

The issues and challenges of COVID-19 outbreak in Malaysian higher education institutions: A preliminary study

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1. ABSTRACT – COVID-19 has had a significant impact on nearly every profession, including education. The pandemic has offered a push for transformation in the education sector because of the need for social separation; technology-based sustainable education platforms, which have never been used before, have become important. This research aims to dissemble the issues and challenges of COVID-19 Outbreak in Malaysian Higher Education Institutions (HEIs). Al-Kumain et al. (2021) reveal that ‘Absence of online learning facilities’, ‘Conducive learning environment’, ‘Institutional practices for using digital technologies effectively’, ‘Socio-Economic condition’, ‘Turning away from learning’, ‘Increasing psychological stress among students/academic staff’ and ‘Lost of direct interactions’ are the vital problems faced by the students and academic staff in the implementation of teaching and learning during the pandemic of COVID-19 in the Malaysian higher education sector.

1. INTRODUCTION

In January 2020, Malaysia identified its first COVID-19 case. At the time, cases were infrequent and primarily limited to tourists. Local outbreaks began in March 2020, with the largest cluster (Seri Petaling Cluster) being related to the Tablighi Jamaat spiritual assembly in late February and early March, resulting in a substantial spike in local cases and those transmitted to neighbouring countries. Malaysia has become the fastest-growing COVID-19 outbreak in just a few weeks among the Asian countries. The Malaysian government acted fast to stop the virus from spreading and on March 18, 2020, a nationwide "Movement Control Order" (MCO) was announced in order to control the virus's spread.

The MCO caused the Malaysian people to live in social isolation for a long time. The unprecedented rules had drastically impacted people's lifestyles and social ties, resulting in high levels of anxiety as well as the fear of getting the infection. Although the measures taken in Malaysia primarily reduced the COVID-19 outbreak, measures such as lockdowns, strict isolation, social distancing, emergency remote teachings, and uncertainty and delays in the education sectors, particularly universities, have significant implications on students' socio-psychological well-being and anxiety levels.

HEIs face major challenges in managing the impact of the COVID-19 pandemic. The key issues confronting the university community during the transition to distance work include the rise of educational inequality,

the reliance of educational quality not only on the capabilities of educational institutions, but also on the competencies and technical capabilities of students and lecturers. Other issues are the increased academic load on both students and lecturers as well as the potential for quality reduction due to the spread of online education and the rising cost of education.

Early research has shown that pandemics have a negative impact on students' psychological well-being [3], which has resulted in acute despair and anxiety. Cao et al. (2020) [4] studied at the psychological effects of the COVID-19 pandemic on Chinese university students. There were 0.9 percent of kids with severe anxiety, 2.7 percent with moderate anxiety, and 21.3 percent with mild anxiety among the 7143 students evaluated. In a research of 1210 students from 194 cities in China, Wang et al. (2020) [5] discovered that 53.8 percent of respondents had a severe to moderate psychological impact, with female students having a stronger psychological impact. Wang & Wang (2020) [6] argued that increased ambiguity and its implications for students' academic development could influence students' psychological well-being, as demonstrated in earlier studies.

2. METHODOLOGY

2.1 The Participants and Procedure

To evaluate the challenge and risk of the higher-level education in Malaysia during the COVID-19 pandemic, web-based online survey was conducted by using the Google Form; a free survey administration software. The period of study was between 6th June 2021 and 10th June 2021, and the survey form was distributed through WhatsApp messages. The targeted group of participants were the students (154 respondents) and academic staffs (47 respondents) in higher level education institution namely Universiti Teknikal Malaysia Melaka (Melaka), Politeknik Muadzam Shah (Pahang), Universiti Teknologi MARA (Alor Gajah, Melaka). Participation in the survey was voluntary.

2.2 Study Instrument

The questionnaire was divided into two sections where the first section covers on the respondent basic demographic, and the second section is regarding the effect of COVID-19 on the teaching and learning process. In summary, the demographic basis included information on the age, gender, status, level of study, institution, and accommodation. While in the second section, there are eight sub-sections with a total of thirty questions

excluding the demographic questions.

