperate, and solve issues." Nowadays, technology digital skills become one of the skills that give value to university students not only for education but will be useful after the end of university education.

## 2.5 DIGITAL TECHNOLOGY AS COMMUNICATION TOOLS FOR UNIVERSITY STUDENTS

According to (Anabel, Molly-Gloria, and Barry, 2022) describe communication technologies as the hardware (such as computers, landlines, and mobile phones) and software (such as video chat, messenger, and social media) used by people and organisations to share resources like social support. Smartphone use among college students is more prevalent than that of other digital technology. This is due to the extensive feature set available on smart gadgets. They include things like editing, paying, reading and watching online, and communicating online. The students at Sheffield University, according to (Amine and Berkan, 2019), use their smartphones on campus for web browsing (88%), social networking (88%), accessing academic services (78%), and e-mailing (69%). Smartphone use is higher on campus than that of laptop, netbook, tablet/e-reader, iPod, and other mobile devices combined. Additionally, according to (Amine and Berkan, 2019), the continual connectivity offered by mobile devices facilitated interaction with the course material, communication with classmates and the teacher, and supported content collaboration in a situated and contextualised manner. Digital technology also allows university students to connect with each other without having to meet physically. It facilitates communication even with long distances and wherever they are.

According to a Malaysian research (Siddhartha et al., 2020), the findings showed that interaction between students and lecturers was found to be less frequent than interaction with peers. Additionally, it was shown that the students' academic performance is enhanced by their engagement and communication. In today's digital age, people use social media more to interact and communicate. (Siddhartha et al., 2020) claim that professionals are now working in an increasingly digital age. It is crucial that both new and seasoned professionals are aware of the various social media platforms and how to best utilise such tools for professional advancement. Users of social media have access to a wide range of platforms to successfully participate, learn, and educate in their field. According to (Siddhartha et al, 2020), users may hone their social skills by using social networking sites like Facebook and Myspace. By viewing the news, current affairs shows, and documentaries, they may broaden their social and political understanding. Not only for communication, university students can improve and learn various current issues through social media. Not only that, university students can develop a better way of socializing. The authors (Shilpi and Arun, 2021) claim that students may use social media as an infinite source of learning.

## 2.6 DIGITAL TECHNOLOGY FACILITATES ACCESS TO INFORMATION

According to (Siddhartha et al, 2020), students are depending more and more on information and data that is readily available online and on social networking sites. University students always look for the information they need and want to know on the internet because it is faster and easier. According to (Siddhartha et al, 2020) claims that there is evidence in education that shows students utilise YouTube videos as research tools and that the site's films serve as visual aids to assist students comprehend the material. According to (Siddhartha et al., 2020), the digital divide is primarily centred on access to several information and communication technology (ICT) aspects, such as physical access, motivation, skills, and actual utilisation of digital technologies.

According to (Igbo Harriet Uche, 2020), the goal of information access is to assist the user in finding documents that meet his needs. Also, (Igbo Harriet Uche, 2020) asserts that the phrase "digital libraries" may be interpreted in a variety of ways and be referred to by many names. Analysis of multiple definitions of digital libraries revealed that the terms electronic library, virtual

library, hybrid library, gateway library, library of the future, and library without walls are all used to refer to digital libraries.

## 2.7 RESEARCH FRAMEWORK

This section shows the research framework for the use of digital technology among university students in Melaka.

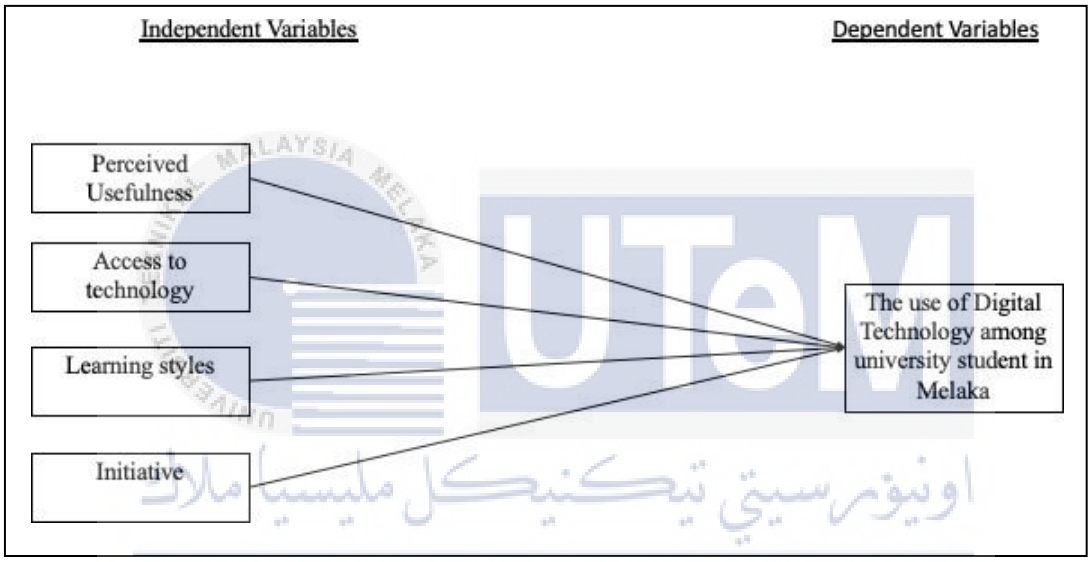




Figure 1: Shows the research framework for this study, which is the use of digital technology among university students in Melaka

## 2.8 RESEARCH HYPOTHESIS

These hypotheses were developed in accordance with the recommended research structure in order to address research queries and achieve the chapter 1 research objectives already mentioned by the researcher:

Hypothesis 1:

There is a significant relationship between perceived usefulness to the use of digital technology among university student in Melaka

Hypothesis 2:

There is a significant relationship between access of technology to the use of digital technology among university student in Melaka

Hypothesis 3:

There is a significant relationship between learning styles to the use of digital technology among university student in Melaka

Hypothesis 4:

There is a significant relationship between initiative to the use of digital technology among university student in Melaka

## 2.9 SUMMARY

The literature review for the key keywords in this study is included in the second chapter. All of these crucial words are thoroughly defined, with references to earlier research, information, or data used to support particular claims. Digital technology, its use as entertainment for college students, its usefulness as an asset to college students, its use as a medium for communication among college students, and its facilitation of simple information access are some of the topics covered by the researcher. The researcher provides the conceptual analysis and research study hypothesis on this chapter as well.

# CHAPTER 3

# METHODOLOGY



## 3.1 INTRODUCTION

According (Sileyew 2019) the research methodology is the path that researchers must take in order to do their research. It demonstrates how these researchers construct their problem and objectives and deliver their findings based on the data collected throughout the study period. This research design and methods chapter also demonstrates how the research outcome will be reached in accordance with the study's objectives. As a result, this chapter outlines the research methodologies employed during the study process. It encompasses the study's research technique, from research plan through result distribution. The researcher outlines the research design that was chosen for the purposes of this study, as well as the rationale for doing so. The device utilised for data collection is also detailed, as are the procedures followed to carry out this investigation. The researcher also describes the data analysis methodologies employed.

## 3.2 RESEARCH DESIGN

An overall structure for how the researcher should respond to the study's research questions or obstacles is known as a research design (William at al., 2017). The strategy outlines the overall design of the investigation as well as the importance of the results to the overall conclusion. The investigation's procedures, including when and how data were acquired, are outlined in the research design. This paper's goal is to outline a method for gathering actual data that can be used to answer the study's research questions. The research problems have a clear aim for the study design, and it also includes a summary of the resources the researcher used to collect data. The sources used by the researcher to get the data, including the mentioned references, must also be made available. It also covers potential methods for gathering and analysing data. As stated by (Kumar, 2019). This research design's goals are to define the procedures for conducting a study and guarantee that there is a relationship between the independent factors and the dependent variable.

## 3.3 RESEARCH METHODOLOGY



In this research study, the researcher used quantitative research as an analysis method. Quantitative research is a technique for generating numerical data and transforming it into knowledge that can be used for evaluation and decision making. The researcher distributed the questionnaire form to the universities that the researcher has mentioned in chapter 1, namely Universiti Teknologi Mara (UiTM) Kampus in Melaka, Universiti Teknikal Malaysia Melaka (UTeM) and Malaysia Multimedia University (MMU) to carry out the data collection process. The questionnaire form has three parts, starting with the demographics of the respondent then followed by the part B which focuses on the independent variable and finally part C focuses on the dependent variable according to the conceptual study. Research questions are distributed through intake groups or batches according to entries through Facebook at each university that has been named by the researcher. The link can only be accessed by university students. University students will be taken to old google forms where research questions have been prepared by the researcher to answer the questions that have been formulated to achieve the purpose of the research study.

## 3.4 POPULATION AND SAMPLING

The whole group from whom a researcher hopes to draw conclusions is referred to as a population. A sample is a representative group of the population from whom a researcher collects data. Every time, the sample size is smaller than the whole population. A list of all the participants in the study serves as the sample frame. It is a comprehensive list of all the subjects the researcher is interested in learning more about. A sample frame is more specialised than a population, which differs in that the former is more general.

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

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

Source: Krejcie & Morgan, 1970

Figure 2 : Sample Size Calculation from a Population (Source : Krejcie and Morgan, 1970)

### 3.4.1 POPULATION

The researcher's interest in a certain group or subject is expressed by the target population, which calls for more investigation and analysis of the results. The study's target audience was university students who attended universities close in Melaka. Respondents for this survey would be students from these universities. The total number of students at these three universities, according to each university's official website, is 29,315 students. There are 4,700 MMU students, 12,259 UiTM students, and 12,356 UTeM students.

### 3.4.2 SAMPLING SIZE

According to Saunders et al. (2016), there are two types of sampling techniques that make up a probability or representative sample and are unlikely to be sampled. Probability samples can be categorised as chance or probability, terms that the chosen target audience is frequently already familiar with. Respondents are likely to put in a lot of effort to complete the questionnaire for the researcher and the sample's objective, which may help researchers analyse the features of the target population. The probability sample also includes simple, systematic, laminated, and clustered fractions. Non-probability samples are ones in which the target population is not known, making it potentially difficult to answer to a researcher's inquiry.



### 3.4.3 SAMPLE SIZE

A sample size is a subset of the population used in surveys and experiments. Any empirical research whose objective is to compile data from a sample should pay careful attention to the sample size. Because of this, the target population for this survey must be reached by 250 respondents. In order to get the desired result, the researcher uses random sampling.

## 3.5 DATA COLLECTION

According to Ajayi (2018), data is described as a set of quantitative or qualitative variable values, as well as facts or figures that aid in the conclusion of a study. The previous researcher went on to explain that the process of finding and acquiring data must be completed before the process of presenting or interpreting information can begin. Primary and secondary data are used as data sources. The researcher gather data to guarantee that the study process works well and that the research objectives are satisfied. It is the process of collecting data from appropriate sources, testing hypotheses, and analyzing the outcomes. The data in this study is divided into two categories: primary data and secondary data.

### 3.5.1 PRIMARY DATA AND SECONDARY DATA

The information will be gathered from both primary and secondary data sources. In this study, both data sources will be employed.

Primary data sources, as defined by Richard (2018), are information or data that has been gathered directly. This kind of information is distinct and has never been gathered before. As main data sources, surveys, experiments, interviews, and observations were employed (Victor, 2017). Since the survey approach offers the most trustworthy data about the respondents, it was chosen as the primary data source for this study.

Data from unpublished or previously published sources are referred to as secondary data sources. Numerous types of statistical data have been published in published sources by national organisations or government publications. On the other side, unpublished sources are information that is kept in-house by organisations but made public. The researcher will collect secondary data for this study from books, journals, and published papers.

### 3.5.2 QUESTIONNAIRES

The questionnaire is designed to serve as a starting point for the kinds of inquiries related to the particular goals of this study. Since the researcher anticipates that the majority of respondents would be able to understand and react to the question, it is being prepared in English. In order to ensure that respondents feel comfortable answering the questions, the survey also included include the study objectives and the researcher's contact information at the beginning.

Sections A, B, and C make up the questionnaire's three sections. Demographic data about the respondents, including their gender, age, ethnicity, level of education, and university, will be gathered in Section A. As stated in Table 1, the questionnaire will be constructed in Section B as a Likert scale. The questions are based on an independent variable that is the factors influencing how university students in Melaka utilise digital technology. The statement for the dependent variable, which is the usage of digital technology among university students in Melaka, will also be presented in the form of a Likert scale in section C. The questionnaire for both pilot test and actual survey distributed by using Google Form to those researchers in Melaka area only.

| Section | Questions |
|---|---|
| A | Demographic Background<br>• Gender<br>• Age<br>• Ethicity<br>• Education Level<br>• University |
| B | Likert Scale (Independent Variable)<br>• Perceived Usefulness<br>• Access of technology<br>• Learning Styles<br>• Initiative |
| C | Liker Scale (Dependent Variable)<br>• The use of digital technology among university students in Melaka |

Table 1 : Questionnaire Structure

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Strongly Disagree | Disagree | Slightly Disagree | Slightly Agree | Agree | Strongly Agree |

Table 2 : Likert Scale of Agreement

## 3.6 PILOT TEST

A pilot test must be conducted before delivering the questionnaire to responders. To improve and design the questionnaire, a pilot test is done to ensure that respondents would understand the questions and have no trouble responding to them. The feasibility of answering the study questions using the data collected from respondents may be ensured and validated by preliminary analysis using the pilot test. Smaller-scale surveys will be conducted instead of large-scale field studies since researchers do not have the resources or time to do so.



