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**THE INFLUENCING OF VIRTUAL EDUCATION LEARNING
IN FHPK STUDENTS PERFORMANCE DURING PANDEMIC
OF COVID-19**

by

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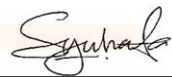
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LIST OF ABBREVIATIONS

COVID-19	Corona Virus Disease 2019
ERT	Emergency Remote Teaching
ICT	Information and Communication
UMK	University Malaysia Kelantan
WHO	World Health Organization



FHPK

ABSTRACT

Due to COVID-19 crisis, the higher education institutions had changed the education system from traditional education to virtual education. The study aims to examine the efficiency of the virtual learning education through the accessibility, teaching and supervision, facilities towards the impact on the students' performance during the pandemic of COVID-19. This study used quantitative method approach to obtain the data from respondents. The targeted sample size for this study is 210 respondents from selected students FHPK, which are divided into three segments such as SAP, SAW, and SAH in University Malaysia Kelantan. The researchers have utilized the google form to distribute the questionnaires. The result indicates that there are relationship between two factors, which are teaching and supervision factor and facilities factors with the student' performance during the pandemic of COVID-19 compared to accessibility factors. The findings of the data are essential in order to improve the students' performance and experience in using the virtual education learning.

Keyword: COVID-19, Virtual Education, Students' Performance

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Starting 31 December 2019, World Health Organization (WHO) have reported Coronavirus Disease 2019 (COVID-19) is defined as a disease caused by a novel coronavirus that identified as a result of an outbreak of respiratory disease in Wuhan City, Hubei Province, China. On 30 January 2020, the WHO have been declared the outbreak of COVID-19 as a global health emergency and become as a global pandemic on 11 March 2020, after the first of H1N1 influenza declaration as a pandemic on 2009 (David J Cennimo, 2020).

During the COVID-19 crisis, shutting down schools and education system is one of actions taken by government and healthcare systems to cope with the pandemic to ensure that people can restrict their interactions with others that can spread of the virus (Subramanian, Mohamed & Khanzadah, 2020). Most higher education institutions have given freedom for lecturers to choose their own platforms in virtual education to meet the best suit for their student in emergency remote teaching (ERT) (Subramanian et al., 2020). According to Farrell (2001), virtual education is “*the application of Information and Communication Technologies (ICT) to core institutional functions on administration, distribution of materials, delivery of course and tuition, and the provision of learner services.*” On the other hand, virtual education can be defined as one system that have been created through alliances and partnerships to facilitate teaching and learning (Farrell, 2001).

Universiti Malaysia Kelantan (UMK) is included as one of the universities that was ordered to be closed due to the pandemic. Therefore, the normal of traditional classes are being replaced with virtual education learning. There are several e-learning platforms that can be used by teachers and students to interact with each other, such as by using social media platforms as the alternative of virtual education methods. Most researchers (Hodges, Moore, Lockee, Bond, 2020; Garcia Aretio, 2019) found that academic institutions faced the dilemma of how to continue education due to the threat of COVID-19, and at the same time to ensure the lecturers and students safe from pandemic of COVID-19.

During this pandemic, there is one alternative that has been used by academic institutions, which is online class. According to Toquero (2020), the students and lecturers face numerous challenges and difficulties, including psychological problems due to inadequate learning approaches. This pandemic has complicated the education system for students due to restricted movement order. Not only that, they also were forbidden from doing direct research, and for students who have their internship this year will be facing many problems with the selected company.

Due to pandemic crisis, the online education system has been used to changes existing of educational system. This changes are caused most of student and lecturers faced many challenges (Bajaj and Sharma, 2018) and requires more detailed lesson plans to design good materials, accessibility and facilities. It is challenging for some students who need direct supervision from their lecturers where their subjects involve practical and also lab tasks and there are still no exact solutions to this problem (Bajaj and Sharma, 2018). Most researchers highlighted several challenges faced by students and lecturer to make online education, such as lack of online teaching skills in educators, online preparation of lesson plans as it is very time-consuming, lack of

appropriate support from the technical teams, and traffic overload in online educational platforms (Basilaia, Dgebiadze, Kantaria & Chokhanelidze, 2020; Brazendale, et al., 2017).

Besides that, regarding the concept of self-regulated learning (SRL), there are several studies have been highlighted students are active and responsible for their own learning process as well as being knowledgeable, self-aware and able to select their own approach to learning (Zimmerman, 2008; Bellhäuser, Lösch, Winter, & Schmitz, 2016). Bellhauser et al., (2016) found that there is positive relationship between SRL and students' academic achievement and learning performance. The result shows students were more likely to be successful in classrooms but using the online education, the result show students have strongly developed SRL skills to perform in their academic (Bellhauser et al., 2016). Therefore, the development of adequate tools in the COVID-19 pandemic have become necessary for evaluation and self-evaluation of learners in order to guarantee good performance in e-learning environments.

1.2 PROBLEM STATEMENT

The education system immediately opted for online learning due the COVID-19 pandemic really causes a massive impact in higher educational institutions. In the current crisis where students and lecturers are one of the most directly affected sectors, they have to face virtual education during the pandemic of coronavirus disease Covid-19 (World Economic Forum, 2020; Toquero, 2020). Since the closure of educational institutions, students and lecturers have started to adapt to virtual education such as Google Meet, Zoom Call, Webex, and many more as their based platform (Fox, 2007). Simultaneously, virtual education refers to *“the instruction in a learning environment*

where the lecturer and the student are separated by time or space or both and the lecturer offers course material through course management applications, digital services, the Internet, videoconferencing, etc". Students receive the content and interact with the lecturer using the same technology (IGI Global, 2020). Tuquero (2020) found that majority of education institution including lecturers and students are not prepared to implement for online education system.

Virtual education has become a new norm in the prolonged spread of the novel coronavirus. The problem faced by students and lecturers is adaptability struggles in educational environments, which are changes from face-to-face education to virtual classroom computer-based training makes the learning experience different for students (Basilaia et al., 2020). Their resistance to change does not allow them to adjust the online education, although it takes time for them to get used and know more on Course Management Systems (CMS) and computer-based education methods (Bansal, 2020). While passive listening and notes taking place in a typical classroom are planned, online conversations call for action. Shahzad et al. (2020) found that students with a 'traditional' mentality find it difficult to adapt the online education. Thus, it is important to study how far virtual education had influenced student performance.

Virtual learning indeed disturbed the performance of students where there's a lot of challenges to overcome. Some students lacking adequate internet connectivity and/or technology are failing to engage in digital learning; this disparity is evident across countries and across national income brackets (Crawley, 2012; Shahzad et al., 2020). For example, according to OECD data in 2019, 95% of students in Switzerland, Norway and Austria have computers to use for their school work, while only 34% of students from Indonesia and ASEAN have that (World Economic Forum, 2020). This is related

to FHPK students in UMK as well, where students face the situation too. The problems arise whether or virtual learning will be useful or not. How will students consider it?

Digital education turns out to be remote emergency education. This is because it is also a dramatic shift in the way that teaching and learning happen when students are physically out of school and split from their lecturers or co-learners (Lee Harvey, 2020). Educational activities during the Covid-19 Pandemic have different types in different countries such as distance education, e-learning, online education and homeschooling (Yan, 2020). For example, distance learning is a planned activity and its implementation is based on theoretical and practical expertise, which is unique to the area and to the field and its nature. On the other hand, emergency remote education is about living in a time of crisis for all of us tools available, like online or offline.

Besides, the effect of the pandemic on our social, economic and political lives, Covid-19 also influenced individuals both emotionally and mentally (Miller, 2020). Students, lecturers and parents are on the move due to the pandemic because of a lot of anxiety. They may find self-isolation and lock-down days challenging in their daily lives, or they may be anxious about the inability to self-isolate. They might be concerned about the shortage of water and sanitation in their homes and neighborhoods. They can lack the right nutrients. They may have raised family and financial obligations. They are likely to be worried by the health and safety of their loved ones and themselves (Shahzad et al., 2020). However, very limited research is done in relation to the education system on how COVID-19 affected the student and lecturers in education changes (Bao, 2020; Sintema, 2020; Yan, 2020).

1.3 RESEARCH QUESTIONS

- 1) What are the relationship between accessibility of virtual education and student's performance?
- 2) What are the relationship between teaching and supervision and student's performance?
- 3) What are the relationship between available facilities and student's performance?

1.4 RESEARCH OBJECTIVE

The aims of this study is to examine the efficiency of virtual learning education through accessibility, teaching and supervision, and available facilities and its impact on student performance. There are following objectives to achieve research aim:

- 1) To identify the accessibility of virtual learning and its impact to student performance.
- 2) To identify the teaching and supervision and its impact to student performance.
- 3) To explore the availability of facilities and its impact on student performance.

1.5 SCOPE OF STUDY

The study is focused on the impact faced by FHPK students and lecturers in virtual education during pandemic Coronavirus (Covid-19). Virtual education is when education courses are taught entirely online, where physical distance between teacher and student is immaterial. In a virtual learning environment, the lecturers and students are different locations at one time to learn and the lecturers will provide course content through online methods, such as Internet, multimedia resources, and video conferencing. Students get the content and communicate with the teacher via the same media. There were some students who come from lower-income families having problems with this virtual education. Not only that, students and lecturers in remote areas also cannot access virtual education because of lower internet coverage.

1.6 SIGNIFICANT OF STUDY

The study will contribute to the improve the virtual education in educational institutes system in Malaysia and also global universities. The study of using virtual education during the pandemic among university students and lectures will bring advantage to the academician and help for deeper understanding in mental health when using virtual education during the pandemic among university students and lectures. They can use this study as a reference to guide them for their research as well. Besides that, this study will help the students and lectures to be more prepared physically and mentally in virtual education. Furthermore, this study could help the businessman come up with new technology resources. Indirectly, it helps low-income families and the remote areas to have higher chances to access modern technology.

