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Siti Norliana Ghazali

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New University Students and Online Learning: Readiness, Challenges and Recommendations

Siti Norliana Ghazali

Academy of Language Studies, Universiti Teknologi MARA Terengganu, Malaysia.

Corresponding Author's Email: liana265@uitm.edu.my

Abstract

The emergence of Covid-19 in 2020 has changed the world in many different ways, including the education sector. It has forced many universities to migrate to online platforms in order to continue with their teaching and learning process. Many studies have been conducted on Covid-19's impact at university level, concentrating on existing students only. Therefore, this study focuses on new university students as they embark on this important phase of their lives. This quantitative study examines new students' readiness to learn online, the challenges they face and their recommendations to improve their learning experience. Questionnaires collected from 600 new diploma students at a Malaysian university were analyzed using SPSS 23. Findings showed that the majority was ready and has the necessary equipment like computers or phones and internet for online classes. The main challenges seemed to be their tendency to keep quiet during class, difficulty in understanding online lectures due to internet problems and explaining to the lecturers about lessons that they did not understand.. Students recommended changes in teaching techniques, providing better materials and using the same platform to improve online classes. After 14 weeks of studying online, these new students also indicated that they would prefer blended or hybrid learning compared to face-to-face or online classes. It is advised that further research on these issues are conducted to find out whether adjustments have been made by universities towards the end of this pandemic.

Keywords: New University Students, Readiness, Challenges, Recommendation

Introduction

In 2020, the Covid-19 virus materialized in Wuhan, China and ended up changing the whole world in various unprecedented ways. Almost all sectors are affected by this new deadly virus, including the education sector. In April 2020, Universiti Teknologi MARA (UiTM), like most universities in the nation decided to implement online learning so that the teaching and learning process will not be further disturbed and students could graduate on time. A few years ago, UiTM introduced blended-learning which mainly used the university's online platform, known as U Future. However, not all lecturers were involved as it was optional and some subjects are considered less suitable to be taught online. Before the decision to use online platforms was implemented in April 2020, UiTM management conducted numerous

courses to introduce lecturers to the different tools and applications that could help ease the transition to online teaching.

Becoming a university student is a milestone for many teenagers. It is what most students aspire to throughout their primary and secondary education, to obtain good results so that they can become university graduates. Pre-Covid-19, students would descend on campuses with their family members for registration to begin this exciting new phase of their lives. University is a place where they get to experience a new environment and meet other students from different states and backgrounds through events and activities conducted during orientation week. Although they might feel slightly anxious, they would not be going through this alone as they have others to share their experience and guide them.

However, this was not the case for both diploma and degree students who registered in September 2020. Due to the increasing cases of Covid-19 in Malaysia, UiTM had to welcome their new students online. This meant that students went through their registration and orientation week virtually. Students who have the same experience describe starting university education online as anti-climactic, consider it second-best and feel underwhelmed by the whole experience as they are stuck at home and have to go through this new phase alone (Newman-Bremang, 2020). Experts who weigh in on this issue have mixed feelings and opinions. There are those who feel that it is unsuitable for new students to start their tertiary education online as these students are new to university life and are not used to being independent, unlike existing university students. In addition, they need to attend classes face-to-face as it is not just about acquiring knowledge, it is also a social event which is vital for students who have never met each other before (Fazackerley, 2020). Those who disagree suggest that online classes can also mimic this social event if they are properly planned and carried out; such as by incorporating more group work, discussion and providing activities that encourage students to interact and get to know each other (Hall & Batty, 2020).

Since the emergence of Covid-19 which forced the transition of the education sector towards online classes, many researches have been conducted on different aspects of this new phenomenon. However, the researches mostly concentrate on existing students and do not focus on new students experiencing university life for the first time. Therefore, the objective of this paper is to investigate this particular group of students' readiness to embrace university education virtually and examine the challenges faced by them. It also aimed to find out how online classes can be improved.

