Understandings, Readiness and Challenges of Post-Endemic Covid-19 e-learning Implementation among University Students

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ABSTRACT

The advent of e-learning or online learning has emerged as an alternative educational tool in reaction to the global outbreak of the Covid-19 pandemic in 2020, which hindered traditional face-to-face learning for students and educators. Diverse digital apps are developed to enhance the e-learning process for those studying in a university or a school. The utilization of e-learning is progressively gaining traction across diverse global industries. Students across various academic levels, from elementary to advanced, have begun utilising e-learning tools. Nevertheless, the extent of understanding, readiness, and challenges faced by these students during e-learning remains uncertain. Hence, the researcher aims to determine the students' understanding level regarding their e-learning experience at the university. The researcher also aims to examine the level of readiness and identify the challenges that university students face in the e-learning process. The study was conducted on a total of 305 students from Universiti Sultan Azlan Shah (USAS) in Kuala Kangsar, Perak, as well as students from Universiti Teknologi Mara (UiTM) Alor Gajah Campus in Lendu, Melaka. The results of the survey show that the participants are strongly committed to learning and have a positive understanding of e-learning. However, there are some challenges related to access to technology and insufficient support at home. While there is an overall positive outlook for the future of e-learning, there are concerns about disinterest and engagement issues. Future research should focus on strategies for addressing technological disparities, enhancing support systems, and understanding factors that influence sustained engagement in e-learning. Additionally, exploring the impact of specific interventions on overcoming the challenges identified in this study could provide valuable insights for improving the effectiveness and inclusivity of e-learning experiences.

Keywords: Understanding, Readiness, Challenges, e-learning, Covid-19

INTRODUCTION

The growth of society has made a significant impact on how people learn and teach nowadays. In the past, people had to rely on conventional learning methods that required physical instruction in a designated setting. However, modern technology has revolutionized the way we learn and access knowledge. With the internet, knowledge is now easily accessible, and learning can take place at any time and place. This has brought fresh air into the contemporary learning and teaching environment.

In 2020, the world was hit by the coronavirus pandemic, which brought the global economy to a near standstill. However, the education sector has undergone several revolutionary changes that have enabled the continuation of knowledge acquisition and prevented humanity from falling behind in the pursuit of knowledge. To help students and teachers learn and teach from anywhere, at any time, a variety of online learning programs and methodologies, known as e-learning approaches, have been developed.

Therefore, this study aims to investigate the understanding, readiness, and challenges associated with e-learning among university students. With the global outbreak of Covid-19 in 2020, the adoption of digital Teaching and Learning has become more prevalent in society. From preschool to university, e-learning approaches have become more common among students and educators, starting with the early levels of education.

E-learning

E-learning is a teaching and learning technique that has been increasingly adopted worldwide due to the convenience and accessibility of the internet. It utilizes the internet as a communication tool and as a reliable source for obtaining information (Nur Fatin Ashikin Mohamed Aziz et al., 2020). One institution that has embraced this method is Universiti Sultan Azlan Shah located in Kuala Kangsar, Perak, where it has become the norm for students.

Before the Movement Control Order (MCO) was enforced throughout the country, the use of Learning Management Systems (LMS) was not widespread. However, after the MCO was tightened in 2020, LMS has become the primary tool for communication between lecturers and students. In addition, other online platforms such as Google Meet, Microsoft Teams, and Zoom have gained popularity as they facilitate online teaching and learning.

Despite the advantages of e-learning, it is important to note that students face certain challenges that may hinder their full commitment during e-learning. Therefore, a study was conducted to assess the level of understanding, readiness and challenges associated with the implementation of post-pandemic Covid-19 e-learning among Universiti Sultan Azlan Shah and Universiti Teknologi Mara Alor Gajah campus students.