1.7 DEFINITION OF TERMS

1.7.1 COVID-19

Coronavirus Disease 2019 (COVID-19) is defined as a disease caused by a novel coronavirus that identified as a result of an outbreak of respiratory disease in Wuhan City, Hubei Province, China. On 30 January 2020, the WHO have been declared the outbreak of COVID-19 as a global health emergency and become as a global pandemic on 11 March 2020 (Cennimo, 2020). The COVID-19 virus can be transmitted through droplets when an infected person coughs, sneezes or exhales and the others can be infected by breathing in the virus if the person are close to the infected person, or by touching a contaminated surface and then touching eyes, nose or mouth (WHO, 2020).

1.7.2 VIRTUAL EDUCATION

Virtual education is delivered via information technology networks, without restricting the learner and teacher in space or time (Harvey, 2020). Virtual education is another name for e-learning, but referring more to electronically aided learning conducted without any face-to-face components (Hope, 2018).

1.7.3 STUDENTS' PERFORMANCE

Students' performance also can be known as academic performance or achievement. Achievement on academic represents the performance outcomes that indicate the students need accomplished specific goals on education system whether in

the environments of school, college and university (Steinmayr et al., 2014). The important of students' or academic performance is to achieve an educational goal and the performances are varying according to the circumstances, organic and environmental conditions that determine skills and experiences (Lamas, 2015).

1.8 SUMMARY

This study was carried out in order to investigate the impact of virtual education that might influence the performance of students. Virtual education is defined as information technology networks, without limiting the learner in time or space. In conclusion, this chapter explained the reason for the research by presenting the research objectives and research questions that were answered in finding and discussion. The purpose of this study is to determine the relationship of factors by using virtual education, which are accessibility, teaching and supervision, and facilities that influenced the performance of FHPK students in University Malaysia Kelantan. The next chapter will explore the existing literature review on the influencing of virtual education learning in FHPK students' performance during pandemic Covid-19.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION

The goal of research is to investigate the influencing of virtual education learning in FHPK students' performance during pandemic COVID-19. This situation of pandemic has impacted all the countries in the world in terms of changing their habits, governance, schooling, contact and so on. The standards of education are also shifting according to the slogan of social distance. In this chapter, there are six main sections. Section 2.2 describe about pandemic of COVID-19, section 2.3 discusses on the virtual education learning, while section 2.4 explains about the factors that influence of virtual education and section 2.5 is about student performance experience during pandemic of COVID-19, and 2.6 is about conceptual framework while 2.7 is hypothesis statement. Finally, end of this chapter will provide summary in section 2.8.

2.2 PANDEMIC OF COVID-19

COVID-19 is a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease. Formerly, this disease was named as Coronavirus Disease-19 or COVID-19 (Qiu et al., 2020). There are a few symptoms if the people affected with this virus, which are fever, cough and shortness of breath. Besides that, the infection of COVID-19 can cause pneumonia or breathing difficulty and also can be fatal (WHO, 2020).

The virus of COVID-19 can be transmitted through direct contact with respiratory droplets of an infected person generated through coughing and sneezing. Individuals can also be infected from and touching surfaces contaminated with the virus and touching their face like eyes, nose, and mouth. The COVID-19 virus may survive on surfaces for several hours, but simple disinfectants can kill it. An infectious and deadly coronavirus that has killed thousands in China has spread to at least 44 countries, stirring fears that COVID-19 may soon become a pandemic (Darryl Coote, 2020).

According to WHO (2020), COVID-19 has affected people every day. The high risk of people, likes older people and people with chronic medical conditions, such as diabetes and heart disease are easy to affect from this virus. The virus can be fatal in rare cases, so far mainly among older people with pre-existing medical conditions.

2.3 VIRTUAL EDUCATION LEARNING IN FHPK STUDENTS PERFORMANCE

Virtual learning is defined as learning that can functionally and effectively occur in the absence of traditional classroom environments (Simonson & Schlosser, 2006). According to Allen and Seaman (2003), virtual education can be referring to blended learning course that having between 30% and 80% of the course content delivered by online education. Virtual learning and classroom shows students and teachers are located in different places and communicate electronically in cyberspace without actually meeting each other in the same place. This situation is replacing the traditional classrooms with blackboard, chalk, students and the instructor.

The web is being used as a tool for learning, as opposed to a medium for predetermined content (Owston, 1997). Classrooms are linked to the outside world

using computers and communications networks and instructors are able to bring in the world into the classroom in real time. Knowledge is not transmitted from the instructor to the student, rather the students construct and create their own knowledge by solving problems, experimenting, discovering and working on hands-on projects.

Gladieux and Swail (1999) and Owston (1997) claim that virtual learning is *“learner-centered as it is flexible and students can choose where, how and when they want to learn”*. In a virtual classroom setting, the text, lessons, assignments, product demonstrations and other course materials can be made available on the web for easy access any time of the day or night. This allows the students to learn at their own convenience and pace. So, in a way teaching and learning become on-going or perpetual in nature, rather than being confined to pre-specified hours in a week (Hiltz, 1995).

Virtual education learning environments provide opportunities for students to interact and collaborate with other students from all over the world, work on real life projects, and use the information available on the web to search for answers, and engage in on-going learning. This education learning also be effectively used to promote collaborative learning as it makes it possible for students to interact and work with students in different places (Alavi, Wheeler, Valacich, 1995)

2.4 THE INFLUENCING FACTORS OF VIRTUAL EDUCATION LEARNING

The rapid transition to an online education system, which is virtual education has forced the development of instructional strategy. The pandemic of COVID-19 has opened up the opportunities to upgrade the educational mode and transfer to emerging technologies (Toquero, 2020). There are many possibilities and problems faced by the

students and teachers using virtual education in the relevant literature (Shahzad et al., 2020; Rodriguez-Segura et al., 2020; Bansal, 2020). In this study, three factors are investigated to measure the student performance by using virtual education during the pandemic of COVID-19.

2.4.1 ACCESSIBILITY

In this study, the researcher will discover the factor of virtual education learning in FHPK students' performance during pandemic COVID-19. Accessibility towards the virtual learning is important. According to Shahzad et al. (2020), the expressing students and lecturers attending the class through virtual teaching is convenience. This is because the result found lecturers are easily accessible to ask the questions by voice or text messages, and get the answer from student at the spot when online class is being conducted or later in his or her free time. Turchynova et al. (2020) emphasized that the comprehensibility, accessibility and stated that they are satisfied with the lecturer's compatibility with the system and live lectures and live lessons. Murphy (2020) claimed that COVID-19 and virtual education learning for higher education in post-pandemic pedagogy may increase access to education in rural communities. This is because of personal or financial circumstances, the flexibility of asynchronous eLearning may provide wider access, and also hybrid or blended forms may help improve the quality of the face-to-face teaching by moving to online education. Toquero (2020) also mentioned that by provide accessible mental health-related services and make the curriculum responsive for pandemic situations such as COVID-19, the higher education institutions need to seize the opportunity to strengthen its evidence-based practices.

2.4.2 TEACHING AND SUPERVISION

Dhawan (2020) stated that the COVID-19 pandemic has made the institutions to go from offline to online mode and this will make the institutions which earlier were reluctant to change, to accept modern technology. According to Bao et al. (2020), the government and education institutions appreciated the concept and technique of the virtual or online teaching for the teachers to teach and supervision their students during the COVID-19 pandemic. However, several researchers highlighted three biggest challenges for online teaching faced by the students and teachers, which are distance, scale and personalized teaching and learning (Dhawan, 2020). Basilaia et al. (2020) stated that a tool that innovative solutions by institutions can be successfully used as an alternative for face-to-face classes. According to Liu (2010) conducted a research, the results of the student's performance in case of online learning shows slightly better and effective than traditional face-to-face learning.

2.4.3 FACILITIES

Current developments in information technologies have helped the development of the global communication network with distance education applications (Ince, Kabul and Diler, 2020). The online learning facilities may involve the use of the mobile technologies such as personal digital assistants, MP3 and MP4 player and also includes the use of web-based teaching materials such as website, e-mail, blogs, learning management software and so on (Fayomi et al., 2015). Dhawan (2020) stated that e-learning has certain weaknesses that can hamper the communication between the learner and the educator, where the human touch and the direct communication are lost.

Regarding the way technology is used for education and specifically in what is called ‘face-to-face learning’ classes should be better understood. Bosshardt and Chiang (2016) studied also showed that the students do not believe that face-to-face learning is the same as online classes, where the teachers should be on notice that students' beliefs are changing, same goes to the performance gaps. Hung and Wati (2020) have highlighted the challenges faced by educators which how to make education in the pandemic more “humane” and “embodied” by creating a balance between technology use and humanity in education. Switching to Emergency Remote Teaching (ERT) would require teachers to take more control over the course design, development and implementation process, but would also require students to be responsible for their own learning process (Rodriguez-Segura et al., 2020).

2.5 STUDENT PERFORMANCE/ EXPERIENCE DURING PANDEMIC COVID-19

The Covid-19 had an effect on the students, where everything turns upside down. Student achievement has been achieved and students are going through a virtual learning experience this academic year, which will have an effect on student success (Mahdy, 2020). Without data on how the virus affects student learning, it remains difficult to make informed choices on when and when to return to in-person teaching (Mahdy, 2020). This is the same challenge for FHPK students, where they are faced with virtual learning education, and much of the outdoor testing has moved to virtual assessment.

Based on previous studies on the effect of out-of-school learning, the researchers predicted that in 2020, only 70% of the students will theoretically start reading of the

learning gains compared to the typical school year (Shahzad et al. (2020). In addition, with current pandemic happened, online education offers the student for self-study, the key challenge facing online health science education is how to give practical lessons. Since most subjects are realistic, it is not easy to learn online (Rodriguez-Segura et al., 2020).

In pandemic situation, government efforts have promoted a shared aim of reducing the spread of coronavirus by adopting steps to restrict social interaction. Many countries have suspended face-to-face teaching and tests, as well as limits on immigration affecting Erasmus students. According to Carrasco (2018), online learning is totally good for mature students who are disciplined enough to be autonomous learners, while face-to-face learning is totally useful for students who lack self-discipline and do not know how to manage their own learning. Lazarus et al. (2020) also showed the study in South Africa that found by using online education, such as mobile phone, google meet in learning education among students has a positive impact on students' learning experience. However, many students have no access to the online teaching due to lack of either the means or the instruments due to economical and digital divide (Mahdy, 2020). COVID-19 has a profound impact on students' performance.