This study addresses the following research questions:

1. Are these new students ready for online lessons?
2. What are the difficulties faced by these new students?
3. What are their recommendations to improve online classes?

Literature Review

According to Northeastern University (2020) there are a few requirements to ensure that students succeed in online learning, which is mainly to treat them like conventional, face-to-face classes. These include avoiding procrastination, doing as much work as possible during class and being an active participant by updating lecturers and asking questions when needed. On the other hand, there are also glaring differences such as it requires a reliable internet connection, a computer or at least a smart phone and a designated, quiet place where students can study and complete their assignments. A conducive environment means students are not disturbed by siblings or asked to help with household chores while joining online classes (Hall & Batty, 2020). Getting access to all these might be a problem for students

who are disable or those who come from lower income families. This pandemic has also increased the level of poverty in most countries, created more inequality and difficulties in getting access to basics like food as well as tools required for online learning like computers and internet (Adedoyin & Soykan, 2020).

Students face many difficulties in attending online lessons. The main problem is getting a stable, reliable and affordable internet connection such as home wifi at home (Amin et al., 2020; Muhammad & Kanat, 2020). The government has introduced some initiatives like providing free 1G data to students and UiTM has also provided aid to those from lower income families but these will not assist students who live in parts of Malaysia that do not have internet coverage. The media has highlighted plights of students who reside in remote areas and have to climb trees or trek hills in order to get internet connection. According to Hazlin (2021), this is because of the low fixed broadband penetration rate in Malaysia especially in places like Sabah and Kelantan, where huge areas still do not have connectivity. This is not just limited to remote, rural areas. The Covid-19 pandemic and the implementation of Movement Control Order mean that most Malaysians are forced to work from home, which has increased the volume of traffic and caused problems like slow internet and lagging, including in urban areas like Klang Valley. Omar et al (2021) found that 77% of students get their internet from mobile packs which can be expensive. As a result, students face financial worries as they have to spend more money for internet access due to the use of different applications and platforms in online classes. Poor internet connection and lagging problems can result in difficulty to understand lessons conducted synchronously as students miss parts of the lecture because of unclear audio or video (Maila, 2021; Muthuprasad et al, 2020). They have to refer to their friends or look for other materials online which require more effort and time. This can be frustrating and stressful for some students who might be demotivated and eventually give up trying to understand the lesson (Lim, 2020; Chung et al., 2020).

Other problems include not having a laptop or needing to share their laptops or smart phones with other family members, having parents or siblings who are not sympathetic or understanding of their situation, being tasked with household chores while attending class and noisy environment, caused by siblings or neighbours. In addition, spending too much time looking at their phone or computer screens can result in eye-strain, headache and back pain (Maila, 2021; Mathew & Chung, 2021). Besides these physical effects, students might also suffer psychologically and mentally due to stress and anxiety. Covid-19 has caused many Malaysians to lose their jobs and put their families in financial turmoil. Students might be worried about their families' financial situation and health as well as the stress from their studies. Lischer et al (2021) in their studies find that anxiety among university students is related to economic uncertainty, academic delay and health issues. This is probably worse for first semester students who are new to the environment in university, do not really know their lecturers or classmates and might feel isolated, (Chong & Soo, 2020) lonely and demotivated as they have to stay at home even though they have become university students.

Besides technical difficulties and effects on physical and mental health, students might also find it hard to concentrate during online classes, especially if they are not required to switch on their cameras during synchronous classes. Some distractions include watching television, playing games and chatting with their friends online during class. Students have more tendency to procrastinate if these classes are conducted asynchronously such as where lecturers provide materials, task or recorded lectures instead of having synchronous classes. Research also suggest that lecturers are inclined to give more workload during online classes

compared to conventional ones (Sia & Adamu, 2020; Adams et al., 2021, 2020; Sim et al., 2020). Other problems encountered by students include trouble retrieving materials provided by lecturers and having lecturers who conduct classes out of schedule and for far longer than the duration allowed by universities. Online learning and assessment are also viewed as less effective by students as they allow cheating and plagiarism (Maila, 2021). Students also feel that they have limited, passive roles in online classes as the lessons are mostly not designed to promote discussion or engagement among their peers (Moorhouse, 2020). Although the majority of these millennials are ready to learn via online platforms, they feel that some of the lecturers are not as capable to utilize the technology, especially at the beginning of its implementation (Lim, 2020; Maila, 2021).