Since the Malaysian government directed the closure of all schools and educational institutions due to the pandemic, the Ministry of Education Malaysia has issued a directive for the implementation of Teaching and Learning (PdP) at home. This directive aims to ensure that students do not miss out on learning. As such, educators from kindergartens to higher education institutions have adopted PdP based on various e-learning methods such as WhatsApp, Telegram, Google Classroom, Zoom meeting, Google Meet, and other applications (Abdul Aziz Ishak et al., 2021).

PROBLEM STATEMENT

Educators have been facing a significant challenge in ensuring the attendance of students during virtual classes. One of the primary reasons for this is the reluctance of students to enable their cameras during online sessions. Additionally, students often remain unresponsive when presented with questions during e-learning sessions, making it difficult for educators to gauge their level of engagement.

Findings from Tosto et al., (2023) stated that, domestic students are more concerned about reduced interaction with teachers in online educations. They also exhibit a higher tendency to turn their cameras off during Zoom classes, citing reasons such as self-consciousness or privacy.

The implementation of e-learning among university students is a complex process that presents several challenges. One of the top challenges is the lack of motivation among students, which can lead to decreased engagement and performance (Lattea, 2023). This is often due to the impersonal nature of online learning environments, which can make it harder for some students to stay engaged and motivated.

Another significant challenge is time management (Amber Blog, 2023). Students have to balance their studies with other responsibilities and potential distractions in a virtual setting. This can be especially challenging for students who are also working or have other commitments, as they have to manage their time effectively to get the most out of their online learning experience.

According to Lattea (2023), technical issues are also a major challenge for students. Troubleshooting technical problems from home can be a significant challenge, especially if students lack adequate support or resources. Technical issues can also lead to frustration and a lack of motivation, further impacting the overall learning experience.

Feelings of isolation are another challenge that students may face when learning online. The lack of face-to-face communication and limited student-teacher interactions can lead to feelings of isolation, which can impact the overall learning experience and the mental health of students.

Lastly, institutional factors such as a lack of support for online learning by university management can pose a significant challenge for students. The lack of adequate resources and support for online learning can make it harder for students to overcome the other challenges mentioned above, further complicating the e-learning process (Musingafi, Mapuranga, Chiwanza, & Zebron, 2015).

As the COVID-19 pandemic disappears and higher education returns to normal, it offers researchers a unique opportunity to better understand students' understanding of online learning, since almost all university students have experienced both online and on-campus learning. Given this changing landscape of online learning in higher education, therefore, this study was conducted to determine the level of understandings, readiness and the challenges faced by students in implementing e-learning. The study aimed to provide insights into the factors that hinder students' participation and engagement in virtual classes. It can indirectly lead to solutions to tackle these challenges in the future.

The findings of this study will be useful for universities to identify the level of understandings, readiness and challenges faced by students in implementing e-learning. Based on these insights, universities can develop effective strategies to overcome the challenges and

improve the effectiveness of e-learning among students (Noraznida Husin dan Nursyaheera Atan, 2020).

RESEARCH METHODOLOGY

A study was conducted at Universiti Sultan Azlan Shah and Universiti Teknologi Mara Alor Gajah campus in Lendu Melaka through a survey using a questionnaire distributed via Google Forms to students. The study was analyzed descriptively using the Statistical Package for the Social Science (SPSS) version 29.0, by analyzing the percentage, the average, mean and standard deviation of the collected data. The questionnaire was divided into four parts: Part A included respondent demographics, Part B focused on students' understanding on e-learning, Part C focused on students' readiness towards the implementation of e-learning, while lastly Part D is the challenges faced by students in implementing e-learning. Part B, C and D used a Likert scale ranging from (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). The items in the questionnaire were modified based on previous studies and have been validated (Abdul Aziz Ishak et.al, 2021).

FINDINGS AND DISCUSSIONS

Based on Table 1, the demographic overview of the participants by their respective universities shows that there are 266 respondents from USAS and 39 from UiTM Alor Gajah Campus. Among them, 288 participants fall within the age range of 18-23 years, while 17 respondents are aged between 24-29 years.

