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OPPORTUNITIES OF THE ONLINE LEARNING FROM STUDENTS' PERSPECTIVES: CASE STUDY IIUM STUDENTS

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Abstract:

The Covid-19 pandemic spread rapidly and had negative consequences on the most of the sectors in Malaysia. As a result of the enforcement of Movement Control Order (MCO) and the need to maintain a certain physical distance in order to combat the pandemic, universities and schools have temporarily closed. Online learning has completely replaced in-person learning in order to keep the educational process running as usual. This paper aims to discover the opportunities of online learning system from the perspective of students in International Islamic University of Malaysia (IIUM) during pandemic via online survey. Based on previous literatures, a few factors that significantly contributed to the opportunities of online learning gained by the students, which are: 1) Course Content, 2) Course Assessment, 3) Social Interaction, 4) Instructor Characteristics, 5) Technological Skills and 6) Time Management. In this article, a research model and hypotheses also were developed prior to data analysis. The collected data were then analysed using SPSS to gain the results. The descriptive statistics, correlation analysis using Pearson Correlation Coefficients, and multiple regression analysis was conducted. The result of correlation and multiple regression analysis revealed a significant relationship between the independent variables and dependent variable. Besides, two hypotheses were supported with the dependent variable which are Course Content and Course Assessment. The study also found that the best factor that has the highest influence on the opportunities of online learning in IIUM, which is Course Content. The results of the study contribute to the body of knowledge about the prospects of online learning by looking at the factors and their findings, which may be an important step to understand and improve the online learning system in the future.

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Keywords:

Online Learning, Opportunities of Online Learning, Covid-19 Pandemic, Students' Perspectives, Malaysia

Introduction

Since December 2019, the rapid spread of the novel coronavirus illness (COVID-19) from Wuhan, China, has had negative consequences around the world, to the point where the World Health Organization (WHO) declared it a pandemic on March 11, 2020 (WHO, 2020; Kapasia et al., 2020). The pandemic has affected almost every sector of the country, and Malaysian sectors are no exception in their struggle against Covid-19. Higher education is one of the areas in Malaysia that has been severely impacted (Lazrina et al., 2021). As the number of cases increased, the Malaysian federal government was forced to take serious measures, implementing a nationwide Movement Control Order (MCO) on March 18, 2020 (Abdul Halim, 2020) to combat the pandemic. Many countries, including Malaysia, have implemented mandatory physical distance policies, with the consequence that national-level schools and universities, including the International Islamic University of Malaysia (IIUM), remain closed for the time being (Koet & Aziz, 2021). IIUM is one of the public universities in Malaysia and has several campuses spread across several states of Malaysia, comprising 14 Kulliyyahs (faculties), three institutes and two centres. As a result, the learning approach has completely changed, with face-to-face learning activities (physical classes) replaced by an online learning method (virtual classes) to continue learning as usual.

Learning experiences employing various electronic devices (e.g. laptops, computers, smartphones, etc.) with internet access in synchronous or asynchronous environmental conditions are referred to as online learning (Zalat et al., 2021). Online learning makes use of information and communication technologies to make online teaching resources more accessible and to create collaborative learning environments for students (Rossi, 2009). Online learning is also known as distance learning, in which students and lecturers are separated by distance but can still interact via the Internet (Bartley & Golek, 2004). Like any other method of learning, online learning has its advantages or opportunities, particularly on the students' side.

In terms of opportunities and advantages, online learning has the potential to make the educational process more creative, student-centred, and adaptable (Singh & Thurman, 2019). When delivering curriculum to students in remote and rural places, online delivery of courses is also convenient and cost-effective (Dhawan, 2020). Furthermore, students perceived that online learning allows them to pursue their studies from anywhere, especially in difficult situations like the COVID-19 pandemic, where they cannot attend universities and schools. It also helped cut the amount of time, effort, travel fees, and other costs associated with traditional learning. When it comes to location, time, and health concerns, online learning is a great option. It also increases knowledge and skill efficacy by allowing access to a large amount of information, improves collaboration, and creates learning-sustaining relationships (Maatuk et al., 2021). Students also can access the numerous and unlimited course materials online, recorded classes, explore new knowledge and technology and have flexible time to learn.

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Thus, this study aims to discover and gain insight into the opportunities of online learning systems from the perspective of university students, specifically IIUM students, during the COVID-19 pandemic. To answer the stated research questions and research objectives, the researcher developed a research model and hypotheses that encompasses a dependent factor/variable, which is opportunities of online learning and six independent factors/variables, namely: (1) Course Content, (2) Course Assessment, (3) Social Interaction, (4) Instructor Characteristics, (5) Technological Skills and (6) Time Management. This study conducted empirical research and collected data through an online survey, focusing on university students as the target group. The data have been analysed by using IBM SPSS version 25. Descriptive statistics, correlation and multicollinearity analysis, and multiple regression analysis were performed to determine the conclusions of the study.