Researchers might assess the questionnaires' validity using a pilot test. Next, 30 respondents are used in a pilot test to pre-test the questionnaire. The suggestions received helped to refine the questionnaire before it was actually given to the intended respondents. In the course of the pilot test, the chosen quality chiefs made a few observations to enhance the questionnaire's content.

However, the quality did not comment on the questionnaire's accuracy features because all of the comments in question just required to reiterate a few key points taking into account the difficulties in trying to make the questions understandable to possible responders. Following these recommendations, a revised questionnaire was made for the final version and used for the survey itself.

## 3.7 DATA ANALYSIS METHOD

The systematic process of locating and tabulating research data using diverse methods is known as data analysis. In this study, questionnaire responses will be analysed and interpreted using the Statistical Package for Social Science (SPSS) software version 25.0. Large amounts of data may be handled by SPSS, and several internal management impacts can be made to speed up the process of acquiring and tabulating measurement data. When assessing the hypothesis and distributing the questionnaire for this study, the researcher can use SPSS to determine the validity, reliability, and correctness of the data collected.

To help the researcher respond to the research question and accomplish the research goal, a summary of the descriptive statistics data will be provided in a table. Along with descriptive statistics, the data will be assessed using linear regression and Pearson correlation.

### 3.7.1 DESCIPTIVE STATISTICS

Narkhede (2018) claims that by summarising and organising the full data set, d escriptive statistics make data easier to grasp. In descriptive statistics, the mode, median, and mean are the three most typical forms of data shown. Additionally, descriptive statistics will show the data as clear-cut and well-organized. Central tendency and dispersion are the two categories into which descriptive statistics are divided. The central tendency measure will be used in this study to establish where the distribution is centred in comparison to what a normal or comparable value for a given variable may reveal to the researcher.

### 3.7.2 RELIABILITY ANALYSIS

Reliability may generate a steady and consistent result by measuring a phenomena. There are several methods for determining reliability. The method with the highest usage rate for evaluating the dependability of data is the Cronbach Alpha coefficient. It is a statistic used to show

how well-suited tests and measurement scales are for research. The most acceptable reliability test for using Likert scales in surveys is Cronbach Alpha (Statistics Solution, 2018).

In this study, the reliability of the independent and dependent variables will be assessed using Cronbach's alpha. Typically, the coefficient alpha value ranges from 0 to 1. According to Hair et al. (2003), the alpha value should be larger than 0.7, ideally greater than 0.80, in order to provide a more trustworthy research.

| Cronbach's alpha | Internal consistency |
|---|---|
| $\alpha \geq 0.9$ | Excellent |
| $0.9 > \alpha \geq 0.8$ | Good |
| $0.8 > \alpha \geq 0.7$ | Acceptable |
| $0.7 > \alpha \geq 0.6$ | Questionable |
| $0.6 > \alpha \geq 0.5$ | Poor |
| $0.5 > \alpha$ | Unacceptable |

Table 3 : Rule of Thumb on Cronbach Alpha (Source: Hair et al., 2003)



### 3.7.3 PEARSON CORRELATION ANALYSIS

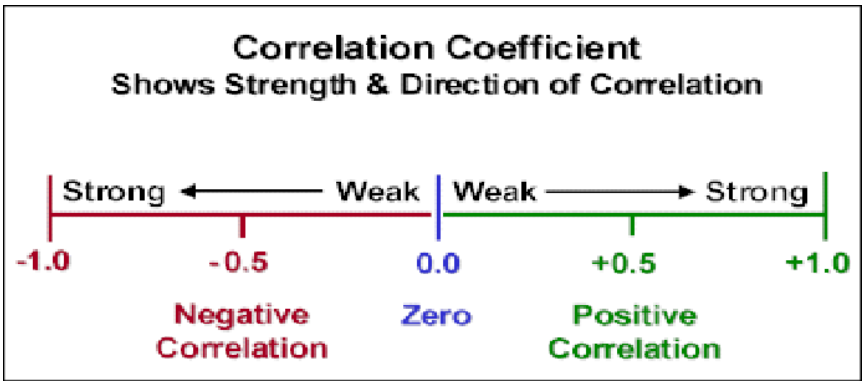


Figure 3 : Strength of the Correlation Coefficient (Source: Smarten, 2018)

In order to measure the linear relationship between the dependent and independent variables, Karl Pearson developed the Pearson correlation analysis. As shown in Figure 3, the symbol "r" is used to measure a sample, with values ranging from -1 to 1, while the sign "p" for Pearson's correlation is used to measure the population. Ganti (2019) claims that if the value is more than 1.0 or lower than -1.0, there is an error in the correlation measurement.

The second study goal will be accomplished with the use of Pearson Correlation Analysis. The second research goal of this study is to examine how university students in Melaka use digital technology. In order to test the hypothesis between each variable, the researcher will use this approach to determine the degree of correlation between the independent variables (perceived usefulness, access to technology, learning styles, and initiative) and the dependent variable, which is the use of digital technology among university students in Melaka.

### 3.7.4 MULTIPLE LINEAR REGRESSION ANALYSIS

In statistical analyses, linear regression is frequently used to identify the best line of fit and evaluate the relationship between two variables. The researcher may distinguish how the dependent variable varies when one or more independent variables alter by using linear regression to anticipate the intensity of independent factors in a dependent variable. Simple linear regression and multiple linear regression are the two primary types of regression, according to Beers (2019).

To ascertain if the factors influencing the usage of digital technology among university students in Melaka are significant, multiple linear regression has been performed. Multiple linear regression is employed because it may estimate the value of a dependent variable from two or more independent variables. This study uses four independent variables to examine if there is a relationship between perceived usefulness and accepting factors: access to technology, learning preferences, initiative, and learning styles. Through the use of multiple linear regression analysis, the third study goal, which is to determine the key determinants of digital technology use among university students in Melaka, may be accomplished. This strategy will be used by the researcher to identify the independent variables that are most crucial in connection to the dependent variables.

After getting the regression equation, researchers can forecast the model, according to Statistics How to (2019).

## 3.8 SUMMARY

The whole procedure for doing research and gathering data has been identified. This chapter covers a wide range of topics, including exploratory research, quantitative research methodologies, primary and secondary data sources, sampling methodology, survey method, questionnaire design, pilot test, and data analysis.

# CHAPTER 4

# FINDINGS



## 4.1 INTRODUCTION

This chapter examined quantitative studies on the use of technology by university students in Melaka. The information was obtained so that analysis could be done to meet the predetermined goals. The data were analysed using SPSS version 25.0, statistical software for social sciences. The following five main components will be covered in this chapter. It included the outcomes of the analyses of the demographic data, the descriptive analysis, the independent and dependent variables' Pearson correlations, the pilot test analysis, the multiple linear regression analysis, and the hypothesis testing.

## 4.2 RELIABILITY TEST ON PILOT TEST

Thirty questionnaire sets have been sent by the researcher for a pilot study. In addition to determining if the questions seem to make sense, pilot tests can be used to enhance the questionnaires. The acquired data will next be examined using SPSS software 25 to determine its validity and reliability. The degree to which the variables are positively associated with one another will be determined by the researcher using Cronbach's Alpha. The typical range of the coefficient alpha is 0 to 1. According to Hair et al. (2003), the alpha value need to be higher than 0.7. While the value should be more than 0.80 to obtain a more trustworthy research.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .923 | .855 | 26 |

Table 4.1 Reliability Statistic for Pilot Test of 30 respondents

(Source: Output from SPSS)



Table 4.1 shows the evaluation of 26 different questionnaire questions that were answered by 30 respondents. Given that it is more than 0.80, the Cronbach's Alpha of 0.923 is considered to have a good level of dependability. This finding suggests that the surveys are trustworthy and acceptable.

### 4.2.1 Perceived Usefulness

The Cronbach's Alpha for PU, as shown in Table 4.2, is 0.822. Since the value is greater than 0.7, the questionnaires statement fits with this research.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .822 | .841 | 5 |

Table 4.2 Reliability Statistic for PU Pilot Test

(Source: Output from SPSS)

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| University student tend to use an application of digital technology to help them perform their job better. | 17.37 | 6.585 | .620 | .432 | .790 |
| University student find that using digital technology improves their ability to collaborate with classmates more effectively. | 17.13 | 7.292 | .827 | .829 | .743 |
| University student feel that using digital technology helps them to be more productive in their studies. | 17.20 | 6.924 | .810 | .854 | .736 |
| By using digital technology, university students can prepare themselves better to face tests such as getting examples of questions to do exercises. | 17.40 | 7.145 | .605 | .578 | .791 |
| University students find that the digital technology has a lot of influence in completing assignments and projects. | 17.30 | 8.148 | .347 | .207 | .866 |

Table 4.3 Item-total Statistics for PU Pilot Test

(Source: Output from SPSS)

### 4.2.2 Access of technology

Table 4.4 shows that the Cronbach's Alpha for Technology Access is 0.891, which is higher than the value 0.7. This demonstrates the validity of the questionnaires assertion in this study.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .891 | .902 | 5 |

Table 4.4 Reliability Statistic for access of technology pilot test

(Source: Output from SPSS)

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| How frequent of use for type of the digital technology in Digital Communication by university students ? | 15.37 | 14.240 | .516 | .504 | .910 |
| How frequent of use for type of the digital technology in Digital Storage by university students ? | 16.27 | 10.616 | .741 | .575 | .874 |
| How frequent of use for type of the digital technology in Digital Software Tools by university students ? | 15.87 | 11.706 | .786 | .685 | .855 |
| How frequent of use for type of the digital technology in Digital Banking by university students ? | 15.37 | 12.999 | .906 | .905 | .848 |
| How frequent of use for type of the digital technology in Digital Shopping Application by university students ? | 15.67 | 10.851 | .841 | .881 | .842 |

Table 4.5 Item-total Statistics for access of technology pilot test

(Source: Output from SPSS)

### 4.2.3 Learning styles

Cronbach's Alpha for learning styles is 0.917, greater above the value 0.7, as seen in Table 4.6. This shows that the claim made in the study's questionnaire is valid.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .917 | .919 | 5 |

Table 4.6 Reliability Statistic for learning styles pilot test

(Source: Output from SPSS)

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| Digital technology offers many variations in different types of courses that can be used according to specific courses, for example, multimedia has filmora, after effect, sony vegas. | 16.53 | 9.361 | .800 | .658 | .897 |
| Digital technology is very easy to understand and learn by a university student without having to take a special course to use it. | 16.17 | 9.799 | .699 | .503 | .916 |
| Skills and techniques using digital technology are easily obtained from various online sources. | 16.30 | 9.114 | .883 | .897 | .881 |
| Learning a course by using digital technology as a tool has a more positive effect than in a traditional way. | 16.40 | 7.834 | .868 | .894 | .885 |
| Digital technology can help students apply what they learn at university in more detail and even be able to advance with digital technology. | 16.20 | 9.752 | .724 | .546 | .911 |

Table 4.7 Item-total Statistics for learning styles pilot test

(Source: Output from SPSS)

### 4.2.4 Initiative

Initiative has the greatest Cronbach's Alpha of all, at 0.938, which is higher and above the value of 0.7, as seen in Table 4.8. This demonstrates the validity of the assertion made in the study's questionnaire.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .938 | .940 | 5 |

Table 4.8 Reliability Statistic for initiative pilot test

(Source: Output from SPSS)

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| Internet facilities and computer labs encourage students to use digital technology at the university. | 16.47 | 12.671 | .766 | .594 | .936 |
| The educational or e-learning portal provided by the university is used comprehensively and is beneficial to university students in accessing educational resources and reading materials digitally. | 16.07 | 11.720 | .809 | .703 | .930 |
| The digital use of technology such as cashless in the university area can change the traditional payment buying and selling practice to a digital one and make it practical outside the university area. | 15.93 | 12.133 | .901 | .819 | .912 |
| Universities and governments run many programs and initiatives for students to recognize and learn the latest digital knowledge such as Adobe Photoshop seminars, Photography courses and e-commerce programs. | 15.83 | 12.420 | .896 | .837 | .914 |
| Universities and the government offer a lot of training and part-time jobs that can give university students experience and opportunities in using digital technology. | 15.97 | 12.447 | .816 | .748 | .927 |

Table 4.9 Item-total Statistics for initiative pilot test

(Source: Output from SPSS)

### 4.2.5 The use of digital technology

According to Table 4.10, Cronbach's Alpha for the use of digital technology is 0.756, which is higher than the value of 0.7. This demonstrates the validity of the assertion made in the study's questionnaire.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .756 | .790 | 6 |

Table 4.10 Reliability Statistic for the use of digital technology pilot test

(Source: Output from SPSS)

**Item-Total Statistics**

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|---|---|---|---|---|
| The digital technology which is Social Media (Facebook, Intagram, Youtube) being use by university students. | 5.90 | 1.541 | .664 | .550 | .684 |
| The digital technology which is Cloud Storage (Google drive, Apple Cloud) being use by university students. | 5.63 | 1.482 | .349 | .298 | .785 |
| The digital technology which is Video Conference Technology (Webex, Meet, Zoom) being use by university students. | 5.83 | 1.454 | .591 | .520 | .694 |
| The digital technology which is Office & Architecture Tools (Powerpoint, Photoshop, AutoCAD, Python, Java) being use by university students. | 5.93 | 1.651 | .649 | .524 | .700 |
| The digital technology which is E-wallet & Online Banking (TnG ewallet, Maybank2u) being use by university students. | 5.93 | 1.789 | .420 | .448 | .742 |
| The digital technology which is Online Shopping (Shopee, Lazada, TikTok Shop, Taobao) being use by university students. | 5.77 | 1.426 | .512 | .502 | .719 |

Table 4.11 Item-total Statistics for the use of digital technology pilot test

(Source: Output from SPSS)

## 4.3 Reliability Test

Reliability tests enable the researcher to get more consistent and solid results for this investigation. The reliability and acceptability of data that have been created for a study project are demonstrated using Cronbach's Alpha. The findings will then demonstrate how accurate, consistent, and acceptable the questionnaire was. In order to obtain a more dependable research, the alpha's value should be larger than 0.70 and more than 0.80.