2.3 Data Analysis

Data analysed comprised of questions related to the evaluation of the pandemic risk management challenges for the future of higher level of education in Malaysia. Questionnaires distributed by the researcher are based on the objectives of the study for the purpose of collecting data. The findings of this research are explained based on the two sections of the questionnaire, section A being the demographic information and section B being the evaluation of the risk and challenges in higher learning institution due to the pandemic where 30 questions were asked. Part B includes all the eight subsections as shown in Table 1 below. The response items selected were the Likert scales with the statements of agreement; 1 (strongly disagree) to 5 (strongly agree). The intermediate scale was set as neutral. The data was analysed by summarizing the results based on the frequency of the answers given.

Table1 The effect of COVID-19 on the teaching and learning in higher level education

Sub-section	Description
Part A: Absence of online learning facilities	Difficulties encountered due to lack/ limited facilities to conduct online learning/ teaching
Part B: Conducive learning environment	Environmental interference / distraction that affect the learning/ teaching concentration
Part C: Institutional practices for using digital technologies effectively	Inadequate/ inappropriate tool available for learning/ teaching/ assessment purposes
Part D: Socio-economic conditions	Socio-economic might have been affected due to this uncertainty's conditions during the pandemic
Part E: Turning away from learning	Unable to cope with the current online system may cause education discontinuity
Part F: Emotional discomfort and anxiety	Quarantine/ isolation in pandemic period can affect the psychological disorder
Part G: Increasing psychological stress among students / academic staff	The challenge to grasp the sudden change in learning and teaching process (from classroom to online)
Part H: Loss of direct interactions	Impact of losing the face-to-face interaction among student and academic staff

3. RESULTS AND DISCUSSION

3.1 Part A: Absence of online learning facilities

Part A is the data related to absence of online learning facilities as shown in Table 2. It is about institutions face obstacles to ensure stable network along with quality of E-learning products and services. Lack of E-learning facilities that students could use to connect with their instructors and peers hinder the progress of online education, as discovered in [1] and [2].

Table 2 Data collection for absence of online learning facilities

Item	Absence of online learning facilities									
	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
1 Internet connection problems	11	5.5	17	8.5	59	29.5	52	25.9	62	30.8
2 Limited previous experience with online teaching/learning	8	4	21	10.4	45	22.4	69	34.3	58	28.9
3 Lacking of technological infrastructure – microphone, camera, speakers etc.	20	10	39	19.4	47	23.4	62	30.8	33	16.4
4 Limited devices (laptop, smartphones) for teaching/learning	24	11.9	45	22.4	52	25.9	39	19.4	41	20.4

n - Respondents; % - Percentage

3.2 Part B: Conducive learning environment

Part B is data collection about conducive learning environment as shown in Table 3 below. Students in most low and middle-income families do not have a peaceful space to read in their homes, particularly if they live in a mixed family. Difficulties may occur from the students'

home environment, such as family members (younger and older siblings) interfering with their ability to concentrate on their studies. Family activities might provide distractions, reducing the concentration required to study the subject matter [9].

Table 3 Data collection for conducive learning environment

Item	Conducive learning environment									
	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
1 Difficult to concentrate/understand during lectures	7	3.5	18	9	31	5.4	49	24.4	96	47.8
2 Limited time during lectures	12	6	29	14.4	48	23.9	54	26.9	58	28.9
3 Ineffective time management	9	4.5	15	7.5	52	25.9	50	24.9	75	37.3
4 Environmental Disruptions – noise, house conditions	10	5	11	5.5	38	18.9	53	26.4	89	44.3

n - Respondents; % - Percentage

3.3 Part C: Institutional practices for effective use of digital technology

According to the data gathered, ineffective use of digital and communications technologies such as video collaboration and learning digital management system (LMS) leads to inconsistency in learning and teaching. Table 4 shows the data collected on the effective use of digital technology for institutional practises.

