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International Students' Experience and Perception towards UTM Campus Management on COVID-19

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Abstract

In response to the recent COVID-19 pandemic, many scholars have studied on pedagogies, methods of effective online learning and the well-being of educators and students. However, very few works have specifically focused on non-local students of a particular institution, given that they were already distanced from their home country. This paper takes interest in the mentioned scope, within the period of Movement Control Order (MCO) in Malaysia. The objectives are, to explore international students' perception on COVID-19 management by Universiti Teknologi Malaysia (UTM), their experience of online learning during the MCO, and the correlation between the two with students' satisfaction in overall learning experience. The study adopts mixed method of qualitative and quantitative analysis. A set of questionnaires were distributed to 150 international students of UTM. The questions encompass students' satisfactory towards online learning experience, university's response when assistance is required, and students' personal well-being during the MCO. The results were analyzed by using SPSS, where the percentage of overall international students' perception is 64.03%, which categorizes as 'very good' in relative to the test value. The percentage for experience of the international students during MCO is 69.59% which also categorizes as 'very good'. The two mentioned variables show a strongly positive correlation with the satisfaction of the students in overall learning experience, which was obtained by the statistic method of bivariate correlation. This study concludes that the experience and perception shown by UTM's international students during MCO are relatively positive and thus, contributes to a conducive and positive online learning atmosphere.

Keywords: COVID-19, Foreign, International Students, Learning Experience, Online Learning, E-Learning

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Introduction

Background of the Study

Malaysia was labeled as a country that had three times more cases of COVID-19 than any other country in Southeast Asia eventually leading the fight against COVID-19 and being the safest country in the entire world. Being a good example in Southeast Asia, the Movement Control Order (MCO) was a fast initiative enforced by the government authorities (Ebrahimi, 2022). However, the MCO affects international students stranded in Malaysia. As such, this research tries to investigate the factors that affected international students and assess their success and satisfaction in fully online education.

Across the country, Universities and colleges have closed residences in Malaysia after Malaysia's government implemented the MCO to curb the COVID-19 spread. This pandemic is changing the way in which learning and educational systems operate around the world. Classes have moved online. Universiti Teknologi Malaysia (UTM) is no exception, after the first announcement of the MCO on the 18th of March 2020, students and professors try to adapt to a circle new normal of learning through technology. All students are required to evacuate, UTM campuses are almost empty, left with only the international students that could not make it to go back to their countries. With the growing number of international students pursuing studies in UTM (Ebrahimi & Yusoff, 2020), Universities are concerned with the challenges faced by them during the Coronavirus outbreak.

UTM international students from various countries have been continuing to study during the COVID-19 pandemic while connected to their lecturers and classmates online. They mentally or emotionally are experienced differently. The majority of international students had to contain within a room in the hostel during MCO in Malaysia. Quarantine might be incurred by the student's displeasure or has been taken as an opportunity to focus completely on the study. At the same time, helpful support from UTM through E-Learning services has made online education successful. We expect international students to understand the situation and participate actively during online classes, but we found some with no attention. This should be investigated to reveal the cause and reason for finding international students' satisfaction. This study seeks to answer three questions: What is the perception of UTM international students during MCO? How did UTM international students experience life during MCO? To what extent are international students satisfied in online classes using UTM E-Learning. The research objectives are (1) to investigate the international students' perception of MCO. (2) To explore the experience of the international students during MCO and (3) to measure the international students' satisfaction in online classes using UTM E-Learning. The research uses both methods of qualitative and quantitative research designs, employs conceptual investigation, and uses questionnaires as the instruments for data collection. A total of 150 international students participated in the research. Findings from this research could be contributed to aid international students in Malaysia in the consequences of the outbreak.

Importance of the Problem – The Impact of the Pandemic on Higher Education Institutions (HEIs)

The measures taken to curb the pandemic have had an immediate effect on higher education. They have impacted, often dramatically, the conditions under which higher education all of a sudden had to perform research and what is now often referred to as 'emergency online education'; students need assistance; staff face unprecedented challenges, including job insecurity; university leaders had to reinvent how to run their campus operations. The

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consequences will be felt way into the future. In order to envisage medium- and long-term scenarios, it is important to capture what were happening and what will be consequences for national and international students, many universities and other higher education institutions already foresee the impacts of the move online or the impacts of economic crisis on national and international students and their families, including closure of universities for short, medium or long term.

The grim financial future that many HEIs will have to face, while others are even at risk of seeing their activities being closed altogether, will weaken the capacity of higher education to assume its responsibilities to society. Students need to be assisted, staff needs to be protected and assisted, the institutions and the systems need to be supported. It is clear that the future of higher education needs rethinking in many ways. International and multilateral cooperation within the higher education sector and with policymakers, communities and other stakeholders will need to be increased and strengthened. High quality research and education is required; likewise, the equality agenda needs to be supported everywhere in order for the innovation needed to rebuild societies will be done by and with all, and not only by those who will be able to afford it. The need for knowledge creation and dissemination is as important as ever especially stakeholders aspire to meet the global challenges identified and to build a sustainable future.

For many universities, international students bring much-needed revenue each year. With travel restrictions and closed borders, universities are coming to terms with the fact that this revenue may be significantly reduced in the next academic year. Malaysia ranks as the 11th largest exporter of education in the world, due to its conducive learning environment and stable socio-economic development (Ebrahimi & Yusoff, 2020). As such, numerous applications from foreign students is still being received and processed for submission. The MCO wreaked havoc on students, staff and administrators of public and private HEIs. Classes were hastily rescheduled, examinations were postponed, and students scrambled to return home. This was a dramatic shift to virtual information sessions and a new challenge for foreign students' recruitment.

Since the outbreak of the COVID-19, many international students at UTM have been caught in extraordinarily challenging situations. Students across the higher education sector have been dramatically impacted by the spread of the coronavirus, from travel restrictions to social distancing, isolation measures, quarantines, campus closures, and border closures. Within a short period of time, student mobility — considered and promoted as the most desirable element of global higher education experience — has suddenly been deemed problematic and, in some cases, held accountable for spreading the coronavirus. By the same token, the physical presence of international students — a vital aspect of international education and the internationalization of higher education — has suddenly become associated with the coronavirus and their presence has, in some cases, been considered unwelcome by both their host and home countries as well as by any transit destinations should their travels to their host countries and-or back home require stopovers. In some cases, international students have been stranded in places that do not seem to be welcoming and hospitable, this include UTM.

Preventive measures taken inside the university are exemplary and, so far, clear communication and updates have been maintained between the university and its international students. Recognizing the tremendous disruption caused by the COVID-19 pandemic and its resultant effects on every aspect of life, several timely major administrative and academic initiatives have been implemented at UTM to provide the utmost possible

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safety and care for all students. UTM international students who are away from their home countries have gone through varying degrees of stress and anxiety. Therefore, speedy support has been provided, for example, the university has been very flexible and responsive in helping international students travelling back to their home countries, has offered consistent care to any international students with medical needs, have provided a generous 'free meals system' for international students and has continued to provide counseling assistance and accommodation for them during the pandemic.