Some students find communicating with their lecturers difficult to do online and instead resort to other alternatives to solve their problems like using the internet to look for more information and asking their classmates to help aid their comprehension (Adams et al., 2021; Ferlazzo, 2020). This might be more prevalent among new university students who are still not used to a more relaxed communication in university compared to secondary school and are therefore afraid to ask questions (Chong & Soo, 2021) They also might find it difficult to get help from classmates who they have never met before.

For students to be successful in online distance learning, they have to be independent and well-disciplined. This includes planning and organizing their tasks and reminding themselves to study or complete their assignments on time. Kamaruzaman et al (2021) found that students preferred structured assignments as well as constant reminder from their lecturers to help them gain relevant skills for online learning. Students also need to avoid any distractions such as by switching off their phones, which could be a major challenge for these millennials (Amin et al, 2020; Friedman, 2020). Therefore, besides identifying students' readiness to study online and the challenges they face, it is also important to get students' feedback and recommendations on how to improve online lessons.

Methodology

This research examined new diploma students' readiness to participate in online learning, the difficulties faced by them as well as their recommendations on how online classes can be improved. The research questions presented and discussed in this paper are a larger part of a study to examine new students' experience in becoming university students virtually. This research utilized a questionnaire and convenient sampling to collect data. Initially, 70 of the researcher's students were asked to write a short essay about their online learning experience. The questionnaire was later developed based on these essays and literature review related to online learning among university students. The questionnaire was distributed via google form at the end of the semester to first semester diploma students with the help of their lecturers. This comprised students from Dungun, Kuala Terengganu and Bukit Besi campuses and 600 responses were received and analyzed. The first section of the questionnaire, Part A collected demographic information from the students to find out their family's background and if they had the necessary equipment for online classes. Part B of the questionnaire utilized a Likert scale and students had to indicate the frequency of problems faced by them from never, rarely, sometimes and always. It consisted of 14 items. Cronbach Alpha Analysis was used to measure the instrument's reliability and for Part B, the value is .773. Respondents were required to answer all the questions in Part A and B. The last part of the questionnaire consisted of one open-ended question which was optional. This question asked students to suggest how their online teaching and learning process can be improved.

For data analysis, descriptive statistics analysis techniques using SPSS Version 26 was used to find the frequency for Part A and mean and standard deviation of problems faced by these new students in Part B. For the open-ended question, thematic analysis was used, which is considered the foundational method for other qualitative analysis (Nowell et al, 2017). Each response was read and assigned codes. These codes were later grouped and collated into themes which were analyzed for frequency. 195 suggestions were received on how to improve online classes.

Data Analysis and Results

The 600 respondents are students from seven faculties in UiTM Terengganu, with the biggest number being students from Hotel and Tourism faculty (27.5%), followed by Engineering students (24.5%) and Business Management (14.85). 63.8% of the respondents are female and the other 36.2% are male first semester students. When they answered the questionnaire, a total of 130 (21%) respondents were on campus, mainly students from Hotel and Tourism Faculty who were required to be there beginning week 10. This was to enable them to begin their practical lessons in labs and kitchens.

Table 1

Respondents' Financial Background

Total household income	Frequency	Percentage
Below RM2500	256	43
RM2501 – RM5000	158	26.3
RM5001 – RM11000	135	22.5
RM11001 and above	49	8.2

Harian (2020) categorizes the total household income in Malaysia into ten groups and considers B40 households as those who earn RM5000 or less each month. Based on respondents' financial background in Table 1, it can be determined that 69.3% of the students surveyed come from lower income families or B40. The second largest group is the middle-income families or M40 at 22.5% and only 8.2% of the respondents are from families who earn more than RM11001 monthly.