Table 4 Data collected on the effective use of digital technology for institutional practises

Item	Institutional practices for using digital technologies effectively									
	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
1 Exams/quiz are inappropriate measurement tools	10	5	23	11.4	66	32.8	55	27.4	47	23.4
2 Online assignment not suitable	16	8	40	19.9	52	25.9	44	21.9	49	24.4
3 Difficult to use complex concepts – practical, hands-on, lab works	4	2	11	5.5	24	11.9	60	29.9	102	50.7
4 Difficult to do online assessments – discussions, presentations	11	5.5	28	13.9	43	21.4	55	27.4	64	31.8
5 Increase in exam malpractice	6	3	6	3	52	25.9	64	31.8	73	36.3

n - Respondents; % - Percentage

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3.4 Part D: Socio-Economic condition

Table 5 is the data collection on the socio-economic condition. Four questions were constructed. Citizens with weak socio-economic conditions would not be able to implement and use digital platforms for learning and teaching. This could be due to many factors such as lack of digital tools and unable to purchase network connections. Furthermore, due to the pandemic, impoverished student may have to contribute to their family to find extra income as main earning family members may have lost their jobs or earning capacity.

Table 5 Data collected for Socio-Economic Condition

Item	Socio-Economic Condition									
	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
1 Hinder my productivity in future	8	4	9	4.5	47	23.6	70	35.2	65	32.7
2 May negatively affect my employability/ promotion chances	6	3	12	6	57	28.5	74	37	51	25.5
3 Enhance understanding of virtual tools	5	2.5	9	4.5	62	30.8	67	33.3	59	29.4
4 Low financial support for the vulnerable students/ academic staff	4	2	9	4.5	62	30.8	67	33.3	59	29.4

n - Respondents; % - Percentage

3.5 Part E: Turning away from learning

Respondents claimed that virtual classrooms are ineffective because they are easily distracted and turning away from learning. We observed that there are few factors that negatively influence students/academic staff satisfaction significantly as shown in Table 6. The

respondents strongly believe that the students unable to absorb all knowledge and skill (72.1%). Both academic staff and students (53.7%) agree that instructions for assignments are not clear and students/academic staff without access to appropriate digital technologies are excluded from the teaching-learning process (55.2%). The problem of the digital divide was also a big issue particularly for learners in rural areas. This is because students and academic staff in rural areas often lack the needed facilities and expertise to implement remote teaching and learning. While many lacks the required digital skills to implement online education. Technology remains a therapy to bridge the educational gaps that often emanates from unscheduled closure of institutions during pandemics.

Table 6 Data collection for turning away from learning

Item	Turning away from learning									
	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	n	%	n	%	n	%	n	%	n	%
1 Unable to absorb all knowledge and skills	6	3	14	7	35	17.9	79	39.3	66	32.8
2 Instructions for assignments are not clear	10	5	23	1.4	60	29.9	69	34.3	39	19.4
3 Students/Academic staff without access to appropriate digital technologies are excluded from the teaching-learning process	13	6.5	12	6	65	32.3	66	32.8	45	22.4

n - Respondents; % - Percentage

3.6 Part F: Emotional discomfort and anxiety

Teaching and learning online makes significant impact to the emotional discomfort and anxiety to both student and academic staff. From the data collected, depicted that 67.2% of respondents were not happy to participate in distance learning because assignments requested are too many. Some of respondents felt the assignments are too troublesome (57.2%). The heavy amount of coursework to complete by students was cause negative impact of their online learning experience. The load became particularly heavy as the semester was approaching conclusion. Furthermore, four items in Table 7 on the 5-point Likert scale of perceived emotional discomfort and anxiety were endorsed by more than half of the sample, which are often (fairly or very) felt nervous, stressed, and angered and unable to overcome piled up difficulties. The data collected reveal that 67.6% of respondents agree online learning deterioration of mental health, while about 72.2% felt they lacked the motivation during online learning. Due to the calm and comfortable environment at home, lack of knowledge, devotion to family, and lack of a private room, this issue significantly worried a large percentage of respondents to complete assignments/tasks.

Table 7 Data collection for emotional discomfort and anxiety

Item	Emotional discomfort and anxiety									
	Strongly disagree		Disagree		Neutral		Agree		Strongly agree	
	#	%	#	%	#	%	#	%	#	%
1 Assignments requested are too many	9	4.5	13	6.5	44	21.9	59	29.4	76	37.8
2 Assignments are too troublesome	10	5	16	8	60	29.9	44	21.9	71	35.3
3 Deterioration of mental health	8	4	17	8.5	40	19.9	62	30.8	74	36.8
4 Lack of motivation	5	2.5	12	6	39	19.4	54	26.9	91	45.3