The test results show that this research's independent have alpha values greater than 0.7 while dependent variables have lower then 0.7 but the final result still in acceptance which is 0.906 in Table 4.12 who is greater than 0.7. Learning styles, which have an alpha value of 0.815, have the highest alpha value of all the variables, as seen in Table 4.13, making it the most depend able variable. Initiative has an alpha value of 0.794, which is the second-highest. Technology access has a third higher alpha value of 0.789. Perceived usefulness, a variable with an alpha value of 0.756, was the next. The last option was using digital technology, with an alpha value of 0.681.

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .906 | .882 | 26 |



Table 4.12 Reliability Statistic for 256 respondents

(Source: Output from SPSS)

| | **Reliability Statistics** | |
|---|---|---|
| **All Variables** | **Cronbach's Alpha** | **N of items** |
| **Perceived Usefulness** | **0.756** | **5** |
| **Access of technology** | **0.789** | **5** |
| **Learning styles** | **0.815** | **5** |

| | | |
|---|---|---|
| **Initiative** | **0.794** | **5** |
| **The use of digital technology** | **0.681** | **6** |

Table 4.13 Reliability Statistic for each variable

(Source: Output from SPSS)

According to table 4.12, the questionnaires in this study have good reliability and all respondents can grasp the questions effectively, as indicated by the alpha value of 0.906.

## 4.4 Descriptive Analysis of Demographic

All 256 respondents (N=256) were analysed using a descriptive analysis to determine their background characteristics. Background information on respondents includes gender, age, ethnicity, level of education, and university.

### 4.4.1 Gender

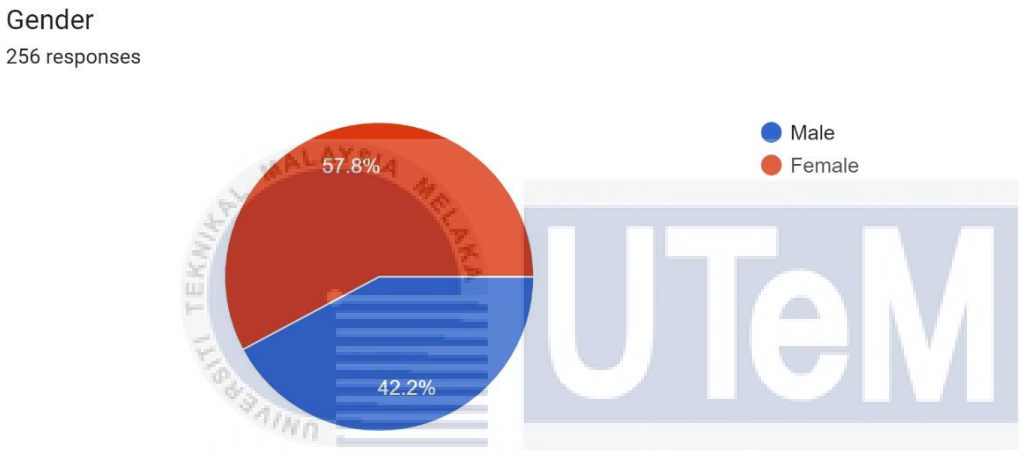


Figure 4.4.1 Percentage of Gender

(Source : Survey by google form)



**Gender**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Female | 148 | 57.8 | 57.8 | 57.8 |
| | Male | 108 | 42.2 | 42.2 | 100.0 |
| | Total | 256 | 100.0 | 100.0 | |

Table 4.14 Frequency and Percentage of Gender

(Source: Output from SPSS)

According to Table 4.14, of the 256 responders, 148 were female (or 57.8% of the total), and 108 were male (or 42.2%). Results indicated that there were more female participants in this study.

### 4.4.2 Age

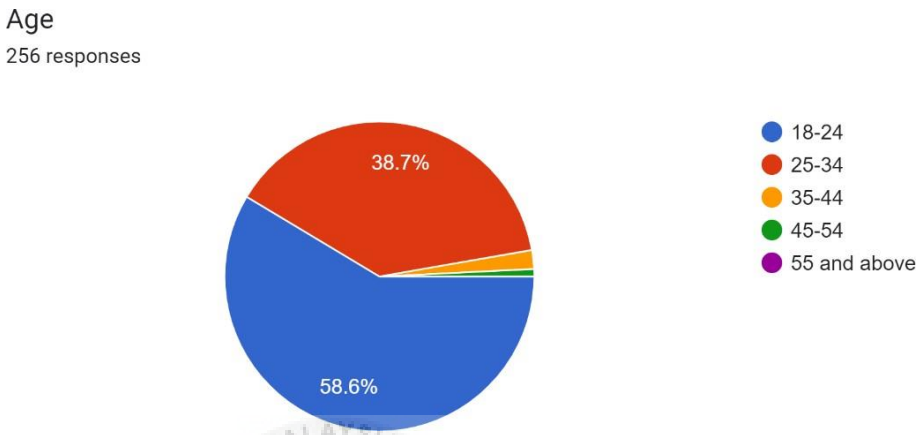


Figure 4.4.2 Percentage of Age

(Source : Survey by google form)

**Age**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | 18-24 | 150 | 58.6 | 58.6 | 58.6 |
| | 25-34 | 99 | 38.7 | 38.7 | 97.3 |
| | 35-44 | 5 | 2.0 | 2.0 | 99.2 |
| | 45-54 | 2 | .8 | .8 | 100.0 |
| | Total | 256 | 100.0 | 100.0 | |

Table 4.15 Frequency and Percentage of Age

(Source: Output from SPSS)

Age groups are grouped into 5 categories based on Table 4.15. In all, respondents between the ages of 18-24 made up the largest portion of survey participants—150 students, or 58.6% of the total. The second-highest level is made up of respondents aged 25 to 34, who made up 99 respondents overall and made up 38.7% of the total. Those aged 35 to 44 come in second with a total of 5 respondents, or 2% of the total, while those aged 45 to 55 come in last with a total of 2,

or 0.8% of the total respondents. There are no respondent for age above of 55. In conclusion, there are 150 individuals in the 18 to 24 age range, or 58.6% of the total population, and just 2 persons, or 0.8%, in the 45 to 55 age range.

### 4.4.3 Ethnicity

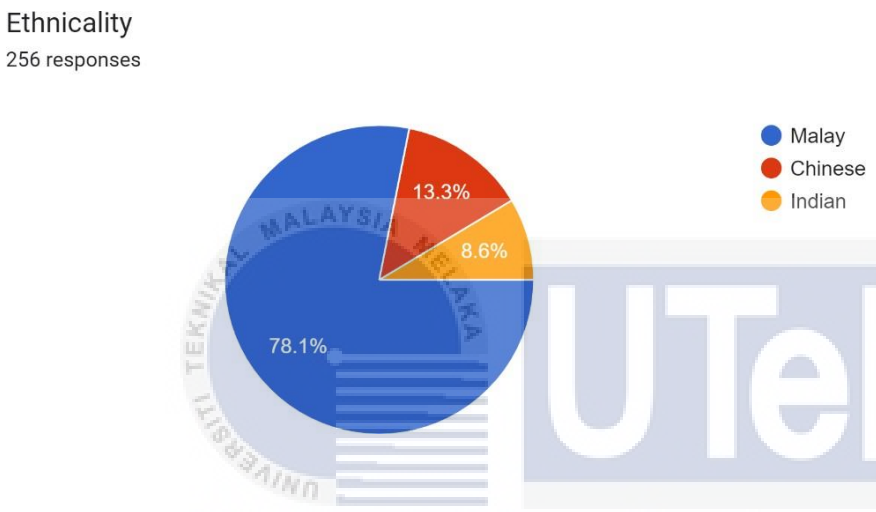


Figure 4.4.3 Percentage of Ethnicity

(Source : Survey by google form)



**Ethnicity**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Chinese | 34 | 13.3 | 13.3 | 13.3 |
| | Indian | 22 | 8.6 | 8.6 | 21.9 |
| | Malay | 200 | 78.1 | 78.1 | 100.0 |
| | Total | 256 | 100.0 | 100.0 | |

Table 4.16 Frequency and Percentage of ethnicity

(Source: Output from SPSS)

According to table 4.16, there are three primary races in Malaysia: Malay, Indian, and Chinese. These are the ethnicities who responded to the questionnaire for this research study.

According to the data of table 4.16, the Malay race has the biggest percentage with 78.1%, or 200 persons overall. Chinese people rank second with 13.3%, or 34 persons, in total. 22 persons, or 8.6% of the Indian ethnicity, have responded to this study. In conclusion, the Malay race has the biggest percentage (78.1%, or 200 people) while the Indian race has the lowest percentage (8.6%, or 22 people).

### 4.4.4 Educational Level

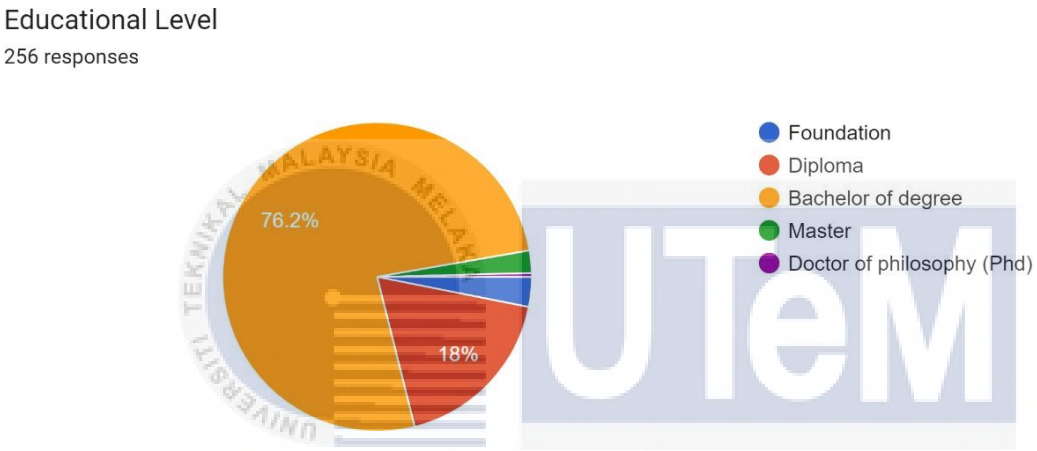


Figure 4.4.4 Percentage of Educational Level

(Source : Survey by google form)



**Educational Level**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Bachelor of degree | 195 | 76.2 | 76.2 | 76.2 |
| | Diploma | 46 | 18.0 | 18.0 | 94.1 |
| | Doctor of philosophy (Phd) | 1 | .4 | .4 | 94.5 |
| | Foundation | 8 | 3.1 | 3.1 | 97.7 |
| | Master | 6 | 2.3 | 2.3 | 100.0 |
| | Total | 256 | 100.0 | 100.0 | |

Table 4.17 Frequency and Percentage of educational level

(Source: Output from SPSS)

Based on table 4.17 for the level of education, starting with a bachelor's degree with 76.2% of all respondents is also the highest compared to all with a total of 195 respondents. Next, a

diploma level of 18.0% or a total of 46 people participated in this questionnaire. The next level is the doctor of philosophy (PhD) with a percentage of only 0.4% of the total or only 1 person. While for the foundation level, it is as much as 3.1%, which is 8 people out of 256 total respondents. and last but not least is the master level which is 2.3% or only 6 people. The total brings to 100% or 256 respondents. In conclusion, the highest number is the bachelor's degree education level which is 76.2% or a total of 195 respondents. Meanwhile, the lowest is for the doctor of philosophy (PhD) education level which is only 0.4% or only 1 respondent.