Are These New Students Ready for Online Lessons?

All groups of household income reported that they were financially affected by Covid-19, with the majority, a total of 140 from B40, followed by 16 from M20 and 7 from T20 household as shown in Figure 2 below.

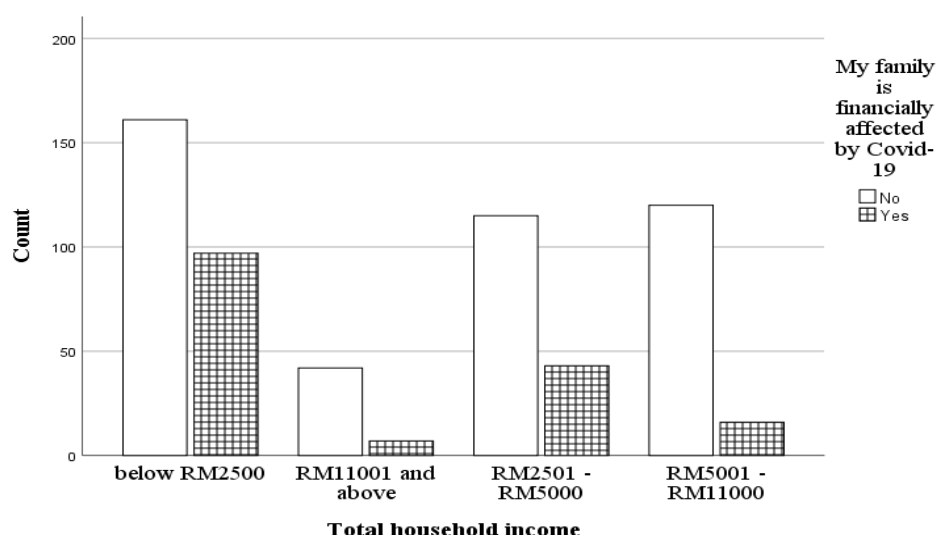


Figure 2: Household income and the numbers financially affected by Covid-19.

Based on Table 3, all the students reported that they had their own smartphone. Only 2.3% of the respondents did not have a computer, all of whom are from B40 families. 20% of the respondents did not have access to 24 hours internet connectivity, with the highest number (75) as predicted, from household income with less than RM5000. 29.8% of the students from all the income groups surveyed said that they did not have a dedicated space at home for studying or a suitable, conducive, environment that support online distance learning. Overall, these findings seemed to indicate that the majority of first semester students had the necessary equipment and were ready to take part in online classes

Table 3

Students' Access to Facilities and Household Income

	Classification	Below RM 2500	RM2501- RM 5000	RM 5001 – RM 11000	More than RM11000
24 hours internet access	Yes	185	128	135	49
	No	73	30	0	0
Own study space and conducive environment	Yes	167	113	105	36
	No	91	45	30	13
Own laptop	Yes	250	152	135	49
	No	8	6	0	0
Own smartphone	Yes	256	158	135	49
	No	0	0	0	0

This questionnaire was distributed after 14 weeks of online classes and the last question in Part A was to find out if students would like to continue with online learning, prefer face-to-face classes or blended learning, if given a choice. The majority (63.3%) indicated that they preferred blended learning while conventional classes chosen by 25.5% of the respondents and the least popular was online classes, preferred by only 11.2% of the respondents. The popularity of blended learning could be due to its advantages like it is more convenient as students do not have to rush and get ready if they have online classes in the morning. They

can also save money on transport, food as well time as they can join classes from wherever they are. At the same time, they feel reassured as they are able to ask questions and get help from lecturers as well as interact with friends when they attend face-to-face classes.

Table 4
Students' preferred learning mode

Learning mode	Percentage
Conventional (face-to-face)	25.5
Online	11.2
Blended learning (a mixture of both)	63.3

What Are The Difficulties Faced By These New Students?