But as the days have gone by, HEIs are realizing that "normal" will not come back anytime soon. Academicians have begun conducting online lectures and re-arranging their semester scheduling to fit the new reality. Administrators and management teams have begun building business contingency plans to ensure financial stability and continuity. Students have been putting in their best efforts to try to learn in these challenging times. There are critical issues that have been raised by students, academics and the management teams of HEIs that have to be resolved quickly.

The primary concern for many is their academic progression. The next issue would be academic delivery and quality of teaching and learning during the MCO period. Even some of our approved online distance learning courses require face to face tutorial credit hours. We are not just talking about support for the students — who are already dispersed into many different locations, not all with strong broadband connectivity — but also support for teaching staff, many of whom rely on the institutions' facilities for the majority of their teaching aids. The issue here is both short-term and long-term in nature. What happened to students who couldnot adapt to distance-learning mode, and then struggle with their marks for the semester during the MCO? Should lecturers then be more lenient in assessment? If so, how does this impact knowledge transfer and retention? Students are having breakdown and dealing with pressure as well as financial problem, thus it is hard for them to cope with their studies (Hannigan & Saini, 2020). Our main responsibility was to comply and abide the rule to mitigate and prevent from the virus being spread because it would have put public society in danger.

Relevant Studies

Studies have shown an epidemic represents a living, social laboratory that provides a useful window through which to view the resilience and efficiency of a particular society's administrative structures, its political and social strengths and shortcomings, and its engagement with rumor, suspicion, or outright bad behavior (Wantz, 2020). After all, epidemics are hardly quiet occasions; they are experienced and responded to in real time by the affected community and then later discovered, heralded, and explained by historians. As a result, the historical record of these events is especially rich and provocative (Briggs, 1961; Rosenberg, 1987; Rosenberg and Golden, 1992).

Effect of COVID-19 to Higher Education Institutions

In light of the recent spike in COVID-19 cases, Malaysia government decided to stop all physical activities in all institutions and promote new norms of teaching and learning as a replacement to the conventional method. It has been done by optimizing the use of existing platforms such as Massive Open Online Learning (MOOC), Open Educational Resources (OER), Flipped Classroom online, Google Classroom, Facebook Live etc. Other platforms such as Zoom, Webex and Google Meet also become one of the main platforms to implement online teaching (Omar, 2020).

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During the first total lockdown starting 18 March 2020, there are two types of students which are stranded on campus and off campus. For the students who are stranded in campus, the government through the Ministry of Higher Education has been providing aid and assistance to students stranded in the campus during the 1st lockdown and continued giving assistance for students to continue their studies. For example, USD50 cash assistance, daily food and transport back to their home are provided for the students stranded on campus. Meanwhile for students who are located off campus, the government has collaborated with telco for a special package of mobile data for students. Other than that, USD362 advance assistance to purchase mobile devices for selected students especially B40, providing wider coverage of high-speed Internet to facilitate online learning and moratorium for students' loan repayment of up to 6 months (Omar, 2020).

Meanwhile at the university level, the aspect of ICT facility capability, internet access, skills and training for lecturers became hot topics of discussion. For universities that have not implemented or lacked emphasis on the aspects of E-learning and ICT technology in PdP before the epidemic started, face big problems in ensuring the survival of PDP online when the epidemic hits. This problem includes aspects of facilities, finance, training and expertise (Tuquero, 2020; Aydemir & Ulusu, 2020) which need to be provided in a short time as soon as movement restrictions are imposed and all physical classes are banned.

It causes a conventional Teaching and Learning Load (PdP) that has been going on for a long time at all levels of study. Although in this modern era internet facilities and educational technology have developed so rapidly, the PdP process through conventional methods is still the main medium of PdP whether at the school or university level. On the other hand, ICT facilities and educational technology that are becoming more advanced nowadays play a more supportive role in this conventional PdP activity.

Although online PdP is seen to be easier from the implementation aspect and does not involve many logistical aspects, it is still not the main choice of PdP medium compared to conventional. There are several factors why this happens, one of which is the quality of the PdP itself. Quality aspects can be optimally achieved through direct interaction between instructors and students. On the other hand, the interaction between the two parties online is limited and there are often one-way interactions. It also reduces the instructor's ability to monitor students. In summary, the use of online PdP in its entirety has many shortcomings compared to conventional PdP from the aspect of the quality of knowledge that can be conveyed to students, the educational element and also the aspect of the environment conducive to learning.

After the implementation of MCO 1.0 up to MCO 3.0, PdP sessions at HEIs, especially Public Universities are still implemented online and hybrid for certain critical programs that require the physical presence of students on campus. This atmosphere has put pressure on students who are mostly still in their respective residences and not excepting students who are at university also affected their psychological aspects (Abdul Rashid et al., 2021).

Continuing higher education is a difficulty for students looking at the educational, social, environmental, and psychological adaptation in the new campus environment that can affect their psychosocial well-being and learning outcomes (Yikealo et al., 2018). The current situation adds to the existing difficulties faced by students. Although the issue of stress among university students is not a new issue, the inattention to this increase in stress can lead to the possibility of bad things happening. Extreme stress can lead to mental health problems. Even worse, stress can also take the lives of students and several cases of this have already been

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reported during the COVID-19 pandemic. This shows that the issue of stress should not be taken lightly even though this issue has existed for a long time.

A study was also conducted among students at Universiti Sains Malaysia (USM) to identify the stress factors faced by students. The stress factors experienced by students are evaluated from several factors, namely learning factors, financial factors, and personal factors. As a result of the study, the researcher found that the main factor to the stress faced by students is from the aspect of learning (Ramli & Sheikh Dawood, 2020). Among the learning factors that cause stress are students having difficulty understanding what the lecturer has taught and experiencing fatigue after class. In addition, financial factors that require students to do part-time work, and personal factors such as having trouble sleeping and problems with family, are also causes of stress among students.

However, a study conducted by Ahad et al. (2020), for Community College students showing aspects of self-management pressure or student self-motivation, on average only showed a moderately high mean score of 3.12. This shows their balance in controlling their own motivation to understand the difficult phase that occurs. Basically, even though the students give less focus and concentration to make learning sessions from home a success, but maintaining a sense of responsibility towards academics is still high among students when they can still produce better quality of work than when they were at the institution. This reinforces the view that every individual, including students, faces different experiences and feelings in the face of the COVID-19 pandemic.

Norhana et al., (2020), in the research conducted, it was found that overall students showed a positive attitude when receiving instructions to stay at home and continue learning online. Next, from the point of view of student pressure in terms of time management, self-management and academic management are different. In terms of time management, students feel quite pressured to organize their time between the load of learning assignments and homework assignments since they have to study online. While for self-management, overall they are able to control themselves in the midst of difficulty adapting to new norms. In addition, for academic management, even if they feel pressured by the new challenges they have to face, they are still able to complete the work with the best quality. Finally, the element of stress identified as having the most impact on students is academic. They feel pressured to continue their studies in the new normal situation where there are various challenges but need to continue for their future career search.