2.6 CONCEPTUAL FRAMEWORK

Conceptual framework is the major part designed to show the relationship between the independent variables and dependent variables as shown in Figure 2.1.

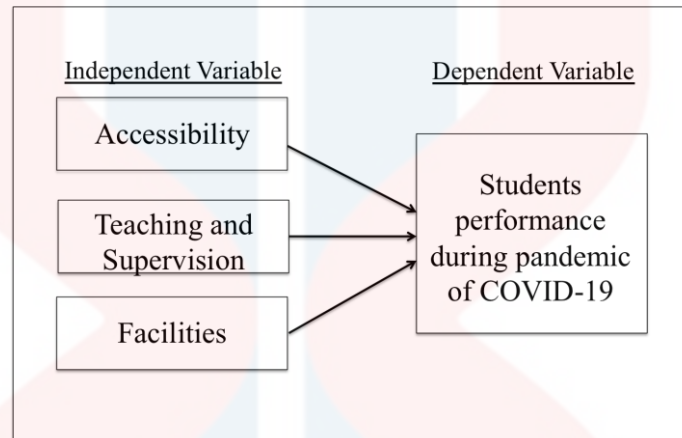


Figure 2.1: Conceptual Framework

Figure 2.1 indicates the independent variables (IV) and dependent variable (DV) of this research. The independent variables are the factors which influence virtual education learning. On the other hand, the dependent variable is the FHPK student's performance during the pandemic of COVID-19. There were three independent variables determined in this study which are the accessibility, teaching and supervision, and facilities. This figure shows the relationship between the accessibility, teaching and supervision, facilities and the FHPK student's performance during the pandemic of COVID-19.

2.7 RESEARCH HYPOTHESIS

The hypothesis of the research is made based on the factors such as the accessibility, teaching and supervision, and facilities which influencing the FHPK student's performance during pandemic of COVID-19. Based on the past literature that had been discussed, there are three hypotheses created and to be tested as follow:

1. H_{0a} – There is no relationship between accessibility and the student's performance during the pandemic of COVID-19.

H_{1a} – There is a relationship between accessibility and the student's performance during the pandemic of COVID-19.

2. H_{0b} – There is no relationship between teaching and supervision and the student's performance during the pandemic of COVID-19.

H_{1b} – There is a relationship between teaching and supervision and the student's performance during the pandemic of COVID-19.

3. H_{0c} – There is no relationship between facilities and the student's performance during the pandemic of COVID-19.

H_{1c} – There is a relationship between facilities and the student's performance during the pandemic of COVID-19.

2.8 SUMMARY

This chapter has discussed the influencing factors of virtual learning, the accessibility, teaching and supervision, and facilities as independent variables while FHPK student's performance during the pandemic of COVID-19 as dependent variable. The variables are the things that can be measured, controlled or manipulated. In brief, variables including the independent variables (IV) and dependent variable (DV) are the main in research. With the setting of independent variables and dependent variables, the researcher found out that the study brings the impacts to the FHPK student's performance during the pandemic of COVID-19. In point of fact, all variables are related as any of them may influence a student's performance during the pandemic of COVID-19.

CHAPTER 3

METHODOLOGY

3.1 INTRODUCTION

This chapter aims to elaborate about the research design that is being used to carry out this research for this study. The previous chapter discusses on the literature on factors of virtual education learning that influenced students' performance satisfaction to achieve the objectives of this study. This chapter is divided into nine sections. Section 3.2 describes the research design, section 3.3 discusses the population, section 3.4 explains the sample size, section 3.5 describes the sampling method, section 3.6 explains data collection procedure, section 3.7 discusses research instrument, section 3.8 explains the data analysis, and last, section 3.9 gives the summary over the chapter.

3.2 RESEARCH DESIGN

Research design is essentially the plan for a study that describes the procedures to be followed by researchers to achieve the research goal or test the hypothesis proposed for their studies (Daniel & Gates, 1999). The value of research design is to ensure that data-generated evidence can react confidently and convincingly to the research question (Vaus, 2001). It can be divided generally into qualitative and quantitative architecture of analysis. The qualitative study design used case studies to investigate the significance and interpretation of dynamic social contexts, such as the essence of human experience (Creswell, 2017).

On the other hand, quantitative analysis design used numbers and figures to clarify and interpret the relationship between the variable and its findings (Kumar, 2013). However, four kinds of descriptive correlational, experimental and quasi-experimental quantitative study designs. According to Creswell and Creswell (2017), a quantitative research method enables the research strategy to uncover new knowledge in a field where very little is known. Quantitative design also involves the statistical and mathematical tools to derive results such as Coefficient of variation, SPSS, ANOVA and etc. Quantitative research also involves the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute alternative knowledge claims (Leedy & Ormrod 2001; Williams, 2011).

This analysis is focused on the quantitative nature of descriptive science. The descriptive study explains something that may be a pattern, a current condition or features of a community of organizations, individuals and others (Kumar 2013). The researchers therefore want to establish the influencing factors of virtual learning education.

3.3 POPULATION

Population can be explained as a comprehensive group of individuals, institutions, objects in a particular country with have a common characteristic that researchers wish/ interested to investigate (Taherdoost, H, 2016). According to Sekaran and Bougie (2013), the population is described as a whole group of individuals, incidents or topics of interest, the researcher needs to draw inferences about this. The sample is selected from the population and the results are generalized to the population.

On the other hand, population and sample can save researchers time, cost and resources to conduct this research (Hanlon. B. & Larget B., 2011).

In this research, the target population is FHPK students in Universiti Malaysia Kelantan. This is because researchers want to focus on their performance on the virtual learning education during this pandemic Covid-19.

3.4 SAMPLE SIZE

Sampling is an acceptable number of components from the population. Sample size is the total number of samples selected for the study. Sample size refers to the number of participants or observations in a study. The sample size helps to understand a set of subjects selected from the general population and it is considered to represent the actual population for that particular study. The sample of this study will be selected from the target population. The target population is 150 FHPK students only who are from 3 different courses which are, 1) Hospitality (SAH), 2) Tourism (SAP), and 3) Wellness (SAW).

3.5 SAMPLING METHOD

There are two types of sampling that are both probability and non-probability. According to Dan Fleetwood (2020), probability sampling is defined as a sampling technique that uses a method based on probability theory to select samples from a larger population. The whole set of cases from which the study of the researcher is taken is the population. Probability sampling consists of simple random sampling, systematic sampling and stratified sampling. While, non-probability sampling is known as non-

sampling method. Every unit of population does not have a fair chance of participating in the investigation. There is no random selection made Non-probability sampling including convenience sampling, snowball sampling, quota sampling, judgmental sampling (Etikan & Bala, 2017).

In this study, multi-stage stratified random sampling method in probability sampling is selected. This sampling is effective and efficient on cost and time to simplify the population from subgroups (called strata). Based on this study, multi-stage stratified sampling focused on clustering from subpopulations by using a hierarchical structure of units. Multi-stage sampling may be used to render clusters and sub-clusters. Therefore, the researcher has selected students who are FHPK which are divided into three segments such as SAP, SAW, and SAH which is stated in University Malaysia Kelantan. The researcher also will be choosing the students from year 1 until year 4. Besides that, this survey contains multiple options which students are able to fill in accordingly. This ordering effect will allow the researcher to collect sample questionnaire data for the respondent. The follow of sampling process as shown in figure below;

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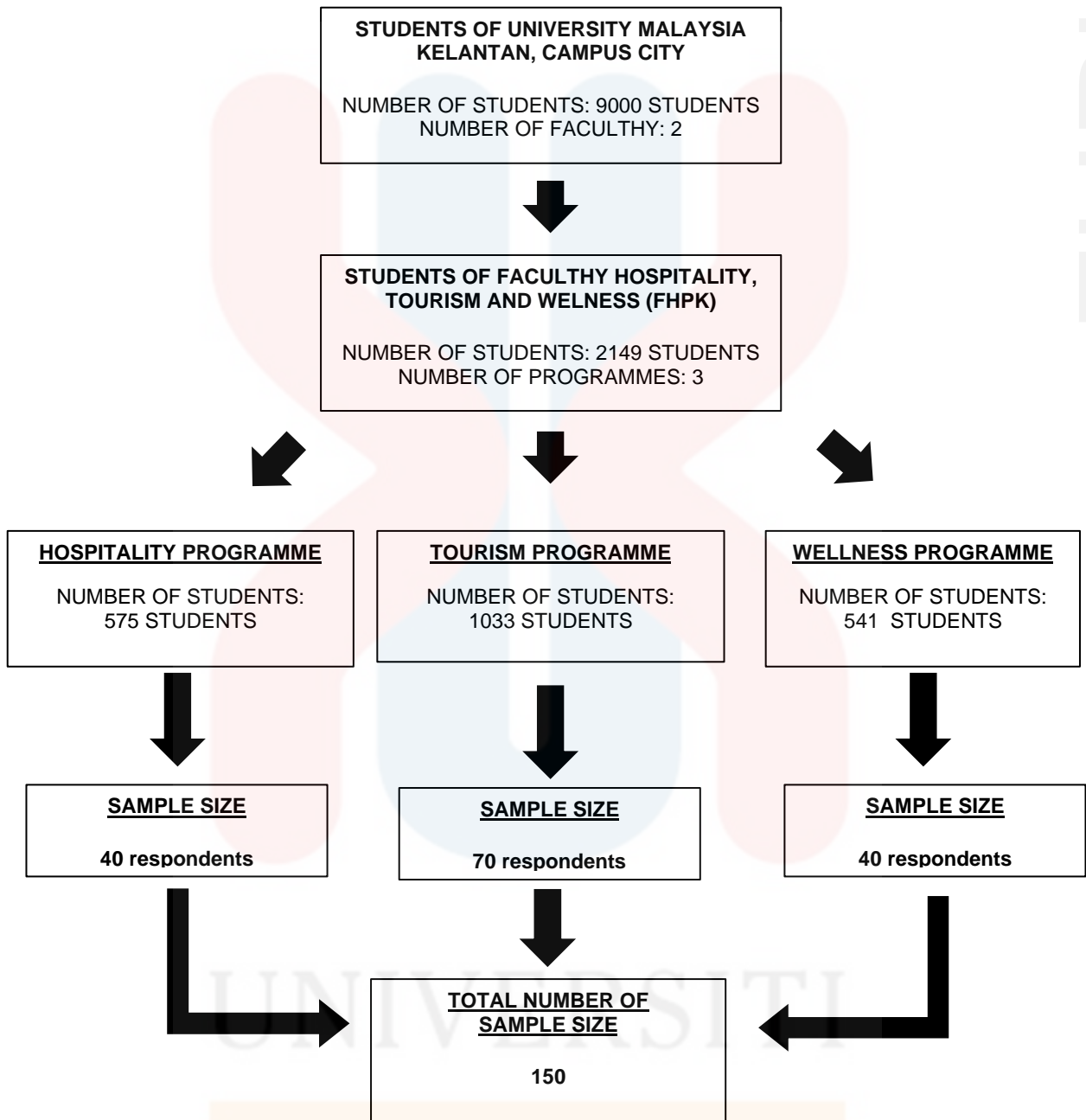


Figure 3.1: The Sampling Process of Sample Size

3.6 TYPE OF DATA COLLECTION

In this research study, there are two type of data collection used to gather the information, which are from primary data and secondary data. The aim is to collect appropriate and relevant data to address the research objectives of this study.