### 4.4.5 University

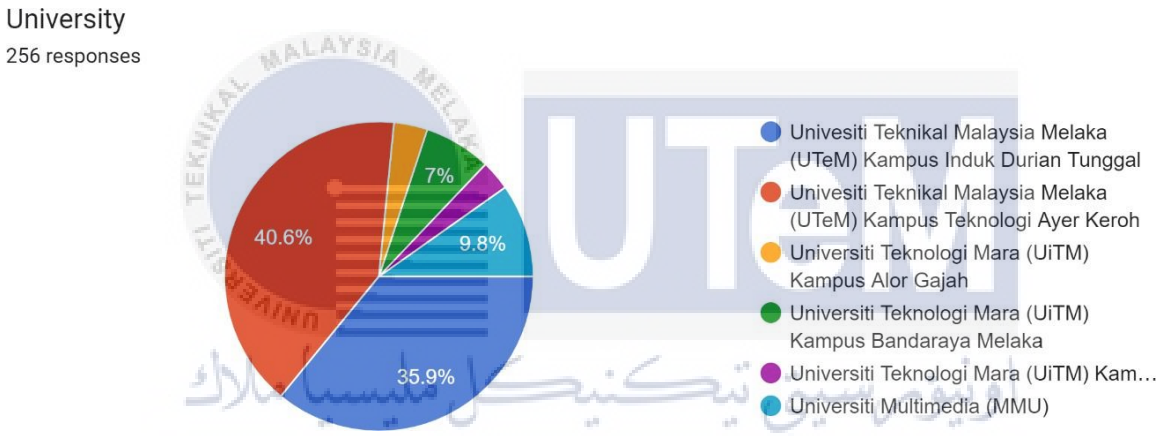




Figure 4.4.5 Percentage of University

(Source : Survey by google form)

| University | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Universiti Multimedia (MMU) | 25 | 9.8 | 9.8 | 9.8 |
| | Universiti Teknologi Mara (UiTM) Kampus Alor Gajah | 9 | 3.5 | 3.5 | 13.3 |
| | Universiti Teknologi Mara (UiTM) Kampus Bandaraya Melaka | 18 | 7.0 | 7.0 | 20.3 |
| | Universiti Teknologi Mara (UiTM) Kampus Jasin | 8 | 3.1 | 3.1 | 23.4 |
| | Univesiti Teknikal Malaysia Melaka (UTeM) Kampus Induk Durian Tunggal | 92 | 35.9 | 35.9 | 59.4 |
| | Univesiti Teknikal Malaysia Melaka (UTeM) Kampus Teknologi Ayer Keroh | 104 | 40.6 | 40.6 | 100.0 |
| | Total | 256 | 100.0 | 100.0 | |

Table 4.18 Frequency and Percentage of university

(Source: Output from SPSS)

Based on table 4.18 for Frequency and Percentage of universities, starting with Malaysia Multimedia University (MMU) is 9.8% or a total of 25 respondents. Next, from Universiti Teknologi Mara (UiTM) Kampus Alor Gajah with 3.5% or a total of 9 respondents. Further, Universiti Teknologi Mara (UiTM) Kampus Bandaraya Melaka with 7.0% of the total, which is a total of 18 respondents. Then, the number from Universiti Teknologi Mara (UiTM) Kampus Jasin was as much as 3.1% or a total of 8 respondents. It is also the lowest number compared to all universities. Next, is from the Universiti Teknikal Malaysia Melaka (UTeM) Kampus Induk Durian Tunggal with a total of 35.9% or a total of 92 respondents. Last but not least is the Universiti Teknikal Malaysia Melaka (UTeM) Kampus Teknologi Ayer Keroh with a total of 40.6% which is equivalent to a total of 104 respondents. The total brings to 100% which is equivalent to 256 total respondents. In conclusion, the highest number is from Universiti Teknikal Malaysia Melaka (UTeM) Kampus Teknologi Ayer Keroh with a total of 40.6% or a total of 104 respondents. And the lowest is from Universiti Teknologi Mara (UiTM) Kampus Jasin with only 3.1% equivalent to 8 respondents only.

## 4.5 Descriptive Analysis

**Statistics**

| | | IV1 | IV2 | IV3 | IV4 | DV1 |
|---|---|---|---|---|---|---|
| N | Valid | 256 | 256 | 256 | 256 | 256 |
| | Missing | 0 | 0 | 0 | 0 | 0 |
| Mean | | 4.2695 | 3.7695 | 4.2031 | 4.2188 | 1.1048 |
| Median | | 4.4000 | 3.8000 | 4.2000 | 4.4000 | 1.0000 |
| Mode | | 4.40 | 3.60 | 4.60 | 4.60 | 1.00 |
| Std. Deviation | | .63494 | .68999 | .66532 | .66483 | .18428 |
| Variance | | .403 | .476 | .443 | .442 | .034 |

Table 4.19 Descriptive Analysis

(Source: Output from SPSS)

According Narkhede (2018) asserts that descriptive statistics are applied to ensure that the data appear straightforward, understandable, and ordered by summarizing and arranging the entire data. The findings obtained with SPSS and from the descriptive statistics of the independent and dependent variables are shown in Table 4.19. The dependent variable is the use of digital technology (DV1), whereas the independent variables are perceived usefulness (IV1), access of technology (IV2), learning styles (IV3), and initiative (IV4) .

Based on table 4.19 Descriptive Analysis displayed above, the highest mean is on independent variable IV1 which is perceived usefulness with a value of 4.2696 closely followed by independent variable IV4 which is initiative with a total of 4.2188. The difference is only 0.0508. While for the independent variable IV3, it is in the third place, with a mean value of 4.2031. Finally, the lowest mean is on the dependent variable DV1 which is the use of digital technology with a mean value of 1.1048. Based on table 4.19 Descriptive Analysis as well, the highest median value of 4.4000 is for two independent variables namely IV1 perceived usefulness and IV4 initiative. And followed by IV3 which is learning styles with a value of 4.2000 and IV2 access of

technology with a value of 3.8000. Lastly is the median for the dependent variable DV1 which is the use of digital technology with a value of 1.000. As for the mode, it can be seen f rom the table above that the mode for IV3 learning styles and IV4 Initiative has the same value at 4.60. while for IV1 perveiced usefulness is 4.40 mode value.

Next, the mode for IV2 access of technology is 3.60. Finally, the mode value for the dependent variable DV1 the use of digital technology is 1.00. All the results are based on a total of 256 respondents who answered the questionnaire distributed by the researcher online through google forms.

## 4.6 Pearson Correlation Coefficient Analysis

The linear relationship between the dependent and independent variables is measured using Pearson correlation analysis. If the estimated figure is greater than 1.0 or less than -1.0, there was a mistake in the correlation measurement, claims Ganti (2019). Through the use of Pearson Correlation Analysis, the second study goal, which examines the link between customer acceptance of SST in the fast food market, may be accomplished.



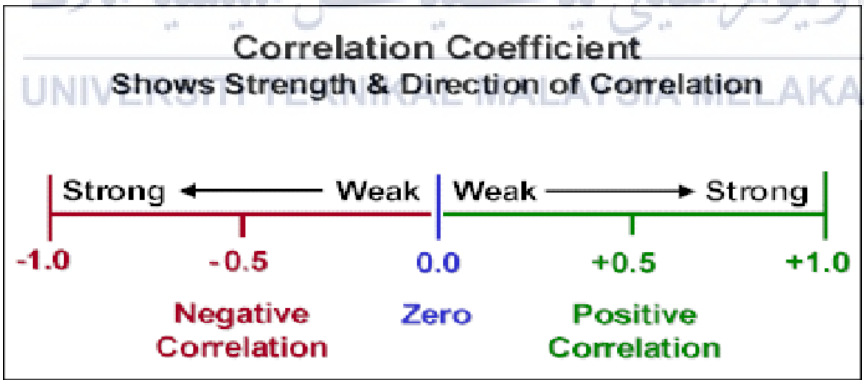


Figure 4.1: Strength of the Correlation Coefficient

(Source: Smarten, 2018)

**Correlations**

| | | IV1 | IV2 | IV3 | IV4 | DV1 |
|---|---|---|---|---|---|---|
| IV1 | Pearson Correlation | 1 | .625** | .686** | .680** | -.379** |
| | Sig. (2-tailed) | | .000 | .000 | .000 | .000 |
| | N | 256 | 256 | 256 | 256 | 256 |
| IV2 | Pearson Correlation | .625** | 1 | .612** | .584** | -.328** |
| | Sig. (2-tailed) | .000 | | .000 | .000 | .000 |
| | N | 256 | 256 | 256 | 256 | 256 |
| IV3 | Pearson Correlation | .686** | .612** | 1 | .754** | -.453** |
| | Sig. (2-tailed) | .000 | .000 | | .000 | .000 |
| | N | 256 | 256 | 256 | 256 | 256 |
| IV4 | Pearson Correlation | .680** | .584** | .754** | 1 | -.488** |
| | Sig. (2-tailed) | .000 | .000 | .000 | | .000 |
| | N | 256 | 256 | 256 | 256 | 256 |
| DV1 | Pearson Correlation | -.379** | -.328** | -.453** | -.488** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | .000 | |
| | N | 256 | 256 | 256 | 256 | 256 |

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

Table 4.20: Correlations between variables

(Source: Output from SPSS)



Table 4.20 above shows the relationship between the variables. This analysis allows the researcher to select "good" variables. Larger coefficient values indicate higher reliabilit y and better relationships for correlated variables. Independent variable IV4 which is initiative and independent variable IV3 which is learning styles show the strongest positive relationship with values of r=0.754 and p=0.000. In the second level, the strong positive relationship is independent variable IV1 which is perceived usefulness with independent IV3 which is learning styles with a positive relationship value of r=0.686 and p=0.000. Then, the relationship between independent variable IV4 which is Initiative with independent variable IV1 which is perceived usefulness also shows a relatively strong positive relationship with values of r=0.680 and p=0.000. In addition, the relationship between independent variable IV1, which is perceived usefulness, and independent variable IV2, which is access to technology, also shows a positive and strong relationship with a

value of r=0.625 and r=0.000. Meanwhile, the relationship between the dependent variable DV1 which is the use if digital technology among university students with all the independent variables shows a relatively weak relationship with a value of r=0.379 against IV1 which is perceived usefulness, r=0.328 against IV2 which is access of technology, r=0.453 against IV3 which is learning styles and r=0.488 against IV4 which is initiative with a value of p=0.000 each. All these relationships are based on the total number of respondents who are 256 people in total.

In conclusion, although the correlation value is low, but the variables still have a significant relationship. This shows that most of the independent variables in this research (perceived usefulness, acccesso of technology, learning styles and initiative) have a significant correlation with the dependent variable (The use of digital technology among university students in Melaka). Findings also show that there is a correlation between some variables. The highest correlation value is IV4 which is initiative and IV3 which is learning styles show the strongest positive relationship with values of r=0.754 and p=0.000.

## 4.7 Multiple Regression Analysis

The four independent variables' influence on the dependent variable were examined using multiple regression analysis. It is performed to gauge an independent variable's influence on a dependent one. Through the use of multiple regression analysis, which is to determine the variables that have the greatest influence on the use of digital technology among university student in Melaka, can be accomplished.

**Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | .505[a] | .255 | .243 | .16032 | .255 | 21.476 | 4 | 251 | .000 |

a. Predictors: (Constant), IV4, IV2, IV1, IV3

Table 4.21: Model Summary of Multiple Regression

(Source: Output from SPSS)

According to Table 4.21, a link between the independent variable and the dependent variable in this study exists as indicated by the positive R value of 0.505. Additionally, the model summary displays R square = 0.255, suggesting that the independent variables effectively account for 25.5% of the variation in the dependent variable (DV1), the use of digital technology among university students in Melaka (IV1 perceived usefulness, IV2 access of technology, IV3 learning styles and IV4 initiative).

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 2.208 | 4 | .552 | 21.476 | .000[b] |
| | Residual | 6.452 | 251 | .026 | | |
| | Total | 8.660 | 255 | | | |

a. Dependent Variable: DV1

b. Predictors: (Constant), IV4, IV2, IV1, IV3

Table 4.22: ANOVA Table

(Source: Output from SPSS)



To find out if there is a difference between the groups, an ANOVA is utilised. It is unable to pinpoint which group is responsible for the disparity, though. The value of the F-test result was 21.476, with a significant p-value of 0.000, which is less than 0.05 alpha levels, based on Table 4.22 above. If the p-value is less than 0.05, Minitab (2019) predicts that some of the means will deviate. As a result, there is a statistically significant difference between independent variables and dependent variable DV1, which indicates digital technology use among university students in Melaka (IV1 perceived usefulness, IV2 access of technology, IV3 learning styles and IV4 initiative).