International Students in Universiti Teknologi Malaysia (UTM)

Greater challenges are faced when it comes to international graduate students. This is because, some students of this group are actually in their country of origin or have decided to return to their country of origin before the borders of the country are closed. With this situation, the need to completely change the PdP method to online is very urgent and needs to be done urgently. According to Scull and colleagues (2020), the implementation of this change process is not an easy matter. Even for research mode students, time management problems (Tseng et al., 2019) and lack of supervisor monitoring (Silinda & Brubacher, 2016) are the main issues of fully online learning. A study conducted by Fathoni and Retnawati (2021) shows that students experience negative physical and psychological effects as well as other technical problems such as internet problems, devices, interaction with lecturers, monitoring and implementation of learning activities during the pandemic.

The transmission of this epidemic has caused stress, depression and anxiety among the community who have to face the fear of the adverse effects to come (Wang et.al, 2020). This

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effect is also felt by students including international students at the university (Abdul Rashid et al., 2021). After several semesters of conducting PdP online without giving students the space to fully return to campus to attend face-to-face classes, it has somewhat contributed to the stress. The uncertain period of time to go through this situation adds to the anxiety and stress of the students.

Worry about the future due to the possibility of a delay in completing studies is a factor in student stress (Woon et al., 2021; Ramli & Sheikh Dawood, 2020). Joe Myers (2021) stated, the study of respondents' perceptions related to this matter found different views according to the countries affected by this epidemic. In addition, there are various other factors that have been detected in putting pressure on students, including interference to obtain stable internet access, limitations on the use of internet quota, financial constraints to provide suitable devices for PdP and PdP implementation methods that are burdensome and less attractive. Coupled with external factors such as the atmosphere in the residence that is not conducive to concentration on PdP (Mohamad, 2021) and assignments and the lack of family members playing a role and support throughout the period following PdP add to the level of stress for affected students (Abdul Rashid et al., 2020). University students are a group that is more vulnerable to stress, which can have negative consequences leading to mental health problems (Auerbach, 2018).

Since the government announced the total lockdown of all universities, UTM also accepted the consequences. No students were allowed to enter and exit the campus for a longer time. As explained in the previous section, there are students who take the opportunity to go back home before the date of MCO and stay at the universities. For the international students, they do not have many options and decided to stay at campus. There were also cases where international students stayed outside the campus. UTM has played an important role to help the students and make sure their needs are taken care of. As explained in the previous section, the government through the university has implemented few alternatives such as daily food, mobile data package, new devices rebate off and much more.

Student motivation can also be affected due to this pandemic. Various learning pressures must be faced alone without guidance from the institution adding to the existing pressure thus reducing the motivation in seeking knowledge (Thomas, 2020). This happens when these students are unable to move actively due to the MCO and spend a lot of time in the room and on the bed. Students who are facing exams are also not able to do activities that can reduce their stress during the exam season thus causing more depression in themselves.

According to Srividhya (2007), gender plays an important role in determining a person's level of mental health. Several studies to see the relationship between stress and student gender have also been done (Hamsan, 2010; Md Yusof, 2013). Some studies show that female students have a higher level of mental health than male students. In the context of Malaysia, men are said to be more stressed than women from a psychological point of view because the local culture states that men should be strong and not weak (Mohamad & Ibrahim, 2018). The attitude of hiding feelings by not sharing the problems faced and masculine traits such as taking care of the ego to look more 'macho' compared to women add more pressure in oneself. Women are also known for their love of telling stories and getting support from the people around them can reduce the pressure they face. However, according to Wade et al. (2002), previous studies conducted on mental health with gender factors did not show consistent results. Therefore, this study was conducted to identify the stress level of university students during the COVID-19 pandemic. This study also wants to look at the level of stress faced by the gender of students.

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According to a study conducted by Woon et al. (2021), the most common stress experienced by students is stress due to disruption of learning during COVID-19 such as anxiety about the future due to the possibility of a delay in graduating, lack of practical learning, difficulty participating in online classes due to internet problems, difficulty adapting with a new learning style, and lost the momentum to learn. However, there are other sources of stress faced by university students. Among them, not being able to do daily routines during COVID-19, experiencing fear when having physical symptoms such as fever, flu, and cough that lead to the thought that they are infected with COVID-19. While a small number of students have other issues that cause stress such as household problems, worries about family, and have a history of being quarantined due to being infected with COVID-19.

The level of human stress is different according to self-resilience, the intensity of the stress faced and the duration of the stress. However, for young people, especially students, the change in the education system that takes place especially PdP online is something drastic with most universities in Malaysia still not having the infrastructure and availability of academic staff or students to fully transition to this new norm PdP. Therefore, when the face-to-face session in the lecture room is replaced by face-to-face on the monitor screen only, including when sitting exams, quizzes, preparing assignments and so on, it makes the level of stress even more difficult to control. The implementation of this new concept of learning not only changes the paradigm of how students and lecturers interact and relate in learning at the university, it also creates new practices in the daily routine of students while studying online. This situation also adds to the impact of changes in their psychological and social processes that bring them risks such as experiencing mental stress problems and so on. Therefore, the best mechanism in alleviating this situation is through the right coping strategies and practices to adapt to the outbreak of the COVID-19 wave.

E-learning among Students

Online learning can also refer to several terms synonymous with it such as e-learning, Internet learning, distributed learning, network learning, tele-learning, virtual learning, computer-assisted learning, web-based learning and distance learning (Ishak et al., 2020). However, all of these terms describe learning methods that will take place in various situations regardless of place by using the Internet. In fact, e-learning can give birth to a more flexible and extensive learning system (Surjono, 2015) because students do not need to come to a place at a certain time. No wonder if by 2018 there are 4.3 billion people depending on the use of mobile Internet (Nick, 2018).

Based on the study of Nanang et al (2021), the use of e-learning brings benefits and a new approach to students because e-learning is equipped with various materials and activities that have been improved with multimedia. E-learning is known as a good alternative in providing opportunities for student engagement with learning activities regardless of time and place. (Abu Hassan et al., 2021). The National E-learning Policy of Higher Education Institutions defines e-learning as the use of information and communication technology that facilitates the learning and teaching process. (Abu Hassan et al., 2021). E-learning is known as webbased learning, directed learning, online learning, computer-based teaching and learning and internet-based learning (Mokhtar et al., 2021).

The use of e-learning among students of higher education institutions helps students in accessing information related to courses or teaching and learning activities virtually (Najib et al., 2017). With the existence of e-learning, information access methods become easier, widespread, student-friendly, consistent and efficient (Anuar et.al., 2015; Hasmuddin & Maat,

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2020). E-learning also provides opportunities for students to arrange learning content, subject control, media selection and learning time to meet learning objectives. (Mokhtar et al., 2021). Indirectly, e-learning produces students who are dynamic and flexible in the learning that follows. Year 1 students in higher education institutions generally do not have a foundation in learning layout, study information content, and accurate and timely information delivery because the learning and teaching style in higher education institutions is different from learning at the secondary level. Therefore, the use of e-learning for Year 1 students is something new. The resulting fear can affect students' willingness to learn according to Mat Yusof (2013). On the other hand, the study of Mesman and Abd Majid (2021) Zuraina et al (2020) found that first degree students' fear affects their willingness to learn and makes them more likely to use online learning mediums for learning purposes. In addition, international students who have just followed the Malaysian education curriculum system, will face challenges in adapting the Malaysian PdP method.