Objectives

This study will answer three (3) main objectives which are:

1. To identify the factors or variables contributing to the opportunities of online learning gained by IIUM students.
2. To measure the degree of the identified factors contributing to online learning opportunities from IIUM students' perspectives.
3. To examine which factor(s) significantly contribute to online learning opportunities from the view of IIUM students.

Scope of The Research

This research will discuss the opportunities of online learning systems from the perspective of IIUM students, particularly during the COVID-19 pandemic. The main respondents involved are undergraduate and postgraduate students in Kulliyyah of Information and Communication Technology (KICT) of IIUM, who attended online classes in previous semesters. This section discusses the hypotheses in the correlation between the defined factors (independent variables) based on previous literature. In this study, six (6) factors of online learning opportunities have been identified. The definitions of these factors (variables), along with the previous studies to support the hypotheses developed in this research, will be discussed in this section.

Technological Skills

Online learning offers independent learning and the development of new skills that promote lifelong learning (Dhawan, 2020). Technology skills are crucial for everyone to have in order to be ready for the digital age, especially in light of the competitive and demanding job market. Therefore, it is crucial for university students to prepare for such a difficult journey (Cheam, 2021). A study carried out by Farrah and al-Bakry (2020) aimed to examine the perceptions of EFL students in Palestinian universities about online learning during the COVID-19 pandemic. According to the result of the survey, the statement "E-learning increases students' technological skills" had the highest mean score of 3.85. This means that online learning contributes to the acquisition of new skills by the students such as technological skills, which is useful to be applied in the future. Based on these justifications, the following hypothesis is developed for this study:

H1: Technological Skills significantly contributes to opportunities of online learning gained by the students

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Course Content

Course content is described as the learning and supplementary materials that students have access to online, such as required reading lists, e-books, lecture recordings, and presentation slides. A study by Alodwan (2021) aimed to investigate from the viewpoints of EFL students the advantages of the online learning system during the pandemic. The respondents of the study consisted of 20 students who were chosen purposely from the World Islamic Sciences and Education University in Amman, Jordan. A semi-structured interview was used to collect data. The results of the study demonstrate that online learning saves time, money, and effort while allowing students to listen to recorded lectures numerous times. Another study by Zboun & Farrah (2021) examined students' perspectives towards the benefits and challenges of fully online classes at Hebron University in Palestine via an online survey. This study revealed that students found online classes comfortable and convenient, quick to access, and easy to reach; 85 per cent of them also felt that it is easy to review the course material before exams. Additionally, there are many online applications that are useful for creating a productive learning environment. Teachers can utilise a combination of audio, videos, chat, and text to communicate with their students. These online tools can also serve as a forum for discussion during class sessions. This can facilitate the development of a collaborative and interactive learning environment where students can give their real-time feedback, ask questions, and engage in engaging learning (Dhawan, 2020). Furthermore, internet technologies allow providing content to many students at once (Coman et al., 2020). As a result, students can access a variety of information, and the provided course material is consistent and easy to update (Sadeghi, 2019). Based on these justifications, the following hypothesis is developed for this study:

H2: Course Content significantly contributes to opportunities of online learning gained by the students

Social Interaction

Social interaction with lecturers and other students is important to achieve fruitful online learning quality (Pham et al., 2021). The effectiveness of online learning can be attained through robust interaction and persistent practice. (Noesgaard & Ørngreen, 2015; Shih et al., 2018). A study by Fatoni et al., (2020), aimed to explore the advantages, constraints and solutions of online learning in response to the COVID-19 pandemic among Indonesian students attending private universities through an online semi-structured questionnaire. The advantage of online learning that students have is smooth interaction. A high response rate of 21.65% is shown through a smooth interaction. They can communicate openly and confidently over the chat and ask questions to the teacher. In comparison to offline lectures, they also feel like they are taking a one-on-one lesson and can ask questions more freely. According to Cheam (2021), students can also connect with one another, share ideas, and respect one another's opinions in an engaging environment created through online learning. Based on these justifications, the following hypothesis is developed for this study:

H3: Social Interaction significantly contributes to opportunities of online learning gained by the students