For Part B of the questionnaire which examined the difficulties or problems encountered by students, the respondents indicated how often they faced these problems according to these scales; always (4), sometimes (3), rarely (2) or never (1).

Table 5
Challenges faced by new students

Challenges	Mean	Standard Deviation
I run out of internet data	2.7	.809
I find it hard to hear/understand lecturer is saying due to internet problems	2.92	.722
I have slow internet connection during the day	2.78	.703
I don't wake up on time for classes/tests/quizzes	1.96	.905
I can't focus during class as I'm distracted by other things like games/social media etc	2.77	.879
I am interrupted by siblings/parents while studying/doing assignments	2.57	.951
I have to help my parents earn money	1.69	.911
I have problems doing group assignments	2.33	.900
I keep quiet during class	3.00	.772
I miss notifications of assignments as my lecturers use different platforms like u future/google classroom etc	2.18	.928
We have class outside the scheduled time	2.05	.745
I find it hard to explain to the lecturers what I don't understand	2.91	.787
My lecturers don't reply questions that I ask using WhatsApp or online platform	1.63	.798
I skip class on purpose	1.38	.686

The main problem for students seemed to be their tendency to avoid speaking and keeping quiet during online lessons (mean:3.00). This could be due to their new unfamiliar environment and the fact that they had never met their classmates or lecturers before. Secondly, students found it hard to understand their lectures due to internet problems like

lagging which cause them to lose parts of the lessons during synchronous classes (mean:2.92). The third challenge faced by students was trying to explain to their lecturer about what they did not understand (mean:2.91). Other challenge encountered by these new students was slow internet connection during the day (mean:2.78). This could be due to more expensive internet data and more working people utilizing the internet during the day. This is followed by being unable to concentrate during class due to distractions like social media and games (mean:2.77). In addition, students also had to cope with interruptions from siblings and parents when studying at home (mean:2.57). They also faced problems doing group assignments (mean; 2.33). On the other hand, there were some good news as students admitted that they rarely skipped class on purpose (mean: 1.38) or had lecturers who ignore their questions or messages posted via WhatsApp or other applications (mean:1.63).

What are Students' Recommendation to Improve Online Lessons?

The last part of this paper discusses the recommendations given by students in order to improve online learning and overcome difficulties faced by them, reported verbatim. Students mainly (13) recommended lecturer make changes to their teaching techniques like preparing more interesting and enjoyable lessons such by having more exercises and using pop quiz. Students would also like lecturers to use a variety of fun, new methods as well as provide discussions and activities that could increase students' engagement. Secondly, students' preference was for lecturers to provide more materials such as books and past year questions as well as answers. This could be due to their lack of awareness on how to source the materials online and from the university's library. They also require guidance from lecturers to identify suitable materials online and provide materials which are more attractive and colourful. Thirdly, 11 respondents mentioned that they would prefer if the lecturers use the same platform or at least limit the number of platforms utilized for online classes, preferably a more stable platform. The use of one platform will ensure that students do not miss any notifications and can save data and space on their phones and laptops which are required when downloading these different apps. Respondents also proposed more detailed, clearer explanation from lecturers to aid students' comprehension This included making sure that students understood what they were supposed to do before proceeding with their assignments and giving feedback on these assignments to help them improve. Another suggestion from respondents was related to the use of synchronous classes, specifically Google Meet. They considered Google Meet necessary for difficult topics and it could also ensure that students were focused as they felt like they were being monitored. Synchronous classes were considered better compared to recorded video or slides, probably because students could also interact with the lecturer and each other and break the monotony of just listening to lectures.