## 4.8 Hypothesis Testing

Regression analysis will be used to determine a hypothesis' validity. A hypothesis can be accepted if the t-value is more than 1.96 and the p-value is less than 0.05. Show that there was no significant influence of independent variables on the dependent variable if the p-value was greater than 0.05. All independent variables (IV1 perceived usefulness, IV2 access of technology, IV3 learning styles and IV4 initiative) and dependent variable (DV1 the use of the digital technology among university students) in this research will be evaluated. Table 4.24 shown t -value and p-value of all variables.

**Coefficients[a]**

| Model | | Unstandardized Coefficients B | Unstandardized Coefficients Std. Error | Standardized Coefficients Beta | t | Sig. |
|---|---|---|---|---|---|---|
| 1 | (Constant) | 1.741 | .074 | | 23.570 | .000 |
| | IV1 | -.007 | .024 | -.024 | -.285 | .776 |
| | IV2 | -.003 | .020 | -.010 | -.137 | .891 |
| | IV3 | -.051 | .025 | -.183 | -2.014 | .045 |
| | IV4 | -.091 | .025 | -.327 | -3.681 | .000 |

a. Dependent Variable: DV1

Table 4.23: Coefficients Table
(Source: Output from SPSS)



In order to determine which elements have the most influence on behaviour intention, researchers have developed four hypotheses, as follows:

**Hypothesis 1: Perceived usefulness**

H0: There is no significant relationship between perceived and the use of digital technology among university students in Melaka.

H1: : There is significant relationship between perceived and the use of digital technology among university students in Melaka.

The value in figure 4.2.3 depicts the relationship between the perceived usefulness of digital technology and the actual usage of it by university students in Melaka. It is safe to say that perceived usefulness does not have a significant link with the usage of digital technology among university students in Melaka since it has a significant value of 0.776. This is because perceived usefulness has a substantial value. The value of Beta is found to be -0.024, and the t-value is found to be -0.285, according to the findings of the regression. As a direct consequence of this, the researcher decided to go with the hypothesis H0 rather than the alternative hypothesis H1.

**Hypothesis 2: Access of technology**

H0: There is no significant relationship between acceess of technology and the use of digital technology among university students in Melaka.

H1: There is significant relationship between acceess of technology and the use of digital technology among university students in Melaka.

The value in figure 4.2.3 depicts the relationship between the access of technology of digital technology and the actual usage of it by university students in Melaka. It is reasonable to presume that access of technology does not have a substantial link with the usage of digital technology among university students in Melaka given that it has a significant value of 0.891. The results of the regression indicate that the value of Beta is -0.010, and the t-value is -0183. As a direct consequence of this, the researcher decided to go with the hypothesis H0 rather than the alternate hypothesis H1.

**Hypothesis 3: Learning styles**

H0: There is no significant relationship between learning styles and the use of digital technology among university students in Melaka.

H1: There is significant relationship between learning styles and the use of digital technology among university students in Melaka.

The value in figure 4.2.3 depicts the relationship between the various methods of learning and the usage of digital technology among university students in Melaka. Learning styles has a significant value of 0.045, thus it can be considered that it does not have a major association with the usage of digital technology among university students in Melaka. This is the conclusion that can be drawn according to the significance of the value. The results of the regression indicate that the value of Beta is -0.183, and the value of t is -2.014. As a direct consequence of this, the researcher decided to go with the hypothesis H0 rather than the alternate hypothesis H1.

**Hypothesis 4: Initiative**

H0: There is no significant relationship between lnitiative and the use of digital technology among university students in Melaka.

H1: There is significant relationship between lnitiative and the use of digital technology among university students in Melaka.



Figure 4.2.3 illustrates how university students in Melaka have become less initiative in their usage of digital technologies over the last several years. Given that the value of the project is large (0.000), it is reasonable to conclude that there is a strong connection between it and the usage of digital technology by university students in Melaka. According to the findings of the regression, the value of Beta is -0.327, and the t-value is -3.681. As a direct consequence of this, the researcher came to the conclusion that the alternative hypothesis H1 should be accepted whereas the hypothesis H0 should be accepted.

| Hypothesis | Results |
|---|---|
| **Hypothesis 1:**<br><br>H0: Perceived usefulness has no significant relationship between the use of digital technology among university students in Melaka.<br><br>H1: Perceived usefulness has significant relationship between the use of digital technology among university students in Melaka. | **$H_0$ is rejected.**<br><br>**$H_1$ is accepted.** |
| **Hypothesis 2:**<br><br>H0: Acceess of technology has no significant relationship between the use of digital technology among university students in Melaka.<br><br>H1: Access of technology has significant relationship between the use of digital technology among university students in Melaka. | **$H_0$ is rejected.**<br><br>**$H_1$ is accepted.** |
| **Hypothesis 3:**<br><br>H0: Learning styles has no significant relationship between the use of digital technology among university students in Melaka.<br><br>H1: Learning styles has significant relationship between the use of digital technology among university students in Melaka. | **$H_0$ is rejected.**<br><br>**$H_1$ is accepted.** |

| | |
|---|---|
| **Hypothesis 4:**<br><br>H0: Initiative has significant relationship between the use of digital technology among university students in Melaka.<br><br>H1: Initiative has significant relationship between the use of digital technology among university students in Melaka. | **$H_0$ is accepted.**<br><br>**$H_1$ is accepted.** |

Table 4.24: Summary of Hypothesis testing

## 4.9 SUMMARY

In this chapter, analyses such as reliability analysis, descriptive analysis, Pearson correlation analysis, and multiple regression analysis were used to the data that was acquired from 256 respondents via the use of questionnaires. Using SPSS Software Version 25.0, it was determined that the reliability of the surveys under consideration had a high level of dependability. The researchers also discovered that initiative was the most important factor when it came to university students in Melaka making use of digital technologies. According to the findings of the experiment designed to test the hypothesis, initiative has been shown to have a significant relationship with the use of digital technology among university students in Melaka. On the other hand, perceived usefulness, access to technology, and learning preferences have been shown to have no significant relationship with this use and therefore have been rejected. The results of the study as well as any suggestions will be discussed in the next chapter.

# CHAPTER 5

# DISCUSSION, RECOMMENDATION AND CONCLUSIONS



## 5.1 INTRODUCTION

This chapter will concentrate mostly on providing a detailed explanation of the study results as well as a discussion of those findings. The limitations of the studies are also highlighted in this chapter, in addition to providing ideas for further research. In addition, the study goals will be dealt with in an acceptable manner throughout this chapter.

## 5.2 DISCUSSION

In order to accomplish its objective of achieving digital advancement, Malaysia is developing a large number of graduates and digital professionals that are proficient in their respective fields. In addition, the researcher who carried out this study was in a position to see, although at a roundabout way, the degree to which university students make use of digital technology in universities, particularly those located in the state of Melaka. The researcher has already mentioned the true purpose of this investigation in the introductory section of the study; the purpose of this section is to expound on that aim and describe it in more detail.

In order to conduct a preliminary study, the researcher has already sent thirty sets of questionnaires. Pilot testing may be used to improve questionnaires in addition to establishing whether or not the questions seem to make sense. The results of the analysis of the questionnaire questions can be found in Table 4.1 on page 4 of chapter 4. These results are based on the responses of thirty people to a total of twenty-six distinct questions. Cronbach's Alpha was calculated to be 0.923, and this value is deemed to have an excellent degree of reliability since it is more than 0.80. This conclusion lends credence to the notion that the surveys may be trusted and are appropriate. The researcher will assess, with the use of Cronbach's Alpha, the extent to which the variables are positively correlated with one another. The range of values that are considered normal for the coefficient alpha ranges from 0 to 1. According to Hair et al. (2003), the alpha value must be more than 0.7 in order to be considered acceptable. However, the value should be more than 0.80 in order to acquire more reliable results from the study.

The researcher is able to get outcomes for this examination that are more stable and consistent thanks to the reliability testing. Cronbach's Alpha is a statistical tool that may be used to provide evidence about the dependability and acceptance of the data that have been collected for a research endeavour. When the results are analysed, they will show how accurate, consistent, and reliable the questionnaire really was. A value of alpha that is more than 0.70 and greater than 0.80 is recommended in order to acquire a study that can be relied upon more. The findings of the tests indicate that the independent variables of this research have alpha values that are greater than 0.7, while the dependent variables have alpha values that are lower than 0.7; however, the final

result is still acceptable, as shown by the value of 0.906 in Table 4.12, which is greater than 0.7. The learning styles variable, which has an alpha value of 0.815, has the highest alpha value of all the variables, as can be shown in Table 4.13. As a result, the learning styles variable is the most reliable variable. The alpha value of initiative is 0.794, which places it in second place among all values. Access to technological advancements has an alpha score that is 0.789 points higher. Following that came a measure known as perceived usefulness, which had an alpha coefficient of 0.756. The use of digital technology was the final choice, and it had an alpha value of 0.681. As shown by an alpha value of 0.906, the questionnaires used in this research have a high degree of dependability, and all of the respondents are able to comprehend the questions well.

### 5.2.1 DISCUSSION OF THE DEMOGRAPHIC BACKGROUND

In order to establish the background characteristics of each of the 256 respondents (N=256), a descriptive analysis was performed on all of the data. Respondents were asked about their gender, age, ethnicity, degree of education, and university attendance as part of the background information collected. Table 4.14 shows that out of the total of 256 respondents, there were 148 females (representing 57.8% of the total) and 108 males (representing 42.2%). According to the findings, this research included a much higher proportion of female participants.



According to Table 4.15, age groups have been divided into five distinct categories. The respondents who were between the ages of 18 and 24 made up the greatest share of the survey participants overall, accounting for 58.6% of the total and including 150 students. The respondents who were between the ages of 25 and 34 made up the second-highest level, which consisted of 99 respondents in total and accounted for 38.7% of the total. Those who are between the ages of 35 and 44 come in second place with a total of 5 respondents, which accounts for 2% of the total, while those who are between the ages of 45 and 55 come in last place with a total of 2, which accounts for 0.8% of the total respondents. There is not a single responder older than 55 years old. To summarise, there are 150 people in the age range of 18 to 24 years old, which accounts for 58.6% of the whole population, whilst there are only 2 people in the age range of 45 to 55 years old, which accounts for 0.8% of the total population. Table 4.16 shows that there are primarily

three different races living in Malaysia: the Malays, the Indians, and the Chinese. These are the people of these ethnicities who participated in this research project by completing the questionnaire. Table 4.16's data shows that the Malay race accounts for 78.1% of the total population, which is 200 people. This gives them the highest proportion. The Chinese population is in second place with 13.3% of the total, or 34 individuals. This survey has received responses from 22 people, which is 8.6% of the total Indian ethnicity. To summarise, those of Malay descent make up the largest proportion of the population (78.1%, or 200 people), while those of Indian descent make up the smallest percentage (8.6%, or 22 people).

According to table 4.17, the level of education that starts with a bachelor's degree has the largest percentage of respondents among all with a total of 195 respondents. This percentage corresponds to 76.2% of all respondents. The following statistic reveals that 18.0% of persons, or a total of 46 individuals, took part in this questionnaire. The doctor of philosophy, sometimes known as a PhD, is the next degree up, however it barely accounts for 0.4% of the total or one individual. On the other hand, the percentage is as high as 3.1% at the foundation level, which translates to 8 persons out of 256 total responses. and last but not least, there are just six persons who have reached the master level, which represents 2.3% of the whole population. The number comes to a hundred percent, or 256 people who responded. In conclusion, the education level corresponding to a bachelor's degree has the biggest number, which comes to a total of 195 respondents with a percentage of 76.2%. The lowest education level is that of a doctor of philosophy (PhD), which only accounts for 0.4% of respondents, making it the only responder in this category.

According to table 4.18 for the Frequency and Percentage of universities, the number of responses beginning with Malaysia Multimedia University (MMU) is 9.8%, which comes out to a total of 25. Next, we have Universiti Teknologi Mara (UiTM) Kampus Alor Gajah with a total of 9 responses, accounting for 3.5% of the total. Additionally, Universiti Teknologi Mara (UiTM) Kampus Bandaraya Melaka had a total of 18 responders, which corresponds to a percentage of 7.0% of the total. After thereafter, the number of responders from the Universiti Teknologi Mara (UiTM) Kampus Jasin reached as high as 3.1%, which equaled a total of 8 people. In comparison to the numbers at other colleges, this one has the fewest. The next response comes from the

Universiti Teknikal Malaysia Melaka (UTeM) Kampus Induk Durian Tunggal, which has a total of 35.9%, which equals a total of 92 respondents. The last participant in this survey is the Universiti Teknikal Malaysia Melaka (UTeM) Kampus Teknologi Ayer Keroh, which received a total of 40.6% of the vote from a total of 104 respondents. This takes the total up to 100%, which is equal to 256 people in total who responded to the survey. In conclusion, the Universiti Teknikal Malaysia Melaka (UTeM) Kampus Teknologi Ayer Keroh has the greatest number of responders, totaling 104 with a percentage of 40.6%. The response rate of Universiti Teknologi Mara (UiTM) Kampus Jasin was the lowest of any campus, coming in at just 3.1%, which is comparable to only 8 responders.