3.6.1 PRIMARY DATA

Primary data focuses on the primary hand original data. That was collected form the primary time and data does not show any article or website (Burns & Bush, 2010). There are several type of primary data, which are experiment, survey, questionnaire, interview and observation (Syed, 2018). This questionnaire will be collected from respondents based on the students' experience and their challenges on facing virtual learning education. The questionnaire is divided into two parts which is Part 1 for demographic characteristics data of the respondent information and Part 2 for the influencing factors of virtual education learning in University Malaysia Kelantan. The questionnaire will be represented in bilingual language to make sure the respondent understands about the research and researcher studies.

3.6.2 SECONDARY DATA

Secondary data which may be types of data obtained in the form of a source that has already been released in some form. Secondary data is often used in every academic literature analysis (Syed, 2018). Source of secondary data, which is a book, a newspaper, an internet report, a research article by other researchers (journals), a

database, recorded by the researcher. The researcher is more likely to use journals to find a literature review, for journal researchers use journals that concentrate on causes that contribute to obesity that are often used by other websites. This approach is useful for collecting data in a large population.

3.7 RESEARCH INSTRUMENT

There are various types of assessments can be used by researchers for their studies, such as surveys, case studies or questionnaires, depending on the nature of the study carried out (Umoh, 2019). Besides that, research instrument can be selected based on the population involved, the purpose of the instrument and the variables measured (Zikmud et al., 2010). A questionnaire is a data collection method composed of a set of questions and other prompts for the purpose of collecting information from respondents (Adomaitienė, Roma & Seyidov, Javid., 2017).

The questionnaire will be conducted via a web-based survey which is a Google form in order to collect the data accurately. Every local person can therefore answer the questionnaire via Google Form. The distribution of questionnaire will be used through online platforms, such as WhatsApp, Twitter and Facebook to students from FHPK in University Malaysia Kelantan. Web-based surveys can be seen as a faster medium to reach the target audience and are easier for respondents to understand. The questionnaire will distribute to respondents in order to make it easier to answer by using in two languages, which are English and Malay. The questionnaires are divided into three section, which are Section A, Section B and Section C as shown in table below.

Table 3.1 Research Instruments

Type of Section	Variable	Type of question
A	Demographic profile	<ol style="list-style-type: none"> 1) Name 2) Email 3) Year of Study 4) Course
B	Accessibility	<ol style="list-style-type: none"> 1) Virtual Teaching is better than face to face teaching. 2) The teacher is easily accessible in virtual teaching. 3) Virtual Teaching is carried out without any interruption 4) Audio-video quality is satisfactory for virtual learning 5) The availability of the Internet is ensured at any time for all the students
	Teaching and Supervision	<ol style="list-style-type: none"> 1) Teaching material is relevant for the virtual learning 2) Relevant training is provided to students for virtual learning 3) Question answering activity is performed easily in the virtual learning

	<p>Available technology</p>	<ol style="list-style-type: none"> 1) The technology used for online learning is reliable 2) Lecturer provides more creative in terms of resources used for online class 3) Satisfaction with the communication tools in the online environment. (Google Meet, Google Classroom, Zoom Meeting, Webex) 4) Online learning ensures the effectiveness in terms of coping up with missed lectures
<p>C</p>	<p>Student performance</p>	<ol style="list-style-type: none"> 1) Virtual teaching ensures quality learning 2) Virtual Teaching is performed daily 3) Students face financial issues from attending online class (internet payment, etc) 4) Students have thought of dropping out due to the inability to cope with online class 5) Students do not receive/have a healthy support system in this tough time which causes mental distress

Based on Table 3.1, there are three section. Section A consists of demographic questions based on the details of the respondents such as name, email, year of study and course. Section B consists of questions about the factors influencing the virtual education learning which divided into 3 categories such as accessibility, teaching and supervision, available technology and while Section C consists of questions about student performance.

In this study, the questionnaire will be given using the format of the Likert scale. Liker scale is a widely used scale that is very important for the respondent to choose whether to agree or disagree with the sequence of statements of each series. It consists of Five-Point Likert scales to be used for each part of the questionnaires. (See table 3.2)

Table 3.2: Five-Point Likert Scale

POINT OF SCALE	LEVEL
1	STRONGLY DISAGREE
2	DISAGREE
3	NEUTRAL
4	AGREE
5	STRONGLY AGREE

3.8 DATA ANALYSIS

According to LeCompte and Schensul (2015), research data analysis is a method used by researchers to reduce and translate data to a narrative. The data processing process helps to minimize the vast volume of data to smaller bits, which makes sense. In addition, the aim of the data analysis is to better understand the data and then come to conclusions. In this study, the data collected from respondents was analyzed using the Social Sciences Statistical Package (SSPS). SPSS Statistics is a software package for logic batch and non-batch statistical analysis. This software is one of the most popular statistical software packages that can perform complex data processing and analysis with simple instructions, including distribution charts and plots. This research will be using the descriptive statistics, the reliability test and the Pearson correlation coefficient for the analysis of the results.

3.8.1 DESCRIPTIVE STATISTIC

In this research, descriptive analysis was applied. Descriptive statistics summarize a data set's attributes and group them. Descriptive analysis is defined as placing data information in research in a simpler and more convenient way. It is often used to include quantitative explanations in a manageable way. Easy graphical visualization helps the reader to obtain a deeper understanding of the details presented. Descriptive analysis would also be used to define the demographic profile, such as the percentage, frequency, mean and average of respondents. There are several graphs suitable for depicting data that are bar charts, pie charts and histograms. As a

consequence, the ranking of the data can be easily distinguished and clearly interpreted by the nominal scale.

3.8.2 RELIABILITY AND VALIDITY

Reliability and validity are concepts that are used to determine study efficiency in terms of method, procedure or evaluation of data analysis. The continuity of a measure is about reliability, and the precision of a measure is about validity (Middleton, 2019). Reliability extends to how a system test something consistently. The result of reliability come from in the same conditions and the same outcome by using the same methods. The reliability and validity shows the accurate of calculation applies and how correctly a methodology calculates what it is supposed to calculate.

There is one way to provide a measure of the internal accuracy of a test or scale, which is Cronbach's alpha. Internal consistency defines the degree to which the same definition or construct is evaluated by all the items in a test and is thus linked to the interrelatedness of the items within the test. Internal accuracy can be determined before a test can be used to guarantee relevance for study or examination purposes (Mohsen Tavakol, 2011). Alpha tests via Cronbach to see whether Likert scale surveys with multiple questions are accurate. These questions test latent variables such as: a person's conscientiousness, neurosis or transparency, secret or unobservable variables. In real life, they're very difficult to quantify (Stephanie, 2014).

3.8.3 CORRELATION ANALYSIS

Correlation Analysis is a mathematical tool used to figure out if there is a correlation between two variables/datasets and how deep the connection can be (Emily James, 2020). This is a mathematical methodology used to measure the frequency of the association between two quantitative variables. The result has high correlation when there is a close relationship between two or more variables, whereas a weak correlation shows the variables are barely related (Monica Franzese, Antonella Iuliano, 2019).

The values can be taken from +1 to -1 by the Pearson correlation coefficient, r . The value of 0 means that the two variables do not have any relation. A value greater than 0 implies a positive association; that is, when one variable's value increases, so does the other variable's value. The negative relation is demonstrated by a value less than 0; that is, the value of the other variable decreases as the value of one variable increases (Stephanie Glen., 2020). The following criteria of Pearson's correlation coefficient have been proposed in Table below.

Table 3.3: The Criteria to Interpreting Person's Correlation Coefficient

Strength of Association	Coefficient, r	
	Positive	Negative
Small	.1 to .3	-0.1 to -0.3
Medium	.3 to .5	-0.3 to -0.5
Large	.5 to 1.0	-0.5 to -1.0

Source: Laerd Statistics (2020)

3.9 SUMMARY

This chapter addressed the number of FHPK students who are dealing with virtual education. In addition, the researcher also clarified the target population, sample size, sampling process, data collection, research instrument and data analysis. From this study, the researcher may also know how to use the research design and work as well as other components. This chapter also clarified how the questionnaire was performed and how the questionnaire could be used in this study.

CHAPTER 4

DATA ANALYSIS

4.1 INTRODUCTION

This chapter describes the result and findings of data which was conducted on the data collected from the survey on this study. Every investigation will decipher and resolve the research questions, while descriptive analysis will rationally simplify a more significant amount of data. Thus, the researcher was able to test the hypothesis and answer the research objective of this study. The data are analyzed by Statistical Package for the Social Science (SPSS) and the last result of statistical analysis was presented in this chapter.

4.2 PILOT TEST

Using the Google Form, a pre-test was performed by researchers to 30 respondents to ensure that there were no mistakes in the language, to assess if the respondents could comprehend the question and to determine whether the claim was well described. The following table showed the results of the pilot test. Based on rule of thumb of Cronbach's Alpha Coefficient Range by George & Mallery (2016), any value obtained from the reliability statistics smaller than 0.4 was deemed unfavorable, whereas the value higher than 0.9 was considered to be very precise. All variables from this study were (give your result), so the questionnaire was accepted for this analysis.