Table 6

Students' Recommendations to Improve Online Lessons

Recommendation	Frequency	
Teaching techniques	13	<ul style="list-style-type: none"> - Always try to ask something before the class end -Put more quizez to improve skill -make a lot of exercises -Make discussion meaningful -Make it short and fun to learn. -i wish there will be more discussion than just watching videos that provided -More class or exercise -use a new way to make online learning become more interesting -using simpler and more fun methods to students -Make it enjoyable -i want more revision in pop quiz material because it is really enjoyable and make me more understand about what i actually learned. It makes me better and better. -Make online class maximum only for 2 hours -Increase students engagement
Materials	12	<ul style="list-style-type: none"> -give students more material to help us search for the material and study without searching any sites that we really not sure if its relate to our course -Give more materials for test or example question with answer -More class or exercise -more materials online to support our assignment , task , examination and etc. -Provide more learning material -give tutorial with the answers -lecturers should suggest an actual book for students to buy for reference purposes without obligating others to buy them -provide the best e-book for the references in any subjects to be learnt in order minimize the misunderstanding of the lessons gained. -More colourful notes. -lecturer must provide an example of past year assignment so the students know the format -The lecturer should give the slide first before present to student -give us the details material and if the lecturers ask us to print the material by ourselves, i will do it but please give us the nice materials for us to see and study so we can understand more. its not just give us the point

		from the powerpoint and we need to search about it on google.
Platform	11	<ul style="list-style-type: none"> -Lecturers use the same platforms -do in one application -maybe use the same platform for all subjects -lecturers should use the same platform -Make all classes in one platform, when the class has come, the platform shows notifications to tell that the class is started. -Each lecturer uses only one or two platform so as not to confuse the students. -use platform that stable -Used a single platform that is stable to provide assignment and assessment -use the same platform -Just use platform google classroom and telegram and google meet only -I hope the lecturer use the same platform. It's use a lot of data and phone space to download so many apps.
Explanation	8	<ul style="list-style-type: none"> -lecturer should explain more about the subject -I always ask my fellow friends because sometimes their explanation more clearer than my teacher's explanation -explain more details about the assignments and make sure all students understand it first before ask us to do our assignments -The lecturer should explain in detail if the student does not understand a lesson -Lecturer need to explain more detail about certain topics give tutorial with the answers -give feedback or comments about our assignment.. student need to know the answer of the assignment is right or wrong -explain the tutor with a very detail possible. -Give a clear description of the assignment given because not all students understands english well.
Synchronous classes	5	<ul style="list-style-type: none"> -Do a google meet section if the topic is much important Use google meet to teach and don't just sending teaching video as -subtitute all time because students sometimes just watch the video and learn nothing (youtube materials better)

-I would like to say that it is more better to make sure that the student is learning by always make a google meet class so they can focus and have a consistent work so they don't get distracted by something else if they don't get monitored.

-Use live instead of giving task

-Make choice for students either to do live online class or watch recorded one, nonetheless both have pro and con so its up to the students themselves on how they handle it :)

-Don't just only give us slide or notes.. lecturer must teach and explain the lesson to student until student understand.

Discussion

In terms of readiness to participate in online learning, the results of this study indicate that most of the new students are ready and have adequate tools like a smart phone and a laptop for online classes despite some of them coming from households that are financially affected by Covid-19. Although less students have access to 24 hours internet connection or their own study space and a conducive environment, most show that they rarely skip class on purpose. This is similar to results found by Muthuprasad et al (2020); Chung et al (2020) that the majority of students are ready for the transition to online platform caused by the Covid-19 pandemic. The reason could be because these millennials have the necessary skills to navigate online classes and consider using different online platforms easy (Adams et al., 2021; Aguilera-Hermida, 2020).

Secondly, the majority of respondents reveals that they prefer blended learning over face-to-face classes, with the least popular being online learning. in line with the findings reported by Muhamad and Kanat (2020) and Mathew and Chung (2021). Online learning is the worst as it lacks opportunities for communication, engagement and support available through conventional classes. A mixed-mode option is best as it provides flexibility while offering support and opportunities that come from face-to-face lessons. Therefore, blended learning seems to be the way forward for higher education institutions post Covid-19 as students appear to be adequately equipped with tools, knowledge and technological skills needed for this approach (Adams et al., 2021).