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Time Management

Time management is the ability to effectively, productively, and efficiently manage time. Because they are concentrated on finishing the assignment and are not wasting time on distractions like social media, students who are good at time management can do more in less time. It can ease stress, give a sense of accomplishment from achieving goals, and allow more time for engaging in activities like hobbies and spending time with family and friends. A study by Khalil et al. (2020) aimed to explore the perceptions of undergraduate medical students regarding the effectiveness of synchronised online learning at Qassim University, Saudi Arabia, via qualitative study. The researchers interviewed 60 medical students via online focus groups. The study revealed that in terms of time management, all participants agreed that online sessions saved time and that their performance had improved as a result of better use of their time as the online learning helped them save time by avoiding daily trips from their homes to campuses and vice versa, improved their sleep patterns, and allowed them to spend more time with families. Based on these justifications, the following hypothesis is developed for this study:

H4: Time Management significantly contributes to opportunities of online learning gained by the students

Instructor Characteristics

In order to help students study more effectively during COVID-19, instructors must take crucial steps to improve the quality of e-learning. Shaid et al. (2021) in their study had examined the degree of students' satisfaction towards online learning implemented at the Faculty of Education, The National University of Malaysia (UKM) during the Covid-19 pandemic via an online survey. The students were from various majors, including Special Education, Sports and Recreation and Teaching English as a Second Language (TESL). According to the survey, undergraduate students had a high mean score of 3.70 in the instructor characteristics area, indicating they were satisfied with online learning. Students can attain better learning outcomes with the aid of pedagogical or proper teaching methods, professional competence, science and technology application level, and the capacity to construct and combine various concepts and practices in designing online course contents in higher education (Alrefaie et al., 2020; Kebritchi et al., 2017; Malik et al., 2018; Taha et al., 2020). Based on these justifications, the following hypothesis is developed for this study:

H5: Instructor Characteristics significantly contributes to opportunities of online learning gained by the students

Course Assessment

Course assessment refers to grading, managing, and online submitting assignments, tests, quizzes, and exams. The assessment's purpose is to evaluate how well a given course meets its intended learning objectives. A research conducted by Othman et al., (2021) aimed to evaluate the effectiveness of Open Distance Learning (ODL) on undergraduate engineering students' performance in Universiti Teknologi MARA (UiTM) during one semester period during the Movement Control Order (MCO) in Malaysia. According to the findings, there was no noticeable difference in the mean assessment score between students using the traditional method and those using the ODL approach. The outcomes showed that both online and in-person students perform at the same level. Additionally, a research by Lorenzo-Alvarez et al. (2019) found that radiology education produced similar academic results when delivered online

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and in person. Numerous comparison studies have been conducted to demonstrate the point and determine whether online or hybrid learning is better than face-to-face or traditional learning methods (Lockman & Schirmer, 2020; Pei & Wu, 2019). These researches' findings indicate that students perform much better online than they do in traditional learning. Based on these justifications, the following hypothesis is developed for this study:

H6: Course Assessment significantly contributes to opportunities of online learning gained by the students

Research Methodology

This research used a quantitative approach to identify the opportunities during online learning among KICT students in IIUM.

Research Population and Sample Size

The main respondents of this research are students of all study levels from Kulliyyah of Information and Communication Technology (KICT) of IIUM. Probability sampling was conducted to allow a strong inferential statistic of the population. According to the Academic Management & Admissions Division (AMAD) of IIUM (2022), there are 1,230 undergraduate students and 224 postgraduate students, with a total number of 1,454 students of KICT in IIUM. Raosoft.com (2004) website is used to calculate the minimum number of respondents to constitute a representative sample for the whole population of students of KICT in IIUM to compute the sample size. Using an indicator percentage of 0.50, a margin error of 10%, a confidence interval of 90%, and a population size of 1454 students, a sample size of 65 was obtained. From the survey, total number of respondents was at 71.

Instrumentation and Measurement

The online questionnaire was distributed and employed in line with the objectives of the study. The questionnaire consists of 23 items and is divided into two parts: the first part includes seven items regarding respondents' demographic information and their study background. The second part contains 16 items regarding students' perspectives on online learning opportunities. As for the opportunities of online learning sections, the items in the questionnaire were all adopted from the relevant literature reviews with minor adjustments, which are from Farrah and al-Bakry (2020) and Selvanathan et al. (2020). The items were measured with a five-point Likert scale that ranges from strongly disagree (1) to strongly agree (5).

Data Collection Procedure

An online questionnaire was created using Google Forms, and the invitation link for participation in the survey was sent to students of KICT in IIUM using social media platforms such as Whatsapp and Telegram groups for a period of five months, starting from 16th February 2023 until 7th June 2023.