The pandemic and the MCO indirectly force students to study online even though this method has not yet been fully accepted among students. As the implementation of e-learning at UTM has been used since the beginning of introducing the National E-learning Policy in 2014 which aims to further improve the quality of learning and teaching and the availability of academic digital learning in order to be in line with the National E-learning Policy. However, there are situations where the implementation of e-learning causes it to receive less response from international students in the post-COVID19 period. Among them is due to e-learning materials and systems not being updated, problems transferring data and information to computer storage (Shiung, 2013). In addition, poor internet connection and access problems and a lack of skills in digital and technology mastery (Salleh et al., 2021).

The chain of transmission of the virus has caused UTM to comply with the KPT order to close face-to-face learning activities and conduct PdP online using the OWC platform, e-learning, Google Meet, WhatsApp, Telegram and so on. Although learning using e-learning started early at UTM, it became more active after the outbreak of the COVID-19 pandemic. Each lecturer and student is provided with an e-learning account to enable PdP activities to be carried out online using the UTM E-Learning platform from April 2020. Therefore, this study was also conducted to explore the experience of using e-learning among UTM international students during the MCO implementation.

The Concept of E-learning

E-learning uses Internet, LAN, WAN networks to deliver interaction, learning information and even learning and teaching materials. With this, teaching and learning materials are easily obtained without the need for any physical meeting between students and instructors. In relation to that, e-learning is indeed very flexible because it contains various reference sources and is easy to access anywhere regardless of time or borders (Najib et al., 2017). Teaching and learning activities can be carried out in e-learning by only using online technology such as discussion boards, e-mail, chat rooms, google classroom and others (Sihes & Sani, 2011). Thus, it is a medium or facilitator in implementing effective teaching and learning sessions especially when the MCO is implemented. Teaching and learning materials are easy to access and download, and students can easily discuss and share information with peers without face-to-face (Hassan & Edje, 2011).

Therefore, the use of e-learning along the MCO implemented provides many opportunities for students to generate more creative and critical thinking ideas (Anuar et al., 2015) and optimize their potential to learn interactively. However, despite the positive effects of e-

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learning, there are studies that say e-learning disrupts the teaching and learning system in educational institutions and invites issues such as teacher readiness, internet access and students who lack information technology skills (Abd Ghani, 2011). The situation faced will have an impact on the level of motivation to study and affect their academic achievement as a whole (Nanang et al., 2021).

Thus, e-learning is not just a learning medium, but it is an encouragement to the transformation of national education. The implementation of e-learning in line with the National E-learning Policy 2.0 aims to bring Malaysian HEIs to a higher level in terms of quality and innovation in teaching and learning in order to be able to compete at the international level. Where the implementation of e-learning can add value to traditional learning techniques (Daud et al., 2012).

Methodology

The analytical scientific mixed methods, qualitative and quantitative, were used for this research including statistical and conceptual investigations in order to further enrich and develop the level of this study. The sources are a library depository of available secondary literary resources as well as a survey that disseminated among international students at UTM Johor Bahru in Malaysia.

Population and Sampling

The population for this research specifically includes UTM international students in Malaysia. The sample consists of 150 international students in Johor Bahru campus. Accordingly, stratified random sampling is used. Firstly, pilot study is done at UTM Johor Bahru campus involving 20 international students. The purpose of this pilot study is to measure the understanding of international students on the questionnaire. After revision of the questionnaire, it was distributed to the population focused in this research.

Instrument

This research is used a set of questionnaires consisting of three aspects such as: the demography, different aspects of life during MCO, and its issues and challenges among international students in fully online education.

Results

This research proposes a random sampling of international students in Johor Bahru campus. The MCO began in March 2020 until December 2022. Link of questionnaires were distributed among students in an online class via Google meet during MCO period. The data was collected from July 2021 until December 2021. Data was analyzed using SPSS software. The findings help answer the objectives of the research. In addition, demographic characteristics of the respondents are described.

Demographic

A total number of 150 international students participated in this research grant. Three quarter are male (75.2%) and the remaining 24.8% are female. The majority of respondents are full-time students (95.3%) doing their degree (83.2%). Majority of the respondents depend on their family and spouse as a source of income (83.9%). During the MCO, half of the respondents are back in their country (59.1%), one fifth are outside the University campus

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(21.5%), some choose to stay at the hostel in university campus (13.4%) and remaining one fifth prefer to stay at a private apartment (6%). See Table 1 below.

Table 1

Demography of participants

	Details	Frequence	Percent
Sex	Male	112	75.2
	Female	37	24.8
	Total	149	100.0
Age group	16-20 years old	56	37.6
	21-25 years old	67	45.0
	26-30 years old	8	5.4
	31 years old and	18	12.1
	above		
	Total	149	100.0
Residence	Hostel at University	20	13.4
	Campus		
	Private Apartment	9	6
	Outside Universiti	32	21.5
	Campus		
	Outside Malaysia	88	59.1
	Total	149	100.0
Mode of Study	Full-time	142	95.3
	Part-time	7	4.7
	Total	149	100.0
Education Level	Degree	124	83.2
	Master's Degree	7	4.7
	PhD	17	11.4
	Other	1	0.7
	Total	149	100.0
Source of Income	Scholarship	4	2.7
	Study loan	3	2.0
	Working	17	11.4
	Family/spouse	125	83.9
	Total	149	100.0

International Students' Perception of MCO

Analysis of data and the reporting of the results of those analyses are fundamental aspects of the conduct of research. This section answers the first objective of the study: To investigate the international students' perception of MCO. Table 2 shows the result of a one-sample t-test with the test value of 3 for the perception of International Students about MCO.

More than two-thirds of the respondents have a very good relationship with their relative (67.92%), university colleagues (66.71%), university lecturers (65.10%) and their life change (64.17%) during the period of Covid-19 pandemic.

On the contrary, the respondents do not fear the risk of Covid-19 contagion (63.49%), social isolation (60.40%) that affected their academic study experience (59.60%) as all of these items are not significant with the p-value >.05.

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In overall, more than six in ten (64.03%) of the international students perceived that the Covid-19 has affected their life, their relationship with their family members and relatives (M = 3.2013, SD = 2.769, p = 0.006).