The main problem for students seemed to be their preference to avoid speaking and keeping quiet during online lessons. Moorhouse (2020) also reports that students rarely talk during synchronous classes, preferring to use text chat instead, thus making this type of classes very teacher-centred. Secondly, students face difficulties to understand their lectures due to internet disturbance which cause them to lose parts of the lessons during synchronous classes. This corroborate findings by other researches on this issue (Chung et al., 2020; Muhamad & Kanat, 2020; Sia & Adamu, 2020) as stable, affordable internet is vital for online platforms. The third challenge faced by students is trying to explain to their lecturer about what they do not understand which is also reported by (Maila, 2021; Nasser, 2020). Furthermore, students admit that they are unable to concentrate during class due to distractions like social media and games as well as facing interruptions from siblings and parents when studying at home.

When asked to make recommendations to improve online classes, students indicate that they would prefer lecturers utilize teaching strategies that are fun and enjoyable to increase their engagement which coincide with findings by Moorhouse (2020); Toquero (2020); that students are better engaged after being provided tasks before class and given time to prepare. Students also feel that more interesting materials should be provided as well as guidance on how to source for these materials like past year questions. Chong and Soo (2021) find that first year students need more assistance from lecturers and lack independent study skills, probably including how to use the university's online resources. Respondents also appeal to the lecturers to use the same platform or at least limit the number of tools and platforms so that they do not miss any notifications and can save storage space on their computers. Similarly, Lischer et al (2021) discover that students using a variety of platforms describe it as frustrating and suggest better planning and co-ordination to improve the situation. In addition, clear and detailed explanation is needed by students to improve their understanding of topics as well as getting feedback from lecturers to guide them in completing assignments. Synchronous classes that are recorded is considered better as students have the option of watching the video again if they miss parts of the class. They also feel able to focus more as these classes allow students to feel like they are attending actual classes (Mathew & Chung, 2021).

References

- Adams, D., Tan, M. H. J., and Sumintono, B. (2021), Students' readiness for blended learning in a leading Malaysian private higher education institution, *Interactive Technology and Smart Education*, <https://doi-org.ezaccess.library.uitm.edu.my/10.1108/ITSE-03-2020-0032>
- Adedoyin, O. B., and Soykan, E. (2020). Covid-19 Pandemic and Online Learning: the challenges and opportunities. *Interactive Learning Environments*, 1-13.
- Aguilera-Hermida, P. (2020) College Students' Use and Acceptance of Emergency Online Learning due to Covid-19. *International Journal of Educational Research*. <https://doi.org/10.1016/j.ijedro.2020.100011>
- Aristovnik, A., Kerzic, D., Ravselj, D., Tomazevic, N., & Umek, L. (2020) Impacts of the Covid-10 Pandemic on Life of Higher Education Students: A Global Perspective. *Sustanaibility*, 12, 1-34.
- Chong, Y., and Soo, H. S. (2021) Evaluation of First-Year University Students' Engagement to Enhance Student Development. *Asian Journal of University Education* , 17(2), 113-121.
- Chung, E., Subramaniam, G., & Dass, L. C. (2020). Online Learning Readiness among University Students in Malaysia amidst Covid-19. *Asian Higher Journal of Education*, 16(2), 46-58.
- Fazackerley, A. (2020) Forget Freshers' Week: universities prepare to teach new first years online. *The Guardian*. <https://www.theguardian.com/education/2020/apr/03/forget-freshers-week-universities-prepare-to-teach-new-first-years-online>
- Ferlazzo, L. (2020) What Students Are Really Thinking About Online Learning. *Eduweek*. (<https://www.edweek.org/technology/opinion-what-students-are-really-thinking-about-online-learning/2020/05>)
- Friedman, J. (2020). Tackle Challenges of Online Classes Due to COVID-19 <https://www.usnews.com/education/best-colleges/articles/how-to-overcome-challenges-of-online-classes-due-to-coronavirus>
- Hall, R., and Batty, D. (2020) 'I can't get motivated': the students struggling with online learning. *The Guardian*. <https://www.theguardian.com/education/2020/may/04/i-cant->