## 5.3 DISCUSSION ON THE RESEARCH OBJECTIVES

In order to realise its objective of digital development and realise its potential, Malaysia is educating a large number of highly trained graduates and digital specialists. In addition, the researcher who carried out this study was given the opportunity to see, although at an indirect fashion, the degree to which college students make use of digital technology in universities, particularly those located in the state of Melaka. In the beginning of this investigation, the researcher outlined the true purpose of this inquiry, and the next part will provide more information on that remark.



### 5.3.1 OBJECTIVE 1 : TO INVESTIGATE WHAT ARE THE FACTORS OF THE USE OF DIGITAL TECHNOLOGY AMONG UNIVERSITY STUDENTS IN MELAKA.

The primary purpose of this research is to determine which forms of digital technology are used the most often by university students in Melaka. According to the findings of a survey that was conducted by researchers and given to university students in Melaka, it was discovered that digital communication and digital banking are the digital technologies that are used the most by university students in Melaka, with the same percentage amounting to 95.3% of the total of 256 respondents. It is hardly possible to deny the significance of digital communication and digital

banking in this day and age. In addition, the spread of the COVID-19 virus in 2019 had a significant influence on the ability of people all over the globe to communicate with one another. This is due to the fact that the covid-19 pandemic may be passed on by inhaling air and through close contact, and that it is difficult to see with the naked eye. If it can or continues to have a critical attack, which is characterised by difficulty breathing or the inability of the lungs to function, then it can only be detected by going through the early symptoms.

The usage of digital communication and digital banking seemed to expand among all Malaysians, including university students, according to research published in 2021 by Astro Awani. This trend was seen both during and after the epidemic. It is possible to classify digital communication and digital banking as necessities in the modern era due to the fact that many tasks and even official matters can now be completed digitally in the modern era. These tasks include submitting applications to universities for admission, registering for events, making payments, obtaining loans, and engaging in online education. All of these can be finished using digital means and the internet. In the context of university students in Melaka, digital communication enables them to interact more actively with other peers not only in the context of doing schoolwork but also in the context of discussing and advising one another.



Communication between students and professors seems to be simpler and more expedient as well, not only between students. Every aspect of business and education may be improved upon with a shorter amount of time and effort spent waiting. Simply having access to the internet is all that is required to establish a connection for long-distance communication, which can then be carried out with relative ease. It is correct to equate barrier-free communication with digital communication. Students no longer have to go to an ATM to withdraw or deposit their money since they may do it using digital banking instead of going to an ATM.

In summing up, it can be said that university students in Melaka make extensive use of online communication and financial services. This may be shown via the use of the questionnaire that the researcher used in the course of this investigation. Students in higher education, as well as members of the general public, who make use of digital communication, enjoy a great many advantages. It is strongly advised that initiatives such as the installation of Wi-Fi connection

facilities in university regions be carried out so that digital communication and digital banking may be accessible in an easier and more widespread manner. In addition, it is strongly suggested that digital payment be kept active among university students within the university region so that this practise may be maintained on after they graduate from the institution. In order to create a civilization that is able to adopt tidal technology in the future and has a smart mind and digital knowledge, it is extremely vital for them to practise what they have learned when they have finished studying it.

### 5.3.2 OBJECTIVE 2 : TO ANALYZE THE USE OF DIGITAL TECHNOLOGY AMONG UNIVERSITY STUDENTS IN MELAKA.

According to the findings of the study that was carried out, university students in Melaka make extensive use of digital communication. The percentage of students who say they always or very often use digital communication is 52.7%, and 39.5% of students say they do so often. This demonstrates that the vast majority of university students in Melaka make regular use of digital communication platforms in their daily lives. This is due to the fact that numerous communication issues in the present day are much simpler to connect digitally using a variety of apps that are provided by third parties for free and without the need of making a purchase. In addition to that, they also provide a number of additional features, such as digital communication, in which users may email one another photographs, data, and videos as well as update their status in their programme. In addition, this might be a source of amusement and digital contact for students at educational institutions.



While there are many people who pick occasionally as their option for digital storage, the number of people who prefer not to utilise digital storage at all is as high as 4.7% among university students. The greatest percentage of people who choose sometimes is 51.6%. This number is pretty high and demonstrates that university students in Melaka are not interested in using digital storage in any way, shape, or form. Because there is a storage restriction provided by the service provider and also a price to raise the storage size, the likelihood that may be predicted is due to the fact that there is a storage limit. In addition, in the event that the customer does not renew the storage plan

that they are subscribed to, the data that is stored on their storage will be blocked, and it will never again be available if the subscription is not renewed. Even though there are many advantages to using digital storage, many college students prefer not to do so for this reason, despite the fact that digital storage offers a variety of benefits. The fact that the information that has been saved cannot be seen in the physical world raises further issues about the privacy and confidentiality of the data.

To summarise, not all digital services are favoured and used by college students in Melaka's educational institutions. Students at colleges and universities are influenced by a variety of elements that impact their use of digital services on a regular and continuous basis. In addition, university students place a strong emphasis on the issue of data and work security, as this helps ensure that their creations and information are not misappropriated, disseminated, and exploited by individuals that are not accountable for their actions.

### 5.3.3 OBJECTIVE 3 : TO IDENTIFY THE MAIN FACTORS IN THE USE OF DIGITAL TECHNOLOGY AMONG UNIVERSITY STUDENTS IN MELAKA.

The purpose of this study is to discover the elements related to digital technology that influence university students in Malacca to utilise it. According to the findings presented in the chapter 4 that came before this one, the aspect of university students in Melaka most closely associated with the use of digital technology is initiative. Initiatives that have been offered to university students in Malacca have been influenced by a variety of sources, including the government, the institution, and non-governmental groups (NGOs). The university provides a variety of initiatives, some of which include the organisation of programmes or seminars relating to digital technology, workshops focused on digital learning, and talks pertaining to digital technology. This may, to some degree, pique the interest and curiosity of university students in learning more about digital technology and recognising its many applications.

Next, the effort taken by the government to encourage students at universities in Melaka to make use of digital technology is a factor that contributes to this trend. For instance, the distribution of digital wallets to students as a means of facilitating and encouraging the use of digital

technology as well as acting as a stimulus for the growth of the digital economy is something that should be enthusiastically embraced and supported. Additionally, the distribution of free cellphones, tablets, and laptops to needy and qualified students has had a significant influence on the rise in the usage of digital technology among students attending universities in Melaka.

Then, measures such as providing digital business registration to university students at no cost have a beneficial impact, which in turn has a favourable influence on the desire that university students have in attempting to conduct business digitally and online. In addition, initiatives that are carried out by non-governmental parties, such as providing unrestricted access to a number of digital services, such as Adobe, Microsoft, Canva, and many others, to anyone who possesses a student email address, can give and attract interest and knowledge in the utilisation of digital operations. Additionally, it has the potential to generate a generation that is digitally literate without requiring that generation to participate in specialised training or education programmes in order to acquire the required knowledge and abilities.

Last but not least, offering discounts and promotions via digital and online apps has the potential to promote the use of digital technology in an indirect manner, which will include digital banking and the digital economy. In conclusion, Malaysia is highly active in digitising every area that is relevant to supporting and enhancing digital technology in the nation. This includes education, which is accomplished via a chosen number of local colleges.

## 5.4 IMPLICATION OF RESEARCH

Students at today's universities and the ways in which they study have been profoundly influenced by the broad use of digital technologies. On the one hand, students now have access to a vast amount of knowledge, resources, and tools that were not accessible to them in the past because of digital technology. Because of this, education has become more practical, effective, and readily available.

Students spend an inordinate amount of time on social media, online gaming, and other digital activities, frequently at the price of their academic work. This is due to the fact that digital technology has led to the emergence of new types of diversions and procrastination. In addition, the use of digital technology has altered the ways in which students communicate with one another, engage with one another, and work with one another. Students have reported less face-to-face interaction and a decline in their social skills as a result of the increased use of online communication tools such as email, instant messaging, and social media platforms. While these tools have made it simpler for students to communicate with each other and their teachers, they have also contributed to a decline in these skills.



In addition, the wealth of knowledge that is readily accessible online has made it simpler for students to plagiarise the work of others and participate in other forms of academic misconduct. Students often rely on solutions that are fast and simple to discover, rather than participating in independent thought and problem solving, as a result of the rise of digital technology, which has also contributed to a reduction in critical thinking abilities.

In conclusion, the effects of digital technology on college students might be seen as having both beneficial and negative repercussions. Students have access to new and creative learning tools because to technological advancements; yet, these same advancements also have the potential to contribute to distractions and to hamper critical thinking abilities. It is up to educational institutions, teachers, and students themselves to strike a balance that maximises the advantages while reducing the adverse consequences of technology in the classroom.

## 5.5 LIMITATIONS OF THE STUDY

Quantitative methods are used throughout the whole of the assessment of the construct under investigation in this research. As a direct consequence of this, respondents are only able to answer the questions posed by the researcher. On the other hand, the perspectives of the various respondents on the ways in which university students in Melaka make use of digital technology might vary. It is thus preferable to use qualitative research methods in order to get a higher level of success with one's work. In addition, the researcher had to contend with respondents who did not provide enough time to complete the questionnaire, which led to the collection of a total of just 256 questionnaires.

## 5.6 RECOMMENDATION FOR FUTURE STUDY

The researcher has made some suggestions for further study based on the constraints that were highlighted. To begin, it is recommended to use a 10-point Likert scale in order to provide respondents the opportunity to share their thoughts and increase the research's accuracy and precision. Both closed-ended and open-ended questions were also offered to the respondents so that they could give feedback and responses about the usage of digital technology among university students in Melaka.



In addition, it is recommended that researchers conducting future studies choose a population with a bigger sample size in order to make the results more widespread. In order to evaluate the level of customer acceptability in the future, it is recommended to gather a total of 500 replies. The findings of the study also indicated that the investigation be carried out in a number of other states within Malaysia so that the results would be more precise and objective.

## 5.7 SUMMARY

In conclusion, the study objectives were all successfully accomplished by the use of the questionnaire survey technique. The initiative to the dependent variable, which is the usage of digital technology among university students in Melaka, is acceptable only if it is contributed by one of the four independent variables. The researcher was also able to identify the limits of the investigation. Recommendations have been provided for the conduct of further studies so that better quality research may be carried out.

## CONCLUSION

In conclusion, the objectives of the research were successfully accomplished by the use of the questionnaire survey methodology. According to the findings of this study, there is just one independent variable, initiative, that has been shown to have a significant association with the use of digital technology by university students in Melaka. A positive coefficient in the study results shows that there is a positive connection between all of the components. The results of the study indicate that initiative is demonstrated to have a substantial association with the usage of digital technology among university students in Melaka. The amount of the four independent variables was taken into consideration in the research. The researcher was also able to identify the limits of the investigation. Recommendations have been made regarding the direction of future study in order to facilitate the performance of higher-quality research.