Table 2
International students' perception about MCO

	Ν	М	SD	%	t	df	р
My relationship with relatives during this period of COVID-19 pandemic	149	3.3960	1.16723	67.92	4.141	148	0.000
My relationship with university colleagues during this period of COVID-19 pandemic	149	3.3356	1.21706	66.71	3.366	148	0.001
My relationship with university lecturers during this period of COVID-19 pandemic	149	3.2550	1.24745	65.10	2.496	148	0.014
The changes in my life due to the social isolation during this period of COVID-19 pandemic	149	3.2483	1.25152	64.97	2.422	148	0.017
My fear of the risk of contagion during this period of COVID-19 pandemic	149	3.1745	1.22877	63.49	1.733	148	0.085
The condition of social isolation imposed during this period of COVID-19 pandemic	149	3.0201	1.21071	60.40	0.203	148	0.839
My academic study experience during this period of COVID-19 pandemic	149	2.9799	1.25993	59.50	- 0.195	148	0.846
Overall International Students' Perception About MCO	149	3.2013	0.88750	64.03	2.769	148	0.006

5-points scale where 1 = poor (0-20%), 2 - fair (21% - 40%), 3 = neutral (41% - 60%), 4 = very good (61% - 80%), and 5 = excellent (81% - 100%), Test value = 3

Experience of the International Students During MCO

Table 3 presents the findings of the experience of international students during MCO eventually answering the second objective of this research. It reveals majority of the international students are concerned about senior members of the family (80.81%). Three-quarters of them also trust in both the legitimacy of the University in updating information about the MCO and that staying together with friends is better than being alone during MCO (79.60%). Furthermore, they also experienced an effective action from the University at controlling the spread of Corona Virus upon announcing the MCO (75.44%), not only did the University set an effective curfew during MCO (74.63%) but seven in ten of the respondents received essential aid provided by the University during the MCO period (72.89%).

Prevention is better than cure, two third of the respondents chose not to use public transportation (69.26%) as they preferred to stay inside and came to an agreement with distance learning online (68.32%) and restricted themselves from socializing and learning activities with friends (67.38%)

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In addition, six in ten of the respondents were scared of the infection (66.85%) but at the same time were satisfied with the facilities provided for online learning (66.31%). They had a mild fear of having an infection with friends (64.16%). However, they felt safe staying inside the campus (63.49%) and half of the international students' relationships and lecturers had a neutrally better relationship (56.64) but were not effective during the MCO (58.52%) as all of these items are not significant with the p-value >.05.

Table 3
Experience of the international students during MCO

Experience (N= 149)	М	SD	%	t	df	р
I am concerned about senior member of the family	4.0403	1.17909	80.81	10.769	148	0.000
I trust in the legitimacy of the University update information about the MCO	3.9799	1.06840	79.60	11.195	148	0.000
Staying together with friends is better than alone during MCO	3.9799	1.18247	79.60	10.115	148	0.000
The University has been highly effective at controlling the spread by announcing the MCO	3.7718	1.13971	75.44	8.266	148	0.000
The University has set an effective curfew during MCO	3.7315	1.15449	74.63	7.735	148	0.000
The University provides essential aid for the stranded students during MCO	3.6443	1.20289	72.89	6.538	148	0.000
I avoid going and using public transportation	3.4631	1.29721	69.26	4.358	148	0.000
I agree on distance learning via online	3.4161	1.51613	68.32	3.350	148	0.001
I restrict my socializing and learning activity with friends	3.3691	1.28057	67.38	3.519	148	0.001
I am scared of the Covid-19 infection	3.3423	1.38414	66.85	3.019	148	0.003
The facilities provided to continue with online learning are satisfying	3.3154	1.32077	66.31	2.915	148	0.004
I have mild fear of having infection with friends	3.2081	1.26424	64.16	2.009	148	0.046
I feel safe staying inside the campus during MCO	3.1745	1.21773	63.49	1.749	148	0.082
Relationship between students and the University staff are effective during MCO	2.9262	1.31053	58.52	-0.688	148	0.493

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Overall Experie	nce		3.4796	0.77361	69.59	7.568	148	0.000
better during MCO								
students and	lecturers	are	2.8322	1.31726	56.64	-1.555	148	0.122
Relationship	betw	/een						

5-points scale where 1 = poor (0-20%), 2 - fair (21% - 40%), 3 = neutral (41% - 60%), 4 = very good (61% - 80%), and 5 = excellent (81% - 100%), test value = 3

International Students' Satisfaction in Online using UTM E-Learning

Table 4 shows the results of one sample t-test on the international students' satisfaction in online classes using UTM E-Learning with a test value of 3.0. The overall mean for the satisfaction of using UTM E-Learning is positive (M=3.5869, SD=1.0906). In addition, the highest respondents' satisfaction was with the lecturers. According to them, UTM lecturers are knowledgeable in the subject taught (76.24%) and were accessible to attending questions and give them feedback (75.70%) also encouraged them to discuss and respond to the questions given (74.44%). In addition, lecturers managed lectures time and pace well (74.63%) furthermore giving them fair grading (72.35%) by having to an accurate test that they have learnt in this course (70.20%).

Two third of them were satisfied with the online help features of the course (69.93%) and that lecturer understood their learning needs (69.26%). Not only that, the respondents were satisfied with the online interaction they had with the lecturer (68.86%) by them receiving useful feedback on their performance on test, papers, etc (68.46%) because the lecturer instills interesting online teaching methods to make the subject interesting (68.05%).

It can be concluded that international students are all satisfied with their lecturers during the pandemic as they gave the attention needed with a good strategy of online teaching method used to make the subject interesting.

For experimental and quasi-experimental designs, there must be a description of the flow of participants (human, animal, or units such as classrooms or hospital wards) through the study. Present the total number of units recruited into the study and the number of participants assigned to each group. Provide the number of participants who did not complete the experiment or crossed over to other conditions and explain why. Note the number of participants used in the primary analyses. (This number might differ from the number who completed the study because participants might not show up for or complete the final measurement.)

Table 4
International students' satisfaction in online class using UTM E-Learning

Satisfaction (N=149)	М	SD	%	t	df	р
The lecturers who conduct this method are knowledgeable in the subject taught	3.8121	1.17041	76.24	8.469	148	0.000
The lecturer is accessible to answer question and give feedback	3.7852	1.20564	75.70	7.950	148	0.000
The lecturers encouraged discussion and responded to questions	3.7718	1.17474	75.44	8.020	148	0.000
The lecturer managed lectures time and pace well	3.7315	1.27677	74.63	6.994	148	0.000
Lecture's method of grading was fair	3.6174	1.18890	72.35	6.339	148	0.000

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The test was accurately assessed what I have learnt in this course	3.5101	1.26072	70.20	4.939	148	0.000
I am satisfied with the online help features of the course	3.4966	1.32861	69.93	4.563	148	0.000
The lecturer understood student's learning needs	3.4631	1.34327	69.26	4.208	148	0.000
I am satisfied with the online interaction I had with the lecturer	3.4430	1.36749	68.86	3.954	148	0.000
I received useful feedbacks on my performance on test, papers, etc	3.4228	1.27439	68.46	4.050	148	0.000
The lecturer instills interesting online teaching method to make the subject interesting	3.4027	1.30963	68.05	3.753	148	0.000
Overall Satisfaction	3.5869	1.09063	71.74	6.569	148	0.000

5-points scale where 1 = poor (0-20%), 2 - fair (21% - 40%), 3 = neutral (41% - 60%), 4 = very good (61% - 80%), and 5 = excellent (81% - 100%), test value = 3

3.5 The Relationship between Satisfaction and Selected Variables

This section is interested to measure the relationship between satisfaction, perception and experience. Bivariate correlation is used to find whether perception and experience affecting the satisfaction. The bivariate table 5 below shows that experience has a positive strong relationship with satisfaction (r = 635, p = .000). Moreover, experience is strongly (r = .752, p = .000) affecting the satisfaction.