Table 4.1: Reliability Statistic of the Pilot Test Analysis

Variables	Cronbach's Alpha	Number of Items
Student performance (DV)	.758	4
Accessibility (IV)	.433	4
Teaching and supervision (IV)	.219	3
Facilities (IV)	.749	4

Sources: SPSS

Based on the pilot test that has been conducted for 10 respondents, the results show that one of the independent variables which is 'teaching and supervision' are poor in strength of association. Meanwhile the independent variable of 'facilities' is 0.749 and accessibility constraints are 0.433 in categories of acceptable. The variable of satisfaction of personal experiences show the Cronbach's Alpha with the figure of 0.910 in categories of excellent. The dependent variable, experiences of women solo travelling of this study show the reliability of 0.844 which is in categories of good in the strength of association. Thus, the pilot test proved that one of the independent variable's questions show poor strength of association which were not able to understand by respondents. For this reason, create new questions which able to understand by respondents.

4.3 DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

A whole amount of 210 questionnaire distributed through online platform. From 210 questionnaire collected from the targeted respondents, there all 210 questionnaires that were useable. There all amount 210 useable questionnaires collected online.

A test moderately established the study's overview, an analysis can provide reasonable reaction rates, and superior precision is less clear. The reaction rate, which is the number of study respondents who responded positively to the quality tested, is frequently used to measure how far can be applied the study results.

Table 4.2: Total Number of Questionnaire

Number of questionnaires distributed	210
Questionnaires returned and useable to be analysis	210
Response rate	100%
Questionnaire used for analysis	210

Source: Fieldwork Study (2021)

4.3.1 Year of Study of Respondents

A total of 210 questionnaire sets were assigned via the online portal. This section included the respondents' contextual profiles. This section focuses on the demographic profile and experience of the respondent, including gender, age, race, marital status, education and income.

Table 4.3: Year of Study of Respondents

Respondent's Profile	Frequency (N= 210)	Percentage (%)
Year 1	31	15%
Year 2	11	5%
Year 3	168	80%
Total	210	100%

Source: Fieldwork Study (2021)

Figure 4.1: Year of Study of Respondents

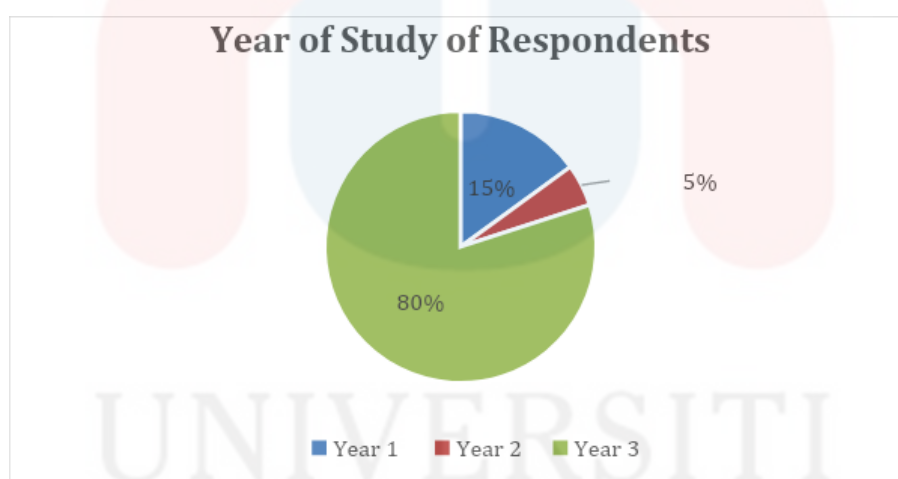


Table 4.3 displays common of the respondents are Year 1 with 15% (n= 31), Year 2 with 5% (n= 11) and Year 3 with 80% (n= 168). Most of respondent are Year 3.

4.3.2 Courses of Respondents

Table 4.4: Courses of Respondents

Respondent's Profile	Frequency (N= 210)	Percentage (%)
SAH	45	21%
SAW	65	31%
SAP	100	48%
Total	210	100%

Source: Fieldwork Study (2021)

Figure 4.2: Courses of Respondents

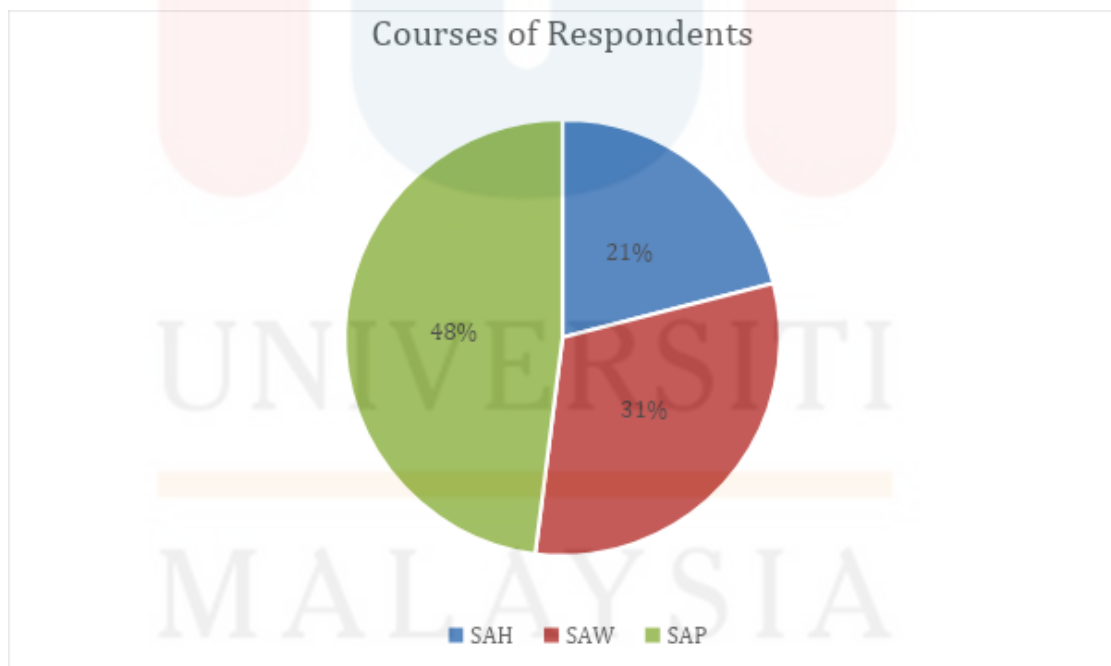


Table 4.4 displays common of the respondents are SAH with 21% (n= 45), SAW with 31% (n= 65) and Year 3 with 48% (n= 100).

4.3.3 Gender of Respondents

Table 4.5: Gender of Respondents

Respondent's Profile	Frequency (N= 210)	Percentage (%)
Male	38	18%
Female	172	82%
Total	210	100%

Source: Fieldwork Study (2021)

Figure 4.3: Gender of Respondents

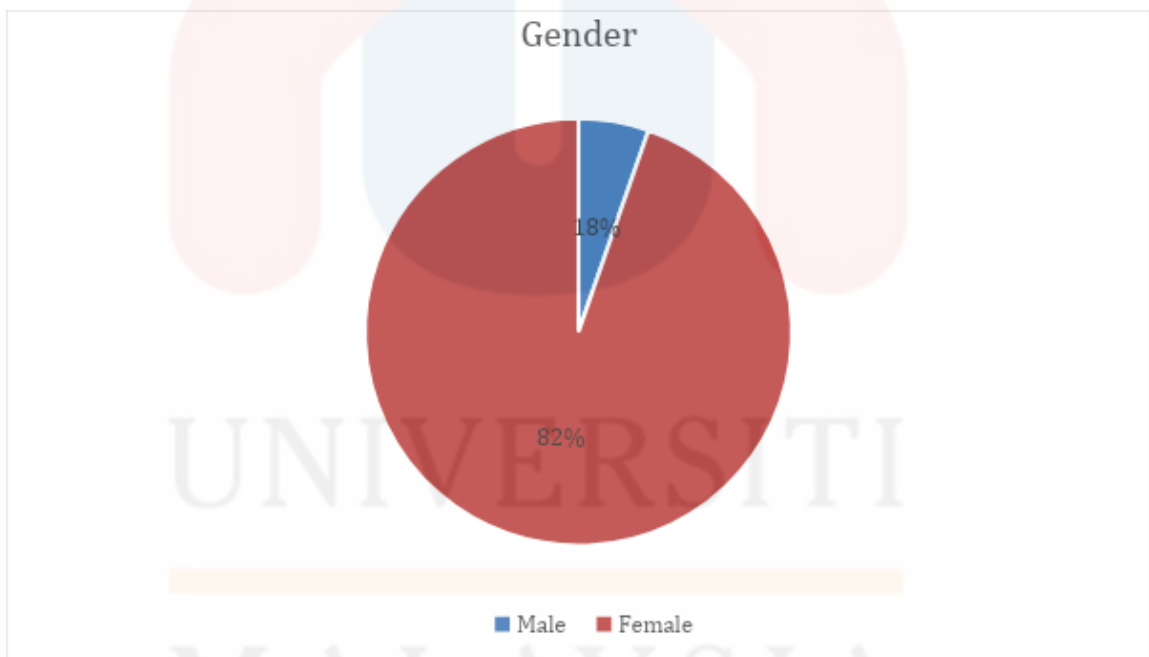


Table 4.5 displays the respondent's demographics of the respondents based on gender. The information refers to the group of respondents who are female is 172 persons (82%). Meanwhile, the group of respondents who are male is 38 persons (18%).