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**APPENDIX**

**Gantt chart for research**

| Time | 2022 | | | | | | | | | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|
| Task | Mar | Apr | May | June | July | Aug | Sept | Nov | Dis | Jan |
| Idea development | | | | | | | | | | |
| Topic Confirmation | | | | | | | | | | |
| RQ and RO Construction | | | | | | | | | | |
| Chapter 1 | | | | | | | | | | |
| Chapter 2 | | | | | | | | | | |
| Chapter 3 | | | | | | | | | | |
| Questionnaire | | | | | | | | | | |
| Chapter 4 | | | | | | | | | | |
| Chapter 5 | | | | | | | | | | |

**Gantt chart for research final year project 2**

| Weeks / Activities | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Making Questionaire Survey | | | | | | | | | | | | | | | | |
| Data Collection | | | | | | | | | | | | | | | | |
| Completed Chapter 4 | | | | | | | | | | | | | | | | |
| Completed Chapter 5 | | | | | | | | | | | | | | | | |
| Proposal Submission | | | | | | | | | | | | | | | | |
| Preparation of Slide | | | | | | | | | | | | | | | | |
| Face to Face Presentation | | | | | | | | | | | | | | | | |
| Final Proposal Submission | | | | | | | | | | | | | | | | |

## CONSTRUCTIONS OF MEASUREMENT

| | CONSTRUCT | SUB-CONSTRUCT | DISCRIPTIONS | MEASUREMENT OPERATIONAL | QUESTIONS(PART II) |
|---|---|---|---|---|---|
| 1 | Perceived Usefulness | Advance tools<br>-Accessible<br>-Reachable<br>-Academic requirements<br>-Friend & Government Initiative | Social well-being is a component of sustainable development, and it depends on education. Reforms in education are primarily motivated by the emergence of information technology as a tool for the dissemination of knowledge. Education in schools and institutions has changed as a result of the introduction of new technology-assisted learning tools like mobile devices, smartboards, MOOCs, tablets, laptops, simulations, dynamic visualisations, and virtual laboratories. AbidHaleem and colleagues,2022). | Each defined of sub-construct has the following measuring options:<br><br>1)Strongly Disagree<br>2)Disagree<br>3)Neutral<br>4) Agree<br>5)Strongly Agree | 1. University student tend to use an application of digital technology to help them perform their job better.<br><br>2. University student find that using digital technology improves their ability to collaborate with classmates more effectively.<br><br>3. University student feel that using digital technology helps them to be more productive in their studies.<br><br>4. By using digital |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | technology, university students can prepare themselves better to face tests such as getting examples of questions to do exercises.<br><br>5. University students find that the digital technology has a lot of influence in completing assignments and projects. |
| 2 | Access of technology (Frequency) | -Digital Communication<br>-Digital Storage<br>-Digital Software Tools<br>-Digital Banking<br>-Digital Shopping Application | The intensity of the use of digital technology has been reported to affect student achievement, with a moderate frequency of digital technology use correlating with higher levels of achievement and high and low frequencies of digital technology use having a detrimental effect (Meggiolaro, 2018; Meng et al., 2019; Organisation for Economic Co-operation and | Each defined of sub-construct has the following measuring options:<br><br>1)Never<br>2)Rarely Use<br>3)Sometimes<br>4)Often<br>5)Always | How frequency of usefor type of digital technology in (..sub-construct..) by university students ?<br><br>(The question repeatly with each of sub- |

| | | | | | |
|---|---|---|---|---|---|
| | | | Development [OECD], 2015; Shewbridge et al., 2005). Gubbels et al. (2020) found that moderate use of digital technology was related to high performance in reading, while excessive use of digital technology was associated with lower reading performance. | | construct and total question will be 5) |
| 3 | Learning Styles | - Self motivation<br>-Fast learner<br>-Skill and technique<br>-Effect<br>-Mindset | Technology for teaching has improved significantly in recent years. E-learning information gets richer and more diversified once learning experiences are tailored (El-Sabagh & Hamed, 2020; Yang et al., 2013). Since students may participate in learning at any time and anywhere, e-learning results in positive learning outcomes (Chen et al., 2010; Lee et al., 2019). | Each defined of sub-construct has the following measuring options:<br><br>1)Strongly Disagree<br>2)Disagree<br>3)Neutral<br>4)Agree<br>5)Strongly Agree | 1. Digital technology offers many variations in different types of courses that can be used according to specific courses. for example, multimedia has filmora, after effect, sony vegas.<br><br>2. Digital technology is very easy to understand and |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | learn by a university student without having to take a special course to use it.<br><br>3. Skills and techniques using digital technology are easily obtained from various online sources.<br><br>4. Learning a course by using digital technology as a tool has a more positive effect than in a traditional way.<br><br>5. Digital technology can help students apply what they learn at university in more detail and even be able to advance with digital technology. |

| | | | | | |
|---|---|---|---|---|---|
| 4 | Initiative | -Self Initiative<br>-University facilities<br>-Universities program<br>-Government initiatives<br>-Non-government opportunities | The goal of the personalised learning strategy is to give each student a productive, unique, and efficient learning route so that they may all take part in the learning process (Hussein & Al-Chalabi, 2020). On the other hand, learning styles provide a significant problem for education in the twenty-first century, because students are expected to take an active role in growing their self-awareness and environmental participation. | Each defined of sub-construct has the following measuring options:<br><br>1)Strongly Disagree<br>2)Disagree<br>3)Neutral<br>4) Agree<br>5)Strongly Agree | 1. Internet facilities and computer labs encourage students to use digital technology at the university.<br><br>2. The educational or e-learning portal provided by the university is used comprehensively and is beneficial to university students in accessing educational resources and reading materials digitally.<br><br>3. The digital use of technology such as cashless in the university |

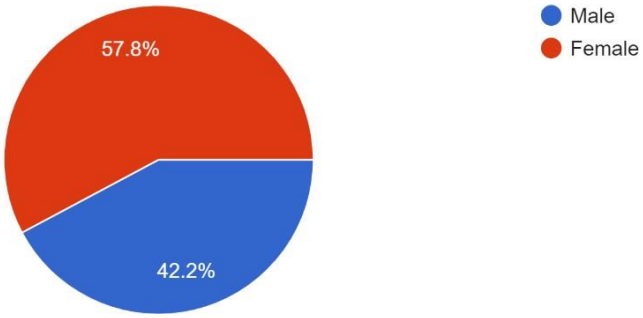
| | | | | | |
|---|---|---|---|---|---|
| | | | | | area can change the traditional payment buying and selling practice to a digital one and make it practical outside the university area.<br><br>4. Universities and governments run many programs and initiatives for students to recognize and learn the latest digital knowledge such as Adobe Photoshop seminars, Photography courses and e-commerce programs.<br><br>5. Universities and the government offer a lot of training and part-time jobs that can give |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | university students experience and opportunities in using digital technology. |
| 5 | The use of Digital Technology (Type of DigitalTechnology) | -Social Media (Facebook, Intagram, Youtube)<br>-Cloud Storage (Googledrive, Apple Cloud)<br>-Video Conference Technology (Webex, Meet,Zoom)<br>-Office & Architecture Tools (Powerpoint, Photoshop, AutoCAD, Python, Java)<br>-E-wallet & Online Banking(TnG ewallet, Maybank2u)<br>-Online Shopping (Shopee,Lazada, TikTok Shop, Taobao) | According Kapur (2018) the widespread use of digital technologies is in the form of computers, laptops, tablets, smartphones, mobile phones and so forth. The main purpose of digitaltechnologies is to form a connection between the individual rapidly, effortlessly and cost-effectively. | Each defined of sub-construct has the following measuring options:<br><br>1)Yes<br>2)No | **PART III**<br><br>The digital technologywhich is (..sub- construct..) being use by university students.<br><br>(The question repeatly with each of sub-construct and total question will be 6) |

## SURVEY RESPONDENT RESULT

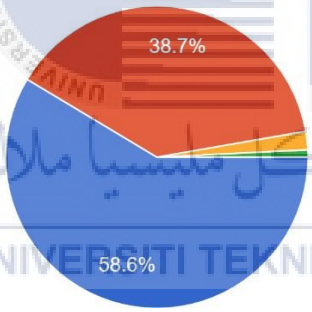
Gender

256 responses



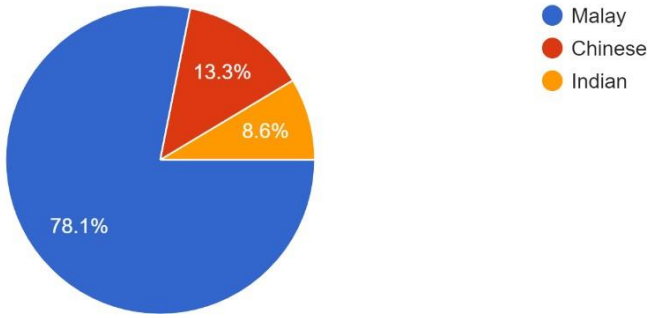

Age

256 responses



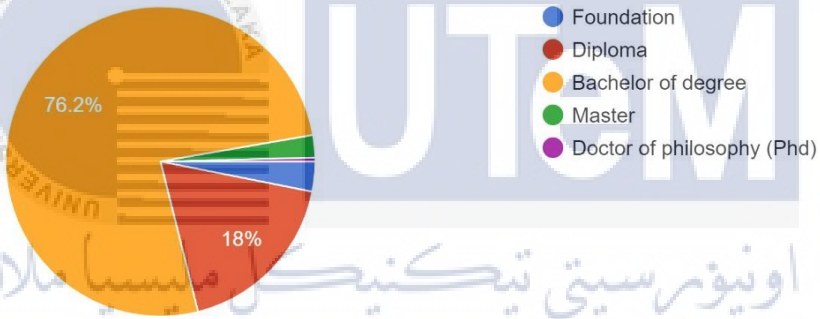
## Ethnicality

256 responses




## Educational Level

256 responses



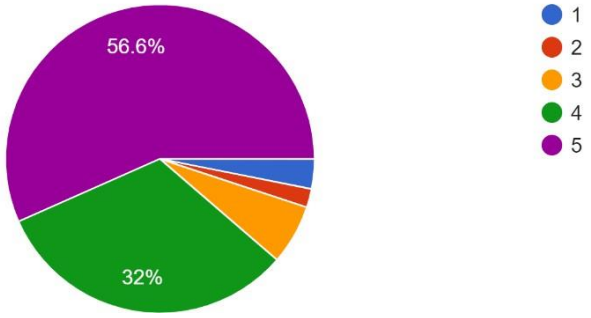



## University

256 responses

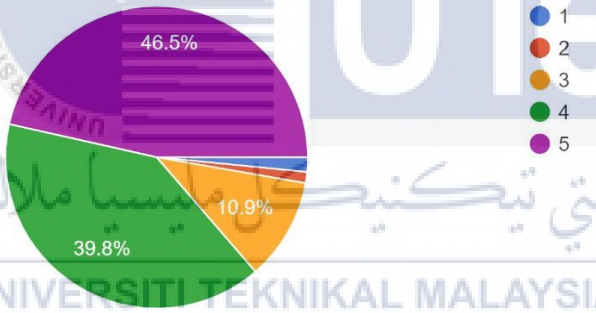
University student tend to use an application of digital technology to help them perform their job better.

256 responses



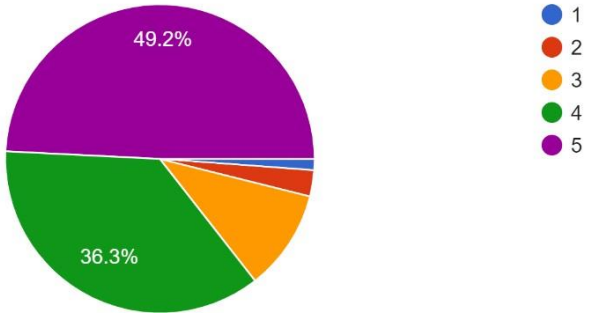

University student find that using digital technology improves their ability to collaborate with classmates more effectively.

256 responses



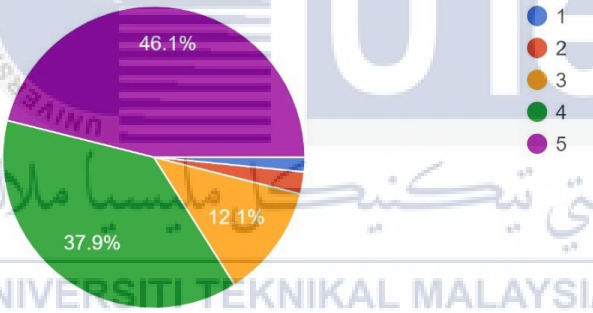
University student feel that using digital technology helps them to be more productive in their studies.

256 responses



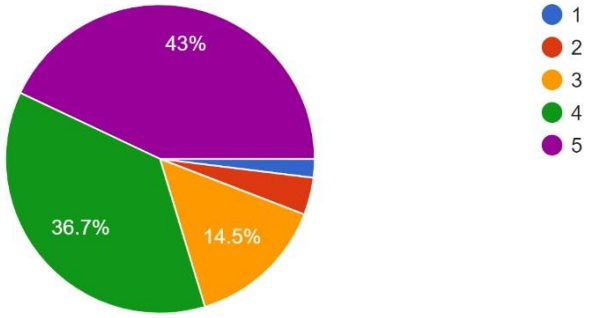

By using digital technology, university students can prepare themselves better to face tests such as getting examples of questions to do exercises.

256 responses



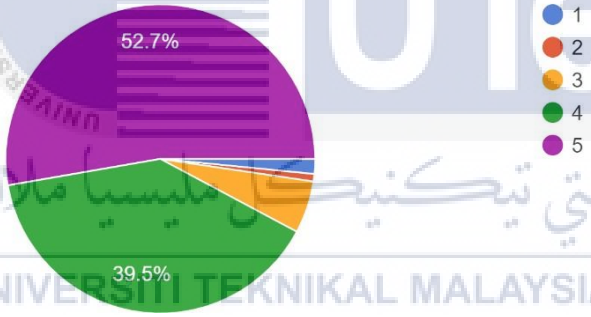
University students find that the digital technology has a lot of influence in completing assignments and projects.

256 responses




How frequent of use for type of the digital technology in Digital Communication by university students ?