Based on the findings, the perception and experience affecting the international student satisfaction. Therefore, they are satisfied when studying if they have positive perception and experience during the COVID-19 crisis.

Table 5
Bivariate correlation between satisfaction and selected variables

Variables	М	SD	Satisfaction	Perception	Experience
Satisfaction	3.5869	1.09063	1		
Perception	3.2013	0.88750	r = 635, p = .000	1	
Experience	3.4796	0.77361	r = .752, p =.000	r = .697, p =.000	1

Discussion

On the one hand, motivation of international students at UTM towards the use of e-learning is remarkable. Motivation is seen as an order or organized steps in influencing someone to do a task (Othman et al., 2020). Where it has a significant influence on student performance. Thus, students with high motivation have a strong drive to continue to be interested in what they learn as a result of stimulation (Ishak et al., 2020). High motivation can change a person's attitude and behavior to do something well Ibrahim et al (2021), and the encouragement of a person's behavior in achieving a goal (Budiarti & Haryanto, 2016).

Intrinsic motivation is a drive related to oneself without being influenced by external influences Othman et al (2020) which is the drive and desire of students to learn and explore something (Ishak et al., 2020). On the other hand, extrinsic motivation is external, i.e. encouragement obtained as a result of external influences. Both are important in helping students stay learning, and motivation is the main factor influencing the use of e-learning.

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Meanwhile, a person's interest is important in determining the level of motivation of students using e-learning. According to Nur Hakimah and Hafizah (2021), whether motivation is intrinsic or extrinsic, it plays an important role in helping students to study more diligently. This is because, the level of motivation to learn depends on the level of their tendency to achieve something. The higher a person's motivation, the greater the effort that will be made to achieve satisfactory results (Upoyo & Sumarwati, 2011). Thus, each individual plays an important role in improving the quality of life whether an individual need to strive to learn to achieve and accept the new norm learning changes.

Having basic skills and knowledge about the internet can further increase student motivation when using e-learning. Eexternal motivation is far more influencing students to learn using e-learning during the MCO (Nur Hakimah and Hafizah, 2021). Actually, majority of students have basic skills and knowledge about technology and have encouragement and support from their families as long as e-learning is implemented. The comfort and ease of use of e-learning are very important in attracting interest and encouraging students to learn through e-learning (Nanang et al., 2021).

On the other hand, student readiness to use e-learning was significant. According to the study of Sihes and Sani (2011), students' readiness for e-learning is a situation where students need to be independent and play an active role in teaching and learning sessions. It shows that the readiness of students begins and depends entirely on the readiness of the individual or the student himself. In addition, readiness in learning is also a willingness or ability of a student to learn. Therefore, if students have a high level of ability, then learning is easier to understand. Whereas if the student has a low level of ability, the level of understanding obtained is low even making it difficult for the student to accept all the learning learned.

In this study, student readiness was measured from the aspect of technology readiness and student technology skills in using e-learning. According to Anuar et al (2015), the e-learning system is a learning style that is completely dependent on the use of computers and internet networks. Without computers and internet networks, students' willingness to deal with e-learning is unlikely to exist and learning objectives are unlikely to be achieved. Therefore, the availability of ICT technology and facilities is a major requirement when linked to electronic learning (Yusof, 2013). The guarantee of successful implementation of e-learning can be fully realized when there are students' skills and willingness to use technology.

Studies have also proven that there are students who are disturbed by the norms of virtual learning because the lecturer's voice is often interrupted and the student's movement is limited only in front of the computer. However, there are a number of students who blend in with the virtual learning style because e-learning helps students access learning materials easily (Nur Hakimah and Hafizah, 2021). In addition, situational obstacles or environmental conditions on the question item "I carry out other tasks such as helping the family in addition to following virtual learning" obtained the highest mean of 4.53. 60% strongly agree and 35% agree that they need to divide their learning time by helping the family and at the same time carrying out commitments as a student and as a child such as helping the family clean the house, helping parents and others. However, there are 75% who strongly disagree with learning while doing part-time work. This shows that students focus on learning and do not waste time with outside activities.

The findings clearly show that encouragement and readiness in the use of technology can change students' learning patterns when the MCO is implemented. This is because the pattern of learning and teaching through learning during the MCO is a new experience. The fun of learning online is a new experience (Nasimah & Mohamed, 2022) and makes it difficult

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for international students to accept the new norm of learning and teaching style because they are used to the traditional method which is face-to-face. Therefore, international students must be independent and always be prepared for all the problems that will be faced during e-learning in order to be able to meet the level of mastery and ability to be effective in engaging directly in learning and teaching even if it is conducted virtually or e-learning.

Conclusion

The fact that most international students were stranded in university campus, the university authorities tried their best to care for the students. COVID-19 pandemic has an impact on everyone's life, in this case the UTM international students. This study has explored the experience of international students in UTM during the MCO. The findings have showed that international students had a very good experience despite having a hard time dealing to balance with emotions and studies. Being far away from family members during this hardship can be difficult for the students thus, international students perceived that the COVID-19 has affected their life, their relationship with their family members and relatives.

Additionally, they have showed a positive satisfaction on the E-Learning online system provided by UTM and that all lecturers are being supportive during the pandemic. Thus, we can conclude there are room of improvement for the universities to take into consideration in providing better services during the outbreak of COVID-19. This too will help assist the university admin and policymakers to understand the need and requirements of international students in Malaysia. Their life and the issue of access to infrastructure during the pandemic of COVID-19.

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References

- Abd Ghani, A. (2011). *Penggunaan Sistem E-Pembelajaran Author Dalam Pengajaran dan Pembelajaran Di UTHM* (System Usage for E-Learning Author in Teaching and Learning at UTHM). 1-19.
- Abdul Rashid, A. A., Amin Al, H. S., Umi Hamidaton, M. S. L., & Syafiqah, R. N. A. (2020). Strategi Pembangunan Aspek Kesejahteraan Kendiri bagi Mendepani Tekanan Akademik Semasa Wabak COVID-19 (Developmental Strategy on the Aspect of Personal Well-being in Facing Academic Challenges During COVID-19 Outbreak). *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 5(12), 16-30. Retrieved from https://msocialsciences.com/index.php/mjssh/article/view/594/413.
- Abu Hassan, S. A., Abidin, Z. S., & Hassan, Z. (2021). Keberkesanan Pembelajaran Dan Pengajaran Dalam Talian (E- Pembelajaran) Terhadap Pembelajaran Pelajar Di Kolej Komuniti Hulu Langat (The Effectiveness of Online Learning and Teaching (E-Learning) towards Students' Learning Experience at Hulu Langat Community College). International Journal of Humanities Technology and Civilization (IJHTC), 2(10), 1–14.
- Ahad, N., Hamid, M. F. A., Noor, A. M., & Lazin, Z. (2020). Analisis Faktor Tekanan Yang Mempengaruhi Pelajar Kolej Komuniti Negeri Johor Ketika Perintah Kawalan Pergerakan (Analysis on Factors Contributing to Stress Among Johor Community College Students During Movement Control Order). *Jurnal Dunia Pendidikan*, 2(3), 158-172.