4.3.4 Age of Respondents

Table 4.6: Age of Respondent

Respondent's Age	Frequency (N= 210)	Percentage (%)
18 - 20	60	29%
21 - 23	130	62%
24 - 26	20	9%
Total	210	100

Source: Fieldwork Study (2021)

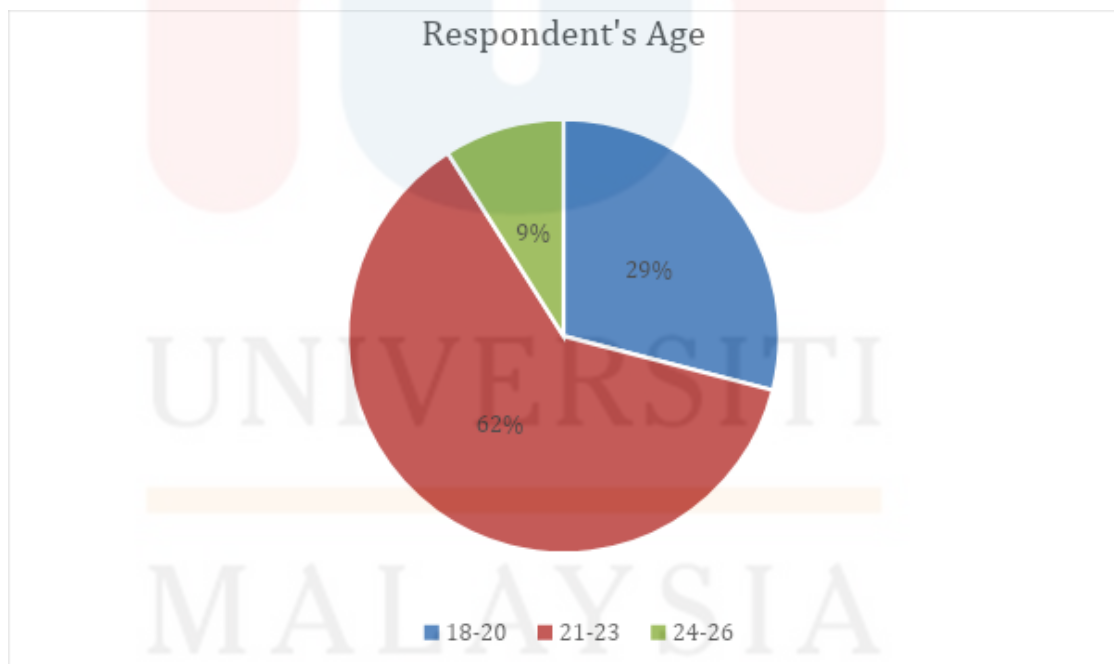


Figure 4: Age of Respondent

From Table 4.6 and Figure 4 shows the age of the respondents and mostly the age group between 21 – 23 years old holds the highest number that is 130 respondents with 62 percentage followed by the second highest 29 percentage with 60 respondents

with the age group 18 – 20 years old. The age group 24 – 26 years old respondents, we had 20 people with 9 percentage, which is the least number of people.

4.4 RESULT OF DESCRIPTIVE ANALYSIS

The central trend of a distribution is to approximate the 'middle' of a distribution of data. For independent and dependent variables, we have used medium and standard deviation. The mean is where the value is aggregated and the number of values is split then. The standard difference is between the value set and the average sample. (Trochim 2020). This research has analyzed the mean and standard deviation for section B and C of the questionnaires to find out factors of student's performance (dependent variable) and accessibility, teaching and supervision and facilities (independent variable). Based on the analysis result, the researcher compared the mean between independent variable and dependent variable for every item in questionnaire. The responses by respondent are scaled by using the 5-Likert Scale which are 1 represent "Strongly Disagree", 2 as "Disagree", 3 as "Neutral", 4 as "Agree" and 5 as "Strongly Agree".

4.4.1 RESULT OF DESCRIPTIVE ANALYSIS DEPENDENT VARIABLE AND INDEPENDENT VARIABLES

Table 4.7 Descriptive Analysis of Dependent Variable and Independent Variables

No.	Variables	N	Mean	Ranking (Mean)	Standard Deviation	Ranking (Standard Deviation)
1	Students' performance	210	3.44	3	0.8085	4
2	Accessibility	210	3.13	1	0.5778	2
3	Teaching and supervision	210	3.81	4	0.5493	1
4	Facilities	210	3.25	2	0.7123	3

Source: SPSS

Table 4.7 showed the descriptive analysis of dependent variable and independent variables in this research. Descriptive Statistic of dependent and independent variable shows each variable's means, standard deviation and ranks. The highest mean 3.81 (SD = 0.5493) with statement 'Lecturer provides more creative in terms of resources used for online class'. The lowest mean is 3.13 with standard deviation 0.5778 using statement 'The sudden change to full online learning was smooth'.

4.4.2 STUDENTS' PERFORMANCE

Table 4.8: Descriptive Analysis of Students' Performance

Descriptive Statistics			
Variables	N	Mean	Std. Deviation
I am NOT totally convinced that I will get the same value of education from an online course	210	3.50	.950
Students face financial issues from attending online class (internet payment, etc.)	210	3.79	1.015
Students have thought of dropping out due to the inability to cope with online class	210	3.11	1.199
Students do not receive/have a healthy support system in this tough time which causes mental distress	210	3.38	1.070

Table 4.8 shows highest mean for students' performance is 3.79 (SD = 1.015) which is 'Students face financial issues from attending online class (internet payment, etc.)'. The lowest mean is 3.11 with standard deviation 1.199 which is ranked 1. In this study students' performance during pandemic of COVID-19.

4.4.3 ACCESSIBILITY

Table 4.9: Descriptive Analysis of Accessibility

Descriptive Statistics			
Variables	N	Mean	Std. Deviation
How do you feel overall about online education?	210	3.09	.947
The sudden change to full online learning was smooth	210	2.87	.962
I am NOT able to dedicate at least 4-6 hours per week for an online class	210	3.10	.943
Online learning ensures the effectiveness in terms of coping up with missed lectures	210	3.44	.948

Table 4.9 shows highest mean for accessibility is 3.44 (SD = 0.948) which is ‘Online learning ensures the effectiveness in terms of coping up with missed lectures’. The lowest mean is 2.87 with standard deviation 0.962 which is ranked 1 in this study accessibility of students through online education during pandemic of COVID-19.

4.4.4 TEACHING AND SUPERVISION

Table 4.10: Descriptive Analysis of Teaching and Supervision

Descriptive Statistics			
Variables	N	Mean	Std. Deviation
I miss face to face contacts with lecturer and friends during online class	210	4.29	.856
Lecturer provides more creative in terms of resources used for online class	210	3.63	.792
Students and lecturers interaction is weak through online learning.	210	3.51	.979

Table 4.10 shows highest mean for accessibility is 3.44 (SD = 0.948) which is ‘Online learning ensures the effectiveness in terms of coping up with missed lectures’. The lowest mean is 2.87 with standard deviation 0.962 which is ranked 1 in this study accessibility of students through online education during pandemic of COVID-19.

4.4.5 FACILITIES

Table 4.11 Descriptive Analysis of Facilities

Descriptive Statistics			
	N	Mean	Std. Deviation
The technology I used for online learning is reliable	210	3.51	.865
I am satisfied with the communication tools in the online environment. (Google Meet, Google Classroom, Zoom Meeting, Webex)	210	3.47	.954
I am more satisfied with learning online compare to other delivery method	210	2.86	1.025
I am able to actively communicate online via email or discussion	210	3.17	.921

Table 4.11 shows highest mean for facilities is 3.51 (SD = 0.865) which is 'Online learning ensures the effectiveness in terms of coping up with missed lectures'. The lowest mean is 2.86 with standard deviation 1.025 which is ranked 1 in this study facilities for students who going through online education during pandemic of COVID-19.

4.5 PEARSON'S CORRELATION COEFFICIENT

In this analysis, the researcher used the Pearson's correlation. Pearson's Correlation (r) is used for calculating the frequency and orientation of the linear interaction between the two variables which is dependent variable (student performance) and the independent variable (accessibility, teaching and supervision and facilities). The value of r is between -1 and 1. The -1 correlation shows a perfect negative correlation, while the 1 correlation shows a perfect positive correlation. The 0 correlation indicates no relationship between the motions of the two variables.

Table 4.12: Pearson's Correlation Table

Correlation Coefficient	Interpretation
.00	No correlation
.01 to .19 (-.01 to -.19)	Very weak
.20 to .39 (-.20 to -.39)	Weak
.40 to .59 (-.40 to -.59)	Moderate
.60 to .79 (-.60 to -.79)	Strong
.80 to 1.00 (-.80 to -1.00)	Very Strong

Source: Heong Mei Yee (2015)

4.6 RELATIONSHIP BETWEEN TWO VARIABLES

4.6.1 Hypothesis 1: Accessibility

H_{0a} – There is no relationship between accessibility and the student's performance during the pandemic of COVID-19.

H_{1a} – There is a relationship between accessibility and the student's performance during the pandemic of COVID-19.

Table 4.13: Correlation Analysis for Hypothesis 1

Correlations			
		Accessibility	Student Performance
Accessibility	Pearson Correlation	1	-.008
	Sig. (2-tailed)		.912
	N	210	210
Student Performance	Pearson Correlation	-.008	1
	Sig. (2-tailed)	.912	
	N	210	210

Table 4.13 illustrates Pearson Correlation Coefficient, significant value and the number of cases which is 210. The p-value is 0.912, which is more than the significant level of 0.01. Therefore, this study rejects the hypothesis H_{1a} for Hypothesis 1. The correlation coefficient of -0.008 suggested a very weak negative relationship between accessibility and student's performance during the pandemic of COVID-19.

4.6.2 Hypothesis 2: Teaching and Supervision

H_{0b} – There is no relationship between teaching and supervision and the student’s performance during the pandemic of COVID-19.

H_{1b} – There is a relationship between teaching and supervision and the student’s performance during the pandemic of COVID-19.

Table 4.14: Correlation Analysis for Hypothesis 2

Correlations			
		Teaching and Supervision	Student Performance
Teaching and Supervision	Pearson Correlation	1	.470**
	Sig. (2-tailed)		.000
	N	210	210
Student Performance	Pearson Correlation	.470**	1
	Sig. (2-tailed)	.000	
	N	210	210

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

Table 4.14 showed Pearson Correlation Coefficient, significant value and the number of cases which is 210. The p-value is 0.000, which is less than the significant level of 0.01. Therefore, this study rejects the null hypothesis H_{0b} for Hypothesis 2. The correlation coefficient of 0.470 suggested moderate positive relationship between teaching and supervision and the student’s performance during the pandemic of COVID-19.