Pilot Study

An online questionnaire was designed and tested on 30 students of KICT in IIUM. The survey consisted of 16 items, and the Cronbach's Alpha test was conducted to test the reliability of the survey. The result of the test showed that the value for Cronbach's Alpha was $\alpha = .936$, which describes the internal consistency as very reliable. Subsequently, minor adjustments were made to ensure the clarity of the survey.

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Findings of The Study

In this section, the demographic profile of respondents was analysed and explained. The descriptive findings for the variables and questionnaire items are also shown in this section. In addition, the reliability and validity of the data were tested to determine the stability and correlation between variables. The independent variables used in this study are Course Content, Course Assessment, Social Interaction, Technological Skills, Time Management, and Instructor Characteristics, while the dependent variable is Opportunities of Online Learning. In addition, multiple regression analysis was also performed to demonstrate the relationships and evaluate the effect of the independent variables on the dependent variable.

Reliability Test (Actual Data)

After collecting the actual data, a reliability test was conducted to measure the reliability of the items. This reliability test was carried out on the entire sample size of 71 respondents. Table 1 shows the findings of the reliability test According to Pratama (2020), a questionnaire is considered reliable for gathering data if it has a value greater than 0.6. The survey consisted of 16 items, and the value of Cronbach's Alpha was $\alpha = .911$, which describes the internal consistency as excellent and appropriate for the reliability of the result.

Table 1: Reliability For Actual Data

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.911	.915	16

Demographic Profile of Respondents

The demographic profile of the respondents was based on the age, gender, level of study, year of study, nationality, mode of study, and a question about whether they (respondents) had ever taken any online courses before. Results were summarised as per the Table 2.

Table 2: Demographic Profile of Respondents

	Classifications	Frequency	Percentage
Age	18-25	48	67.6
	26-33	11	15.5
	34-41	6	8.5
	42-49	1	1.4
	50-57	5	7.0
	58-65	-	-
Gender	Male	31	43.7
	Female	40	56.3
Level of Study	Undergraduate	44	62
	Postgraduate	27	38
Year of Study	1st Year	19	26.8
	2nd Year	19	26.8
	3rd Year	15	21.1
	4th Year	17	23.9
	Other: PhD IT	1	1.4

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Nationality	Malaysia	54	76.1
	Other: Pakistan	5	7.0
	Other: Bangladesh	4	5.6
	Other: India	3	4.2
	Other: Turkey	1	1.4
	Other: Nigeria	1	1.4
	Other: Sudan	1	1.4
	Other: Indonesia	1	1.4
	Other: Foreign	1	1.4
Mode of Study	Full Time Student	70	98.6
	Part Time Student	1	1.4
Experience Whether Taken Any Online Courses Before	Yes	69	97.2
	No	2	2.8

From the responses, in terms of age, 67.6% of the respondents indicated that they were aged 18-25 years old. As many as 15.5% of the total students were aged 26-33 years old, 8.5% were aged 34-41, 1.4% were aged 42-49, consists of only 1 student, and the last group is with percentage of 7% of the total students were aged 50-57 years old. There are no respondents aged 58-65 years old were recorded in the survey. In this survey, 43.7% were males and 56.3% were females. In terms of the level of study, 62% came from undergraduate students, while 27% were postgraduate students. As many as 26.8% of all respondents were in 1st Year of study, about 19 students. As many as 26.8% of the total students were in 2nd Year of study, also around 19 students, 21.1% were 3rd Year students, which is around 15 students, 23.9% were in 4th Year of study, consisting of 17 students, and the last is PhD IT student with percentage of 1.4% of the total students, which consists only 1 student.

In this survey, most respondents are from 1st Year and 2nd Year students, around 19 students, respectively. The majority of the respondents, 76.1%, were from Malaysia, followed by Pakistan, Bangladesh and India at 7.0%, 5.6% and 4.2%, respectively. 1.4% of the respondents were from Turkey, Nigeria, Sudan, Indonesia and Foreign. In terms of mode of study, almost all respondents are full-time students (98.6% or 70 students), and there is only one part-time student, with 1.4%. As many as 97.2% of all respondents chose “Yes” and showed that they had taken online courses before, about 69 students. While only 2.8% of all respondents chose “No”, it showed that they had never taken any online courses before the online learning period, which was around 2 students.

Descriptive Statistics

In this section, descriptive statistics are used to identify the mean value, total mean, and standard deviation of this study's dependent and independent variables. The mean score was interpreted according to Othman and Ishak (2011). The mean score is considered low if the value is between 1.00-2.00, moderately low if between 2.01-3.00, moderately high if between 3.01-4.00 and high if it is between 4.01-5.00. Interpretation of standard deviation or SD was done according to Chauhan et al. (2017). SD is acceptable if less than 2.0 and unacceptable if more than 2.0.