Vol. 13, No. 10, 2023, E-ISSN: 2222-6990 © 2023

- Anuar, Roslaili, & Wan Zakaria, W. Z. (2015). TPACK dalam Pendidikan Seni Visual: Satu Kajian Mengenai Kesediaan Pelajar Menggunakan E-Pembelajaran dalam Pembelajaran Pendidikan Seni Visual (TPACK in Visual Arts Education: A Research on Students' Readiness to Use E-Learning in Visual Art Lessons). *Jurnal Seni Dan Pendidikan Seni*, 3, 8–18.
- Auerbach, R. P., Mortier, P., Bruffaerts, R., Alonso, J., Benjet, C., Cuijpers, P., & Kessler, R. C. (2018). WHO world mental health surveys international college student project: prevalence and distribution of mental disorders. *Journal of abnormal psychology*, 127(7), 623.
- Aydemir, D & Ulusu, N. N. (2020). Commentary: Challenges for PHD student during COVID19 pandemic: Turning crisis into an opportunity. *Biochemistry and Molecular Biology Education*, 48(5), 428-429. https://doi.org/10.1002/bmb.21351
- Briggs, A. (1961). Cholera And Society in The Nineteenth Century. *Past and Present* 19(1):76-98
- Ebrahimi, M. (2022). COVID-19 Risk Management in Malaysia. In M. Ebrahimi, & U. Aydemir (Eds.), *A Global Pandemic Ripple Effects of COVID-19* (pp. 9-24). Sabah, Malaysia: Penerbit Universiti Malaysia Sabah.
- Ebrahimi, M. & Yusoff, K. (2020). The Regulatory Education Environment in Malaysia and Willingness to Accept Unlimited Numbers of International Students. *International Journal of Interdisciplinary Educational Studies*, 15(2), 63-72.
- Fathoni, A. & Retnawati, H. (2021). Challenges and strategies of postgraduate students in online learning during the Covid-19 pandemic. *Jurnal Prisma Edukasia*, 9(2), 233-247. https://doi.org/10.21831/jpe.v9i2.37393
- Hamsan, H. H., Mae, T. P. & Selama, J. (2010). Stres dan Pencapaian Akademik Mahasiswa Pembangunan Manusia di Universiti Putra Malaysia (Stress and Academic Achievement among Students of Human Resources at Universiti Putra Malaysia). *Jurnal Personalia Pelajar*, 13, 57 72
- Hannigan, B., & Saini, S. (2020). Learning In Lockdown: A Case Study of International Student Experiences Of The Covid-19 Lockdown. *Scope: (Teaching & Learning)*, 9, 24–29. https://doi.org/10.34074/scop.4009014
- Hassan, J., & Edje, N. (2011). Penggunaan Internet di dalam mempertingkatkan proses pengajaran dan pembelajaran dalam kalangan pensyarah Fakulti Pendidikan UTM Skudai (Internet Usage in Upgrading the Educational and Learning Process Among Lecturers at Faculty of Education, UTM Skudai). *Jurnal Pendidikan*.
- Ibrahim, R., Nasri, N. M., & Ibrahim, R. (2021). Kesediaan Murid Sekolah Menengah Terhadap Penggunaan Flipped Classroom Dalam Mata Pelajaran Ekonomi (The Readiness among Secondary School Students in the usage of Flipped Classroom for Economics Subjects). *Jurnal Dunia Pendidikan*, 3(1), 2013–2025.
- Ishak, A. A., Zuraina, A., & Ahmad, T. (2020). Pembelajaran atas Talian: Tinjauan terhadap Kesediaan dan Motivasi dalam kalangan pelajar Diploma Logistik dan Pengurusan Rantaian Bekalan, Politeknik Seberang Perai, Pulau Pinang (Online Learning: An Overview of Readiness and Motivation among Students of Diploma in Logistics and Supply Chain Management at Seberang Perai Polytechnic, Pulau Pinang). *Jurnal Dunia Pendidikan*, 2(4), 68–82.
- Joe Myers. (2021). When will life return to pre-COVID normal? World Economic Forum. Diakses pada 20 November 2021 dari: https://www.weforum.org/agenda/2021/04/normalpre-covid-post-pandemic/

Vol. 13, No. 10, 2023, E-ISSN: 2222-6990 © 2023

- Shiung, K. T. (2013). Kajian Mengenai Penggunaan E-Pembelajaran (e-learning) Di kalangan Pelajar Jurusan Pendidikan Teknik dan Vokasional Di Institusi Pengajian Tinggi (IPTA) Negeri Johor (Research on The Usage of E-Learning Among Students of Technical and Vocational Education at an Institute for Public Higher Education (IPTA) in Johor). *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Daud, M. K. A., Azizan, A. T., & Sanusi, M. D. (2012). Penerimaan Dan Kebolehgunaan Rekabentuk E-Pembelajaran (CIDOS) Sebagai Sistem Pengurusan Pembelajaran Di Politeknik Malaysia (Acceptance and Design Usability of E-Learning (CIDOS) as a Learning Management System at Malaysian Polytechnic). Faculty Technology Creative and Heritage, Universiti Malaysia Kelantan, Malaysia E-Mail, 1–12.
- Mat Yusof, M. (2013). Tahap Kesediaan Pelajar Diploma Dalam Mengimplimentasikan Kaedah Epembelajaran Di Politeknik Malaysia (Level of Readiness Among Diploma Students in the Implementation of E-Learning at Malaysian Polytechnic). *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Md Yusof, H. A., & Azman, N. (2013). Perkaitan antara pengurusan masa dan stres dalam kalanganpelajar siswazah di IPTA (Relationships Between Time and Stress Management Among IPTA Graduate Students). *AJTLHE*, 5(1), 34-49.
- Mesman, N. S., & Abd Majid, Z. (2021). Kajian kesediaan pelajar mengikuti pembelajaran dalam talian semasa perintah kawalan pergerakan (PKP) membendung Covid-19 Fasa 2 (Research on Students' Readiness in Online Learning During Movement Control Order for Second Phase COVID-19). *International Journal of Education and Pedagogy*, 3(1), 195–202.
- Mohamad, M. S., & Ibrahim, R. (2018). Perbezaan Gender Tekanan Psikologikal dan Kesihatan Mental dalam Kalangan Pelajar Prasiswazah (Differences in Psychological Stress and Mental Health between Genders Among Undergraduate Students). *Jurnal Personalia Pelajar*, 21(1): 55-66.
- Mohamad, N. M. (2021). Cabaran pedagogi norma baharu di kolej universiti islam perlis (kuips) ketika pandemik wabak koronavirus covid-19 (The New Norm Pedagogy Challenges at Perlis Islamic College University). *Jurnal Pengajian Islam*, 14, 243–254. https://oarep.usim.edu.my/jspui/handle/123456789/6847
- Najib, M. H., Abu Bakar, N. R., & Othman, N. (2017). E-pembelajaran dalam kalangan pelajar di sebuah institusi pengajian tinggi Selangor (E-Learning Among Students at an institute for public higher education in Selangor). Attarbawiy: *Malaysian Online Journal of Education Revised*, 1(1), 74–82.
- Mokhtar, S., Abdul Hamid, B., & Nik Nazli, N. N. N. (2021). Kesediaan Penggunaan E-Pembelajaran Di Kalangan Pelajar Universiti Tenaga Nasional: Satu Tinjauan (The Readiness to use E-Learning Among Students of Universiti Tenaga Nasional: An Overview). *Jurnal Dunia Pendidikan*, 3(1), 161–172.
- Nanang, J., Rahman, S., & Surat, S. (2021). Motivasi Menggunakan E Pembelajaran dan Pencapaian Sejarah dalam Kalangan Pelajar Tingkatan 4 (Motivations to Use E Learning and Achievement of History Subject Among Secondary 4 Students). *Jurnal Dunia Pendidikan*, 3(1), 454–464.
- Norhana Ahad, M. F. (2020). Analisis Faktor Tekanan Yang Mempengaruhi Pelajar Kolej Komuniti Negeri Johor Ketika Perintah Kawalan Pergerakan (Analysis on Factors Contributing to Stress Among Johor Community College Students During Movement Control Order). *Jurnal Dunia Pendidikan*. 150-172.