- Respondents; % - Percentage

3.7 Part G: Increasing psychological stress among students / academic staff

This section presents the result regarding the

psychological stress endured by students and the academic staff. The discussion majorly revolves on the student-academic staff demographic status. Referring to the survey results, both groups; student and academic staff with total number of 84 respondents and 69 respondents respectively, had answered to strongly agree and agree to the increment of their workload during this pandemic. Academic staff experienced extra workload since they must prepare the online teaching and assessment materials [8]. This includes the effort to rewrite the materials, preparing appropriate tools for assessment, assessing online assignments and test, and recording their video lectures. The responses for the difficulties in adapting the online system for teaching and learning/assessment are shown in Table 8 below.

Table 8 Responses for the difficulties in adapting the online system for teaching and learning/assessment

Scale	Difficulty for students/academic staff to adapt to online learning/teaching/assessment					
	Responses		Academic Staff		Student	
	Number	Percentage	Number	Percentage	Number	Percentage
1	8	4.0%	5	10.6%	3	1.9%
2	14	7.0%	8	17.0%	6	3.9%
3	46	22.9%	8	17.0%	38	24.7%
4	62	30.8%	20	42.6%	42	27.3%
5	71	35.3%	6	12.8%	65	42.2%
Total	201	100%	47		154	

3.8 Part H: Loss of direct interactions

For the duration of this COVID-19 pandemic, the challenge is that everybody is advised to practice the 3C guidelines provided by the Ministry of Health, which is to avoid crowded places, confined spaces and close conversation (face-to-face conversation). By adhering to this method, student and academic staff in the higher education institution have gone through the risk of loss of direct interaction. The summary of the questionnaires and answers as tabulated in Table 9 below.

Table 9 Responses on the limitation of social interaction between students and academic staff

Scale	Limited students-academic staff interaction					
	Responses		Academic Staff		Student	
	Number	Percentage	Number	Percentage	Number	Percentage
1	5	2.5%	2	4.3%	3	1.9%
2	5	2.5%	1	2.1%	4	2.6%
3	37	18.4%	7	14.9%	30	19.5%
4	66	32.8%	20	42.6%	46	29.9%
5	88	43.8%	17	36.2%	71	46.1%
Total	201	100%	47		154	

Another negative impact due to the online teaching and learning implementation is lack of self-confidence among student and academic staff because of lesser public appearance. The number of disagreements to this statement is the lowest with total percentage of 9%. Nearly half of student respondents strongly agree that they are undergoing lacking self-confidence in this pandemic period. The remote learning process at home has made the student to suffer the social isolation, lack of motivation and decrease in self-efficacy [7] which hindered them from participating in any kinds of public appearance. For example, before the pandemic, academic staff usually give lectures in the lecture hall with the present of student, while students need to do their

presentation in front of classmates and lecturer. However, all these are impossible to be done and therefore effecting their self-confidence.

4. CONCLUSIONS

From the standpoint of students and academic staff, the study indicated a number of unfavourable factors associated to the development of online educational procedures at institutions. There were a few students who lacked the essential infrastructure (e.g., digital equipment, internet access) to ensure that the teaching/learning process ran smoothly. As a result, even if the infrastructure was in place for the majority of students, communication with academic staff was still lacking. The government/institutions should offer digital equipment to students who do not have it (e.g., smart phones, tablets) to make it easier for them to attend classes. However, because of the students' familial circumstances (e.g., number of people living in the same household, lack of private space, involvement in domestic tasks), the problem may be partially rectified. Education institutions can provide rooms/dorms with stronger internet connections for students who reside in locations not covered by internet networks or who have a weak internet signal.

4.1 Recommendations for HEIs

It is critical to develop and maintain strong communication channels between higher education management, students, and academic staff, in order to keep all stockholders informed and aware of next moves. Furthermore, academic staff should be given continuous ongoing supports in order to build interactive online content. Institutions must increase Internet bandwidth, expand data centre capacity, obtain licenced e-learning technologies, and provide IT training for students and academic staff. Students should have access to effective and responsive IT technical assistance and troubleshooting services, especially during quizzes and exams. It would be very crucial if the education institutions can provide a 24/7 technical support. Employing proper instructional strategies can definitely help to ease the pedagogical and instructional barrier issues that may happen during the implementation of an online learning environment.

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