4.6.3 Hypothesis 3: Facilities

H_{0c} – There is no relationship between facilities and the student’s performance during the pandemic of COVID-19.

H_{1c} – There is a relationship between facilities and the student’s performance during the pandemic of COVID-19.

Table 4.15: Correlation Analysis for Hypothesis 3

Correlations			
		Facilities	Student Performance
Facilities	Pearson Correlation	1	-.240**
	Sig. (2-tailed)		.000
	N	210	210
Student Performance	Pearson Correlation	-.240**	1
	Sig. (2-tailed)	.000	
	N	210	210

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

Table 4.15 displayed Pearson Correlation Coefficient, significant value and the number of cases which is 210. The p-value is 0.000, which is less than the significant level of 0.01. Therefore, this study rejects the null hypothesis H_{0c} for Hypothesis 3. The correlation coefficient of -0.240 suggested a weak negative relationship between facilities and the student’s performance during the pandemic of COVID-19.

Table 4.16: Overall of the Accessibility, Teaching and Supervision, Facilities and Student Performance

Correlations					
		Accessibility	Teaching and Supervision	Facilities	Student Performance
Accessibility	Pearson	1	.160*	.617**	-.008
	Correlation				
	Sig. (2-tailed)		.020	.000	.912
	N	210	210	210	210
Teaching and Supervision	Pearson	.160*	1	.060	.470**
	Correlation				
	Sig. (2-tailed)	.020		.385	.000
	N	210	210	210	210
Facilities	Pearson	.617**	.060	1	-.240**
	Correlation				
	Sig. (2-tailed)	.000	.385		.000
	N	210	210	210	210
Student Performance	Pearson	-.008	.470**	-.240**	1
	Correlation				
	Sig. (2-tailed)	.912	.000	.000	
	N	210	210	210	210

*. Correlation is significant at the 0.05 level (2-tailed).

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

Table 4.16 shows the relationship between a dependent variable which is student performance during the pandemic of COVID-19 and independent variables which are accessibility, teaching and supervision and facilities. It shows that the accessibility has the weak negative relate to the student performance with a correlation coefficient of -0.008 . The p-value of the accessibility is $.912$, which more than the highly significant level of $.001$. Therefore, there is no relationship between accessibility and the student performance during the pandemic of COVID-19. While the teaching and supervision and facilities are having moderate positive and weak negative relate to the student performance with a correlation coefficient of $.470$ and $-.249$ respectively. The p-value of the teaching and supervision and facilities are $.000$, which is less than the highly significant level of $.001$. Hence, there is a significant relationship between the teaching and supervision and facilities to the student performance during the pandemic of COVID-19.

4.7 DISCUSSION

The purpose of the discussion was to interpret and explain the results of the data analysis from the previous chapters and to develop a better understanding of the problems of this research. Therefore, this discussion relates to the research questions posed in the initial chapter. In addition, the findings of this research will also be briefly discussed on the correlation test between the four independent variables and the dependent variables.

In this research, there are four objectives related to this study, which are:

4.7.1 To identify the accessibility of virtual learning and its impact to student performance

The first objective is to identify the accessibility of virtual learning and its impact to student performance. Based on the concept of the virtual learning environment (VLE) can considered a dynamic concept because of the constants evolution is a digital technology, according to its characteristics and potential, and the importance of such an environment have in the process of learning (Paulo Alves, 2017). Based on the result obtained, the accessibility and the student's performance factor has a very weak negative relationship between accessibility of virtual learning and its impact to student's performance during the pandemic of COVID-19.

4.7.2 To identify the teaching and supervision and its impact to student performance

The second objective is to identify the teaching and supervision and its impact to student performance. From this study of teacher education exploring the development of emerging teacher educators as supervisors of teacher candidates, this aims is the rational development of teacher teaching and education that reflects his exploration of personal understanding of purpose in social teaching and teacher education (Brandon M. Butler, 2019). Based on the result obtained, the teaching and supervision and its impact to student performance factor has a positive relationship between teaching and supervision and the student's performance during the pandemic of COVID-19.

4.7.3 To explore the available of facilities and its impact the student performance

The third objective is to identify the available of facilities and its impact the student performance. Despite rhetoric of added value, facilities management suffers a dearth of objectively researched, publicly available information concerning the impact of facilities on businesses at the level of market sectors or individual organizations (Fides Matzdorf, 2003). Based on the result obtained, the available of facilities and its impact the student performance factor has a very weak negative relationship between available of facilities and its impact the student performance during the pandemic of COVID-19.

Based on the result of correlation analysis presented, a significant relationship exists between both variables. Student performance satisfaction negatively correlated with the determinant factors (accessibility, teaching and supervision and facilities). Since the significant levels of both variables are 0.000 showed highly significant, all hypotheses are proven and accepted. The research objectives are unsupported. Table 5 appears the summary for hypothesis testing in this research and the result appeared that all hypotheses expressed were acknowledged at 0.01 significant level.

Table 4.17: Summary for Hypothesis Testing

Hypothesis	Pearson's Correlation result
H1- There is no relationship between accessibility and the student's performance during the pandemic of COVID-19.	r = -0.008, p < 0.01 (not supported)
H2- There is a relationship between teaching and supervision and the student's performance during the pandemic of COVID-19.	r = 0.470, p < 0.01 (not supported)
H3- There is no relationship between facilities and the student's performance during the pandemic of COVID-19.	r = -0.240, p < 0.01 (not supported)

4.8 SUMMARY

This chapter 4 comprises descriptive analysis, reliability test, and the test on assumption that is conducted in regression analysis. The analysis was carried out to investigate whether there is a relationship between the dependent variable and independent variable as expressed by the previous researchers. The study found that all of the hypotheses in this study are accepted.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 INTRODUCTION

This chapter discusses about the result shown in Chapter 4. This chapter also explains about the recapitulation of the findings, limitations, and recommendation. At the end of this chapter the researchers will conclude about this study.

5.2 RECAPITULATION OF THE FINDINGS

The discussion of recapitulation from the findings that researchers done in the previous chapter (Chapter 4), which based on research objective, research questions and hypothesis for this study.

This study conducted to establish the influencing factors of virtual learning education. This study is focused more on how the relationship between the accessibility, teaching and supervision, facilities and the student's performance during the pandemic of COVID-19. Based on the relationship, the researchers can know how all the variables can be related to the student performance. The results shown in the Chapter 4 is based on the questionnaire, which was designed by the researchers to the respondent. The questionnaire consisted of a total number of 15 questions in all sections. Section A is focused on the demographic information of the respondents, which are the name, email, year of study and course. Section B focused on the independent variables (IV) which are the accessibility, teaching and supervision and facilities. Section C focused on the dependent variable (DV) which is the student's performance during the pandemic of

COVID-19. The questionnaire is focused on the quantitative nature of descriptive science and contains multiple options where the respondents are able to fill in accordingly.

In this research, the target population is the students in University Malaysia Kelantan. The researchers selected the multi-stage stratified random sampling method in the probability sampling for this research. The sample size of the respondents is 150 from the population size of 2149 students. The sample of the study selected from the target population which is FHPK students from courses Tourism (SAP), Wellness (SAW) and Hospitality (SAH) and from year 1 to year 4. The data were collected by conducted via a web-based survey which is Google Form and distribute through online platforms such as WhatsApp, Twitter and Facebook to the students of FHPK in University Malaysia Kelantan. The total number of respondents who had answered the questionnaire through Google Form was 210 respondents. The total of 210 data from the respondents proceed with the Statistical Package of the Social Sciences (SPSS). This analysis of data included the frequency analysis, descriptive analysis and Pearson's Correlation Coefficient analysis.

5.3 DISCUSSION ON RESEARCH QUESTION

5.3.1 RESEARCH QUESTION 1: What are the relationship between accessibility of virtual education and students' performance?

The first objective is to determine the relationship between the accessibility of virtual education and the students' performance in the pandemic of COVID-19. Based on the findings in data analysis there is no relationship between the accessibility of virtual education and the students' performance in the pandemic of COVID-19 (p-

value=.912, $r=-0.008$). According to Ince et al. (2020), the advantages of distance learning as accessibility, availability and flexibility does not affect and no significant difference in the students' views on virtual education. Through creative and learning management systems, information technology is functioning as a solution for the continual learning process during this quarantine period. It has given educators the opportunity to adopt IT solutions for students' completion of course work. Teachers, students, and institutional officials are all working hard to make the most use of technology and have an efficient learning process. Eze et al. (2020) mention that the students are still new and possibly learning in their best to utilise the facilities. This implies that the students' progress will from one level to another, and will increase the chances to engage with the use of e-learning facilities (Asongu and Le Roux, 2017; Ciechanowski et al., 2019).

5.3.2 RESEARCH QUESTION 2: What are the relationship between teaching and supervision and students' performance?

The second objective is to determine the relationship between teaching and supervision and students' performance during the pandemic of COVID-19. Based on the findings in data analysis indicated there is a significant relationship between the teaching and supervision and the students' performance during the pandemic of COVID-19 ($p\text{-value}=.000$ $r=0.470$). Therefore, the result is significant and moderate positive relationship between the variables. Cavalli (2017) have studied the comparison of teaching on-campus and virtual education learning have influenced the confident level of student performance.

5.3.3 RESEARCH QUESTION 3: What are the relationship between the available facilities and students' performance?

The third objective is to determine the relationship between the available facilities with the students' performance during the pandemic of COVID-19. Based on the findings in data analysis, it indicated that there is a significant relationship between the available facilities and the students' performance during the pandemic of COVID-19 ($p\text{-value}=.000$, $r=-0.240$). Therefore, the result is significant and a weak negative relationship between the variables. The lack of facilities is about the problem of internet connectivity, deficiency of resource material, lack of technology, etc. All the students are not experts in the use of technology (Shahzad et al., 2020). Internet is the most important component that facilitates the use of e-learning facilities, where Internet is playing the role in uploading assignments, downloading lecture notes, playing teaching videos, attending class online and enhances teaching method (Arghya et al., 2020; Eze et al., 2020). The poor Internet connectivity and lack of skills in ICT were the major challenges to the students. Because of the lack of facilities, the students are not able to study properly and perform well during the pandemic of COVID-19.