Vol. 13, No. 10, 2023, E-ISSN: 2222-6990 © 2023

- Omar, N. (2020). Impact of the COVID-19 Pandemic on Higher Education and Policy Impacts. 8 Th Working Group on Student Mobility and Quality Assurance of Higher Education Among ASEAN Plus Three Countries, Vietnam. https://asean.org/wp-content/uploads/8th-APTWG_Agenda-Item-6_Malaysia_Policy-Responses-to-the-COVID-19-1.pdf
- Othman, M. I. R., Ahmad, N., & Kamaruddin, N. K. (2020). Hubungan antara Motivasi Intrinsik dan Ekstrinsik Dengan Pencapaian Akademik Pelajar UTHM (The Relationship between Intrinsic and Extrinsic Motivations, and UTHM Students' Academic Achievement). www.researchgate.net.
- Ramli, M. W., & Dawood, S. R. (2020). Faktor Tekanan Dalam Kalangan Pelajar Universiti Sains Malaysia: Satu Tinjauan Awal. (Stress Factors Among Students at Universiti Sains Malaysia: An Early Overview). *Journal of Social Sciences and Humanities*, 17(7) (2020), 66-76.
- Rosenberg CE. (1987_. *The Cholera Years: The United States in 1833, 1845, and 1866.* Chicago, IL: University of Chicago Press.
- Salleh, M., Jamaludin, M. F., Syaheeda, N., & Safie, M. (2021). Tinjauan Keberkesanan Pembelajaran Secara dalam Talian Ketika Pandemik Covid-19: Perspektif Pelajar Sains Kejuruteraan Politeknik Ibrahim Sultan (An Overview of the Effectiveness of Online Learning During the Covid-19 Pandemic: The Perspective of Engineering Science Students at Polytechnic of Ibrahim Sultan). *Jurnal Dunia Pendidikan*, 3(1), 374–384.
- Scull, J., Philips, M., Sharma, U., & Garnier, K. (2020). Innovations in Teacher Education at the Time of COVID19: An Australian Perspectives. *Journal of Education for Teaching*, 46(4), 1-10. https://doi.org/10.1080/02607476.2020.1802701.
- Sihes, A. J., & Sani, N. (2011). Perlaksanaan E-Pembelajaran Di Kalangan Pelajar Fakulti Pendidikan Dan Fakulti Kejuruteraan Mekanikal Universiti. (The Implementation of E-Learning Among University Students of Faculty of Education and Faculty of Mechanical Engineering). *Journal of Technical, Vocational & Engineering Educational*, Volume, 3(September), 33–51.
- Silinda, F. T., & Brubacher, M. (2016). Distance learning postgraduate students stress while writing a dissertation of thesis. *International Journal of E-Learning & Distance Education*, 31(1), 1-14.
- Srividhya, V. (2007). Mental health and adjustment problems of students of Navodhaya, central and state schools. Thesis Master of Home Science. University of Agricultural Sciences.
- Surjono, H. D. (2015). The effects of multimedia and learning style on student achievement in online electronics course. *Turkish Online Journal of Educational Technology*, 14(1), 116–122
- Thomas, E. (2020). Coronavirus: Impact on Young People with Mental Health Needs. Young Minds. Downloaded from: Https://Youngminds.Org.Uk/ Media/3708/CoronavirusReport_March2020.Pdf
- Tuquero, C. M. (2020). Challenges and opportunity for higher education amid the Covid-19 pandemic: The Philippine context. Pedagogical Research, 5(4). https://doi.org/10.29333/pr/7947.
- Upoyo, A., & Sumarwati, M. (2011). Analisis faktor- Faktor Yang Mempengaruhi Motivasi Mahasiswa Profesi Ners Jurusan Keperawatan Unsoed Purwokerto (Factor Analysis Factors Contribute to Motivation Among Nursing Undergraduates at the Department of Nursing Unsoed Purwokerto). *Soedirman Journal of Nursing*, 6(2), 81–87.

Vol. 13, No. 10, 2023, E-ISSN: 2222-6990 © 2023

- Wade, T., Cairney, J., & Pevalin, D. (2002). Emergence of gender differences in depression during adolescence. *Journal of the American Academy of Child and Adolescent Psychiatr*, 41: 190–198.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R.C. (2020). Immediate Psychological Responses and Associated Factors During the Initial Stage of the 2019 Coronavirus Disease (Covid-19) Epidemic among the General Population In China. *International Journal Of Environmental Research And Public Health*, 17(5), Article 1729. Https://Doi.Org/10.3390/ljerph17051729
- Wantz, Goerge E, (2020): Contemplating Pandemics: The Role of Historical Inquiry in Developing Pandemic-Mitigation Strategies for the Twenty-First Century, PP 44-60
- Woon, L. S.-C., Abdullah, M. F., Sidi, H., Mansor, N. S., & Jaafar, N. R. (2021). Depression, anxiety, and the COVID-19 pandemic: Severity of symptoms and associated factors among university students after the end of the movement lockdown, DOI:10.1371/journal.pone.0252481
- Yikealo, D., Tareke, W., & Karvinen, I. (2018). The level of stress among college students: A case in the college of education, Eritrea Institute of Technology. *Open Science Journal*, 3(4), 1-18.
- Zuraina, A., Ahmad, M., Ishak, A. A., & Rosli, R. M. (2020). Medium Pembelajaran Sokongan: Kesediaan Pelajar Diploma Pengurusan Logistik dan Rangkaian Bekalan terhadap Penggunaan Aplikasi iHUB (Supportive Learning Medium: The Readiness of Students of Diploma in Logistics Management and Supply Chain, in using iHUB Application). *Jurnal Dunia Pendidikan*, 2(4), 54–67.

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