- get-motivated-the-students-struggling-with-online-learning hall & batty 2020
- Hassan, H. (2021) Malaysia's digital divide makes some students trek up hills and sleep on trees for Internet access. *The Straits Times*. <https://www.straitstimes.com/asia/se-asia/malaysias-digital-divide-makes-some-students-trek-up-hills-and-sleep-on-trees-for>
- Kamaruzaman, F. M., Sulaiman, N. A., & Shaid, N. A. N. (2021). A Study on Perception of Students' Readiness towards Online Learning During Covid-19 Pandemic. *International Journal of Academic Research in Business and Social Sciences*, 11(7), 1536–1548.
- Lim, I. (2020) Reality for Malaysia's university students: Online learning challenges, stress, workload; possible solutions for fully digital future until Dec. *The Malay Mail* <https://www.malaymail.com/news/malaysia/2020/05/30/reality-for-malaysias-university-students-online-learning-challenges-stress/1870717>
- Lischer, S., Safi, M., & Dickson, C. (2021). Remote Learning and Students' Mental Health during the Covid-19 Pandemic: A mixed-method inquiry. *Prospects*. <https://doi.org/10.1007/s11125-020-09530-w>
- Maila, H. R. (2021) Indonesian University Students' Likes and Dislikes about Emergency Remote Learning during the COVID-19 Pandemic. *Asian Higher Journal of Education*, 17, 1-18.
- Mathew, V. L., and Chung, E. (2021) University Students' Perspectives on Open and Distance Learning (ODL) Implementation Amidst COVID-19. *Asian Higher Journal of Education*, 17, 52-60
- Almaiah, M. A., Al-Khawaseh, A., & Althunibat, A (2020) Exploring the critical challenges and factors influencing the E-learning system usage during Covid-19 pandemic. *Education and Information Technologies*, 25, 5261-5280.
- Moorhouse, B. L. (2020) Adaptations to a Face-to-face Initial Teacher Education Course 'Forced' Online due to Covid-19 Pandemic. *Journal of Education for Teaching*, 46(4), 609-611.
- Adnan, M., & Anwar, K. (2020). Online Learning amid the Covid-19 Pandemic: Students' perspectives. *Journal of Pedagogical Sociology and Psychology*, 2, 45-51.
- Muthuprasad, T., Aiswarya, T., Aditya, K. S., & Girish, K. J. (2021) Students' Perception and Preference for Online Education in India during Covid-19 Pandemic. *Social Science and Humanities*, 3(1) <https://doi.org/10.1016/j.ssaho.2020.100101>
- Newman-Bremang, K. (2020) *It Feels Second-Rate.* "The Class of 2024 On Starting University This Fall." <https://www.refinery29.com/en-ca/2020/09/9947380/college-university-students-canada-pandemic>
- Northeastern University. (2020). Tips for taking online classes: eight strategies for success. Retrieved from <https://www.northeastern.edu/graduate/blog/tips-for-taking-online-classes/>
- Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017) Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16, 1-13.
- Omar, N. H., Thomas, B., Jusoh, M. Z., & Jalil, S. Z. (2021). Students' Perception and Preference for Online Learning in Sabah During Covid-19 Pandemic. *International Journal of Academic Research in Business and Social Sciences*, 11(11), 270 – 292.
- Sia, J.K.-M., and Adamu, A. (2020), "Facing the unknown: pandemic and higher education in Malaysia", *Asian Education and Development Studies*, 2, 263-275
- Sim, S. P., Sim, H. P., & Quah, C. (2020) Online Learning: A post Covid-19 Alternative pedagogy For University Students. *Asian Higher Journal of Education*, 16(4), 137-151