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Relationship Between Independent and Dependent Factors (Variables)

This section covers the results of the study and the research hypotheses proposed in the study. Analysis of correlation and multiple regression analysis were performed to address the research questions and the hypotheses of the link between variables.

Correlation Analysis and Multicollinearity Test

The relationships between each of the variables (as measured by OOL, TS, CC, SI, TM, IC and CA) were examined using the Pearson Correlation Coefficient as in Table 4.20 below. As shown in Table 4.20, the results showed that all seven variables are statistically significant correlations with a positive relationship among one another at 0.01 alpha level (2-tailed). The result shows that all factors are positively correlated with the opportunities of online learning.

Table 3: Correlation Analysis

	OOL	TS	CC	SI	TM	IC	CA
OOL	1						
TS	.582**	1					
CC	.797**	.552**	1				
SI	.555**	.362**	.667**	1			
TM	.341**	.272*	.301*	.204	1		
IC	.581**	.469**	.621**	.404**	.374**	1	
CA	.639**	.434**	.618**	.355**	.335**	.486**	1

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

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

Note: OOL = Opportunities of online learning; TS = Technological Skills; CC = Course Content; SI = Social Interaction; TM = Time Management; IC = Instructor Characteristics; CA = Course Assessment.

As shown in Table 3 above, there were moderate positive and statistically significant correlations between technological skills (as measured by TS) and opportunities of online learning (as measured by OOL) with $r = .582$, $n = 71$, $p < 0.01$. Therefore, H1 (*Technological Skills significantly contribute to Opportunities of Online Learning gained by the students*) was supported. Course content (as measured by CC) was found to be highly positive and statistically significant, with opportunities of online learning (as measured by OOL) at $r = .797$, $n = 71$, $p < 0.01$. Hence H2 (*Course Content significantly contributes to Opportunities of Online Learning gained by the students*) was supported. Social interaction (as measured by SI) has a moderately positive and statistically significant correlation with opportunities of online learning (as measured by OOL) at $r = .555$, $n = 71$, $p < 0.01$. Therefore, H3 (*Social Interaction significantly contributes to Opportunities of Online Learning gained by the students*) was supported.

There were weak positive and statistically significant correlations between time management (as measured by TM) and opportunities of online learning (as measured by OOL) with $r = .341$, $n = 71$, $p < 0.01$. Therefore, H4 (*Time Management significantly contributes to Opportunities of Online Learning gained by the students*) is supported. The result of the instructor characteristics (as measured by IC) displays that there are moderately positive and statistically significant correlations with opportunities of online learning (as measured by OOL) at $r = .581$, $n = 71$, $p < 0.01$. Hence, H5 (*Instructor Characteristics significantly contributes to Opportunities of Online Learning gained by the students*) was supported. There were also moderately positive correlations between course assessment (as measured by CA) and opportunities of online learning (as measured by OOL) with $r = .639$, $n = 71$, $p < 0.01$.

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Therefore, H6 (*Course Assessment significantly contributes to Opportunities of Online Learning gained by the students*) was supported. In this study, there was no multicollinearity detected among all variables as the value of the Pearson correlation coefficient for all variables is less than 0.8. Thus, the findings of the study can be trustworthy and reliable.

Conclusion and Future Works

The findings of this study contribute to the body of knowledge in the context of the opportunities of online learning during the COVID-19 pandemic in Malaysia and worldwide universities and colleges in general. The first significant consequence is the identification of contributing factors to the opportunities of online learning. By providing a theoretical basis that analyses the opportunities of online learning that students gained during the learning process in universities, including the administration and academic staff, students and researchers can use this study to help discover more and enhance the online learning quality to the full scale, especially during the pandemic and other crisis that may occur, thereby contributing to the increase of benefits to students and university. The results of the data confirmed that all the variables are positively correlated and statistically significant. The variables were then testified through the regression analysis. It was found that there are two factors that have an impact on opportunities of online learning which are Course Content and Course Assessment. Thus, this result may enable practical implications from the aspect of strategies and future plans to be recommended for the development of online learning during the pandemic and post-pandemic.

This research has some limitations. The first limitation was that the study was limited to students of KICT in IIUM. Therefore, the findings cannot be generalised to all students in IIUM as well as to Malaysian universities, and therefore it was suggested in future studies to choose a sample that includes all students in a university and college, as well as the universities around Malaysia and worldwide, and compare the opportunities of online learning post-pandemic and other crisis that may occur. The last limitation of this study was the quantitative study, thus, other methodologies such as mixed method (quantitative and qualitative study) are preferable to get better insights on the prospects of online learning.

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