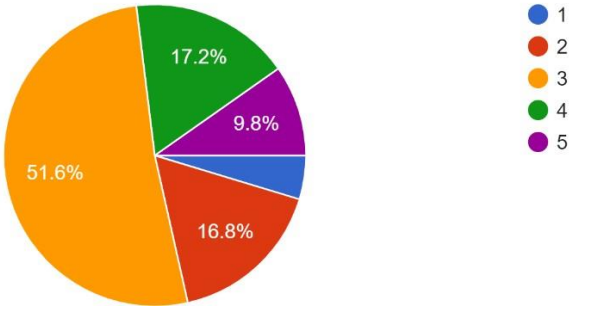
256 responses





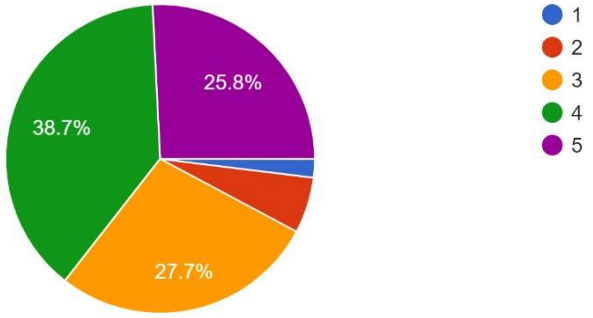

How frequent of use for type of the digital technology in Digital Storage by university students ?

256 responses



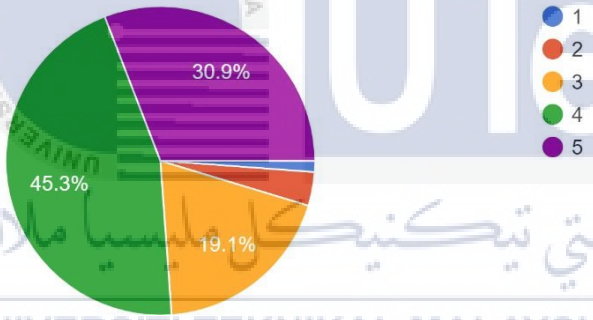
How frequent of use for type of the digital technology in  Digital Software Tools by university students ?

256 responses




How frequent of use for type of the digital technology in Digital Banking by university students ?

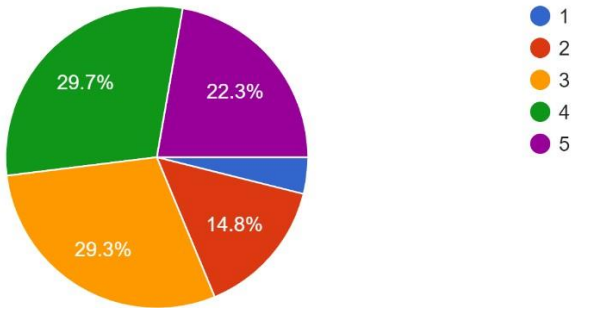
256 responses





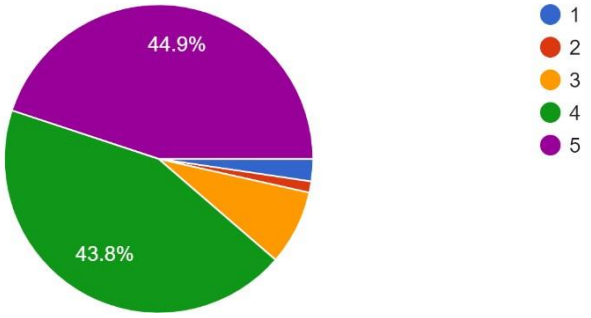

How frequent of use for type of the digital technology in  Digital Shopping Application by university students ?

256 responses



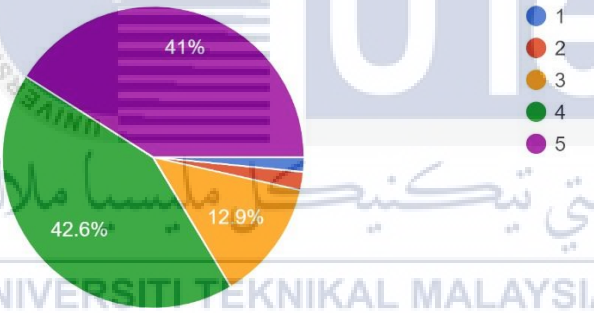
Digital technology offers many variations in different types of courses that can be used according to specific courses. for example, multimedia has filmora, after effect, sony vegas.

256 responses

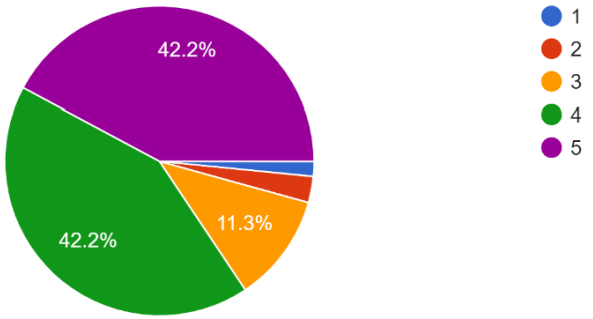



Digital technology is very easy to understand and learn by a university student without having to take a special course to use it.

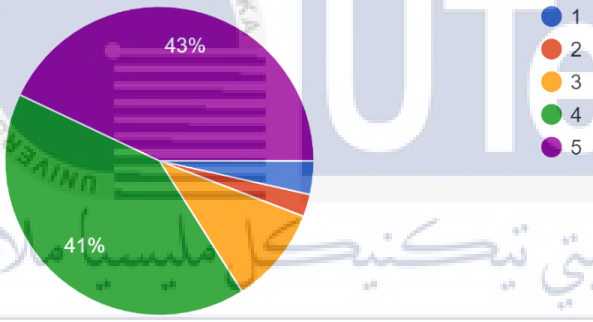
256 responses



Skills and techniques using digital technology are easily obtained from various online sources.
256 responses

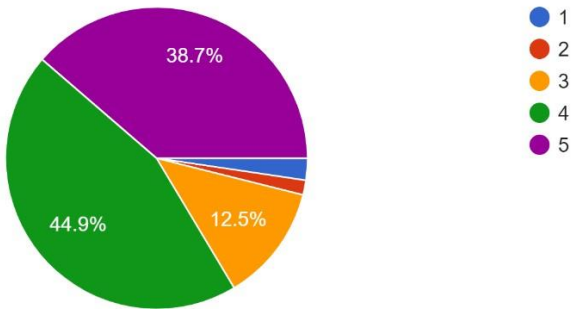



Learning a course by using digital technology as a tool has a more positive effect than in a traditional way.
256 responses



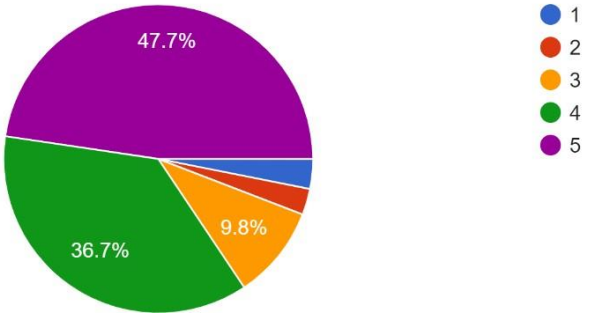



Digital technology can help students apply what they learn at university in more detail and even be able to advance with digital technology.
256 responses



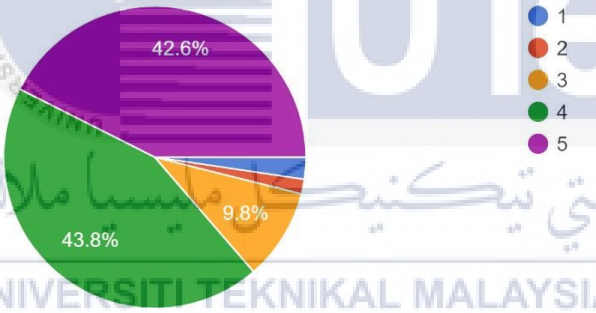
Internet facilities and computer labs encourage students to use digital technology at the university.

256 responses



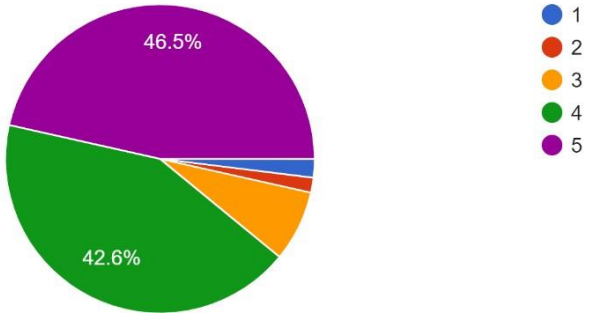

The educational or e-learning portal provided by the university is used comprehensively and is beneficial to university students in accessing educational resources and reading materials digitally.

256 responses



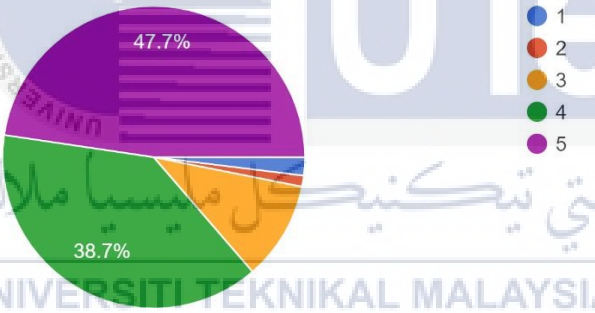
The digital use of technology such as cashless in the university area can change the traditional payment buying and selling practice to a digital one and make it practical outside the university area.

256 responses



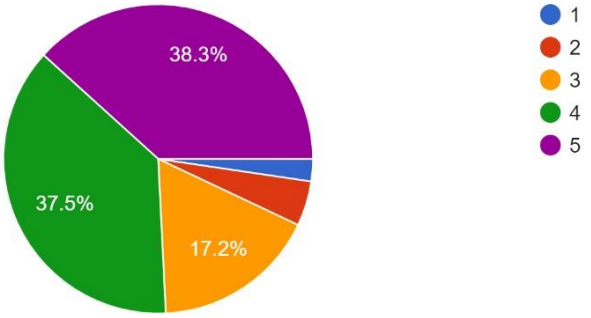

Universities and governments run many programs and initiatives for students to recognize and learn the latest digital knowledge such as Adobe..., Photography courses and e-commerce programs.

256 responses



Universities and the government offer a lot of training and part-time jobs that can give university students experience and opportunities in using digital technology.

256 responses

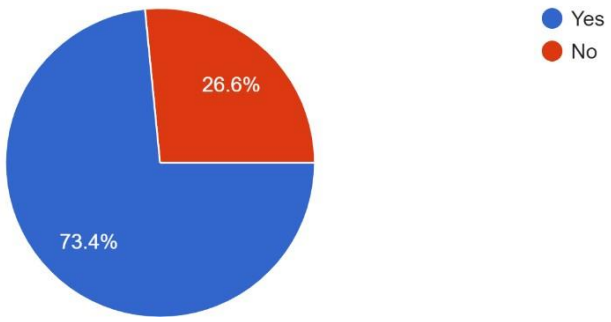



The digital technology which is Social Media (Facebook, Intagram, Youtube) being use by university students.

256 responses

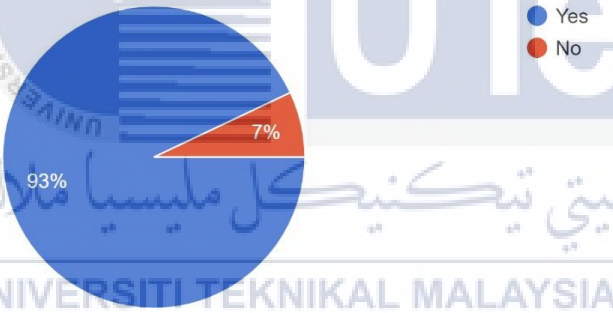
The digital technology which is Cloud Storage (Google drive, Apple Cloud) being use by university students.

256 responses



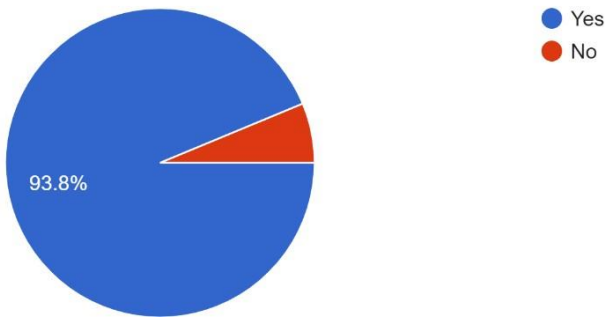

The digital technology which is Video Conference Technology (Webex, Meet, Zoom) being use by university students.

256 responses



The digital technology which is Office & Architecture Tools (Powerpoint, Photoshop, AutoCAD, Python, Java) being use by university students.

256 responses




The digital technology which is E-wallet & Online Banking (TnG ewallet, Maybank2u) being use by university students.

256 responses

The digital technology which is Online Shopping (Shopee, Lazada, TikTok Shop, Taobao) being use by university students.

256 responses