5.4 LIMITATION

The limitation of this study is lack of accuracy data from the respondent. The lack of accuracy data is because some of the respondents not give full commitment and support in this study. Constantly being online is the accepted norm, but the truth is that excessive usage of a computer or tablet can lead to poor vision, strain injuries, and other physical issues. Consider including instructions on proper sitting posture, desk height,

and other topics with your eLearning course; your audience will appreciate it. It's doubtful that your eLearning students' would be driven to self-study if they lack self-discipline. Traditional learning and training offer the advantage of being able to quickly measure progress and fall behind; this is beneficial to many learners, since some like to have their progress regularly monitored in order to perform. The link of google form were distributed to the targeted respondents, however not all of the respondent were responses and answered the questions in the form. Some respondents also were insincere to answer the questions given and it make the researcher had to buy more time to complete this study.

5.5 RECOMMENDATION FOR FUTURE STUDIES

This study still needs improvement for future studies. Therefore, here have been prepared some recommendations to be used in future studies so that the output can be produced even better.

The first recommendation is that this study is better and more efficient if done using both qualitative and quantitative methods. This is that it can help researchers to get more accurate and quality results when this research is conducted in the future.

Next, if survey questionnaires are distributed through online, researchers need to distribute them in a more formal form. Furthermore, the questionnaires are necessary with a letter of confirmation to conduct the study from the university or superiors during the study. This is so that the respondents believe and do not hesitate to answer the questionnaires distributed as the survey has been included along with the confirmation letter.

Students can overcome some of the possible problems offered by online learning by developing strong attitudes toward learning, such as staying focused during online sessions or retaining appropriate motivation, by developing strong attitudes toward learning. They're also critical in assisting students in efficiently utilizing information and communication technology (ICT) and making the most of modern learning technologies. Positive learning attitudes, self-regulation, and intrinsic motivation to study all have a role in enhancing school achievement, but they may be especially crucial if online learning continues.

In addition, in order to provide information and guidance to parents on successful strategies for supporting their children's learning, education systems should strive to strengthen engagement between schools and parents. Teachers, on the other hand, require assistance in incorporating technology effectively into their teaching techniques and approaches, as well as in assisting students in overcoming some of the challenges that come with this type of learning environment. In conclusion, these recommendations are made for the use of future studies and in turn can help researchers further improve the study to be made.

5.6 CONTRIBUTION OF THIS STUDY

This research can assist in describing the issues that students confront while studying online. There was a shortage of means to solve problems among students who studied online during the duration of this study. The following are some suggestions:

1) Data plan

The university must assist those who are less fortunate in gaining internet access data. The institution, for example, has issued data plans to impoverished

students so that they may track their progress. Furthermore, the university gives financial support to students who are unable to purchase data. As a result of a cash donation from the institution, students can purchase internet data in order to keep up with online study and avoid falling behind.

The government is also helping students who are affected by the Covid-19 pandemic through the data plan and device package for students of the institute of higher education, which aims to make online learning more accessible to students. As a result, the ministry of education expects that the many resources available will help to create a favorable and balanced learning environment through an online learning strategy. Furthermore, the ministry of higher education will provide students with data plan assistance.

- 2) Diversify the learning strategies to make them more understandable and successful.

With the advancement of the current world of education, the use of social media in learning has become increasingly significant. Learning will be more exciting and productive if technological media are integrated into the process. Information about current events, education, and technology is easily and swiftly accessible through the social media site Facebook. Every teen user and student is growing their usage of technology through the use of user-created Facebook sites. By 'following' the Facebook page, these reference materials and information can be accessed at any time. It can improve the learning system in a number of ways, both directly and indirectly, by determining the effectiveness of information delivery.

E-Learning, on the other hand, is a teaching style that makes use of modern technologies to better online education. E-Learning is a research and development process that employs electronic networks or the internet to transmit content, information, and engage with students and teachers. Students will become more understanding, critical thinking, and innovative as a result of this E-Learning strategy. Furthermore, video streaming is one of the primary mediums for learning and one of the options for students and students to develop technical and new educational perspectives in today's world. Also, by using video streaming media, learning materials can be stored in a systematic manner, result in productive learning.

3) Assist in terms of student facilities

Students' problems were different when they took online classes, according to this study. Students in remote places such as Sabah and Sarawak, as well as rural areas in neighboring states, are forced to take online lessons. The scenario compelled every student to use their cyber computer or electronic device as a medium for many areas of online learning from home as a result of the COVID-19 pandemic. The impact of the pandemic, on the other hand, necessitates that game technology play a key part in modifying these learning patterns in order to improve internet accessible in locations where it is limited.

As a result, not all students have access to a computer at home to continue their studying during the COVID-19 pandemic. As a result, all parties involved must play a role in assisting students in the interior who are having difficulty accessing the internet. For example, in remote locations, the necessary

parties must strengthen the network or update access to the internet network. Furthermore, the university must support students who are unable to purchase a computer or tablet with which to study at home. As a result, the institution must supply computers or tablets to impoverished students so that they can participate in online learning.

5.7 SUMMARY

The purpose of this study was to see whether The Influence of Virtual Education Learning on The Performance of FHPK Students During the COVID-19 Pandemic Affected Their Performance. In addition, this work might be utilized as a reference by other academics who are conducting research on virtual education learning. The results acquired in Chapter 4 using the Statistical Package for the Social Sciences (SPSS) are reviewed in further detail, and inferences are reached as a result of the findings. As a consequence, it can be concluded that accessibility, teaching and supervision, and convenience have a substantial and insignificant impact on FHPK student performance during COVID-19 pandemic. As a result, it is hoped that all of the information gathered during this study would assist relevant parties in taking steps to assist students who are experiencing online learning issues as a result of the COVID-19 outbreak and discover a way out for those who are in trouble.

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APPENDIX A



UNIVERSITI
MALAYSIA
KELANTAN

QUESTIONNAIRE

Research about 'The Influencing Of Virtual Education Learning In FHPK Students Performance During Pandemic Of Covid-19'

Dear respondent,

We are undergraduate students of University Malaysia Kelantan from Faculty of Hospitality, Tourism and Wellness pursuing Degree in Bachelor of Entrepreneurship (Tourism) with Honors. We are conducting a study to identify the Influence of Virtual Education of Learning of FHPK students' performance during pandemic COVID-19. We would appreciate if you would spend a few minutes our time to complete this questionnaire. Your participation is needed in completing this questionnaire to complete our research. All information will be completely confidential and used for academic purpose only.

Thank you for your participation

Your Sincerely,

DEVAPRIYA DASI A/P ELAMARAN (H18A0096)
AHMAD AZFARMIZAN BIN JAMALUDIN (H18A0012)
LYE LI CHYI (H18A0202)
MUHAMMAD NUR AMIRUL BIN JAMIAN (H18A0268)

Part A

Email address

Your email

Name/ Nama

Your answer

Year of study/ Tahun Pengajian

- Year 1
- Year 2
- Year 3
- Year 4

Course/ Kos Pengajian

- SAP
- SAW
- SAH

Gender/ Jantina

- Male/ Lelaki
- Female/ Perempuan

Age/ Umur

- 18-20
- 21-23
- 24-26

Part B

1. How do you feel overall about online education? / Bagaimana perasaan anda secara keseluruhan mengenai pendidikan dalam talian?

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

2. The sudden change to full online learning was smooth. / Perubahan secara tiba-tiba kepada pembelajaran dalam talian sepenuhnya lancar.

- Strongly Disagree
- Disagree
- Neutral
- Agree
- Strongly Agree

3. The technology I used for online learning is reliable. / Teknologi yang saya gunakan untuk pembelajaran dalam talian boleh dipercayai.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

4. I miss face to face contacts with lecturer and friends during online class. / Saya rindu hubungan bersemuka dengan pensyarah dan rakan semasa kelas dalam talian.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

5. Lecturer provides more creative in terms of resources used for online class. / Pensyarah memberikan lebih kreatif dari segi sumber yang digunakan untuk kelas dalam talian.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

6. I am satisfied with the communication tools in the online environment. (Google Meet, Google Classroom, Zoom Meeting, Webax) / Saya berpuas hati dengan alat komunikasi dalam persekitaran dalam talian. (Google Meet, Google Classroom, Zoom Meeting, Webax)

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

7. I am more satisfied with learning online compare to other delivery method. / Saya lebih berpuas hati dengan belajar dalam talian berbanding dengan kaedah penyampaian yang lain.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

8. I am NOT able to dedicate at least 4-6 hours per week for an online class. / Saya TIDAK dapat mendedikasikan sekurang-kurangnya 4-6 jam seminggu untuk kelas dalam talian.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

9. I am able to actively communicate online via email or discussion. / Saya dapat berkomunikasi secara aktif dalam talian melalui e-mel atau perbincangan.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

10. I am NOT totally convinced that I will get the same value of education from an online course. / Saya TIDAK yakin sepenuhnya bahawa saya akan mendapat nilai pendidikan yang sama dari kursus dalam talian.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

11. Online learning ensures the effectiveness in terms of coping up with missed lectures. / Pembelajaran dalam talian memastikan keberkesanan dari segi mengatasi kuliah yang tidak dapat hadir. Strongly Disagree

- Diagree
- Neutral
- Agree
- Strongly Agree

12. Students and lecturers interaction is weak through online learning. / Interaksi pelajar dan pensyarah adalah lemah melalui pembelajaran dalam talian.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

13. Students face financial issues from attending online class (internet payment, etc). / Pelajar menghadapi masalah kewangan dari menghadiri kelas dalam talian (pembayaran internet, dll).

- Strongly Disagree
- Diagree

- Neutral
- Agree
- Strongly Agree

14. Students have thought of dropping out due to the inability to cope with online class. / Pelajar berfikir untuk berhenti sekolah kerana tidak dapat menghadapi kelas dalam talian.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

15. Students do not receive/have a healthy support system in this tough time which causes mental distress. / Pelajar tidak menerima / mempunyai sistem sokongan yang sihat dalam masa sukar ini yang menyebabkan masalah mental.

- Strongly Disagree
- Diagree
- Neutral
- Agree
- Strongly Agree

APPENDIX B