Table 1: Demography of respondents

Demography	Frequency	Percentage
University		
Universiti Sultan Azlan Shah (USAS)	266	87.2
UiTM Alor Gajah Campus	39	12.8
Age		
18 - 23 years old	288	94.1
24 - 29 years old	17	5.6
Total	**305**	**100%**

Moving on the discussion on the understandings towards e-learning among university students. According to the survey, respondents have distinct understandings about e-learning, with a particular emphasis on commitment to learning and its definition and alignment. The most highly rated statement, "As a student, I need to be more committed to my learning," received widespread endorsement, with an impressive mean score of 4.46. This result highlights the unanimous belief in the importance of dedication to academic pursuits among students. Another area of shared understanding among respondents pertains to the definition of e-learning. With a mean score of 4.36, participants displayed a positive perception, concurring

that e-learning refers to the process of learning utilizing computers and the internet or an intranet network. Many users of e-learning platforms see that online learning helps ensure that e-learning can be easily managed, and the learner can easily access the teachers and teaching materials (Gautam, 2020; Mukhtar et al. 2020).

Additionally, respondents expressed a general agreement with the statement, "e-learning is an initiative in line with the development of ICT and contemporary standards," as reflected in the mean score of 4.23. This suggests a collective belief in the alignment of e-learning with Information and Communication Technology (ICT) advancements and contemporary standards.

Table 2: Understandings on e-learning among University Students

Item	Mean Score	SD
As a student, I need to be more committed to my learning.	4.46	0.61
e-learning refers to learning that takes place using computers and the internet or an intranet network.	4.36	0.65
e-learning is an initiative in line with the development of ICT and contemporary standards.	4.23	0.71
Upload lecture assignments to the E-learning website from time to time	4.20	0.75
e-learning enables individuals to learn continuously, even if they are unable to attend physical meetings.	4.06	0.75
E-learning is a new learning method specifically for students	4.04	0.68
Follow the exercises related to e-learning	3.99	0.74
I am willing to speak the truth, even if it is unpopular.	3.74	0.86
My level of understanding of the concept of e-learning is good	3.67	0.75
Full use of e-learning methods in lectures	3.28	1.08
	4.00	**0.76**

Conversely, the statement with the lowest mean score, "Full use of e-learning methods in lectures," received a mean score of 3.28. This suggests a comparatively lower level of agreement among respondents regarding the complete integration of e-learning methods in traditional lecture settings.

In summary, while respondents collectively emphasize the importance of commitment to learning and share positive perceptions about the definition and alignment of e-learning, there exists notable variability in opinions regarding the full utilization of e-learning methods in lecture environments.

The readiness of university students to implement e-learning will be discussed based on the data presented in Table 3. The results of the survey shed light on the different attitudes of the participants regarding their involvement with e-learning methods. Among the statements that received the highest mean scores, "I do not want to fall behind in using new e-learning methods" stood out with an average score of 4.04. This reflects a proactive and forward-looking approach among the respondents, demonstrating their collective commitment to keeping up with the latest e-learning methodologies.

Table 3: Readiness among University implementing e-learning.

Item	Mean Score	SD
I do not want to be left behind in using new methods of e-learning.	4.04	0.68
I will find a way to attend e-learning classes even if the Internet at my home is not functioning	4.04	0.75
I am willing to use e-learning management systems such as Google Classroom, Zoom, or Meet as tools for online learning	4.01	0.79
I always refer back to the lecturer if I face any confusion in understanding the content of the lesson.	3.93	0.72
I am willing to utilize printed modules as a tool for home-based learning.	3.90	0.85
I am willing to employ online learning resources such as YouTube for remote learning.	3.90	0.88
I am ready to carry out e-learning even after the post-Covid-19 period.	3.90	0.97
I will strive to obtain the latest gadgets and equipment to fulfill the requirements for e-learning classes.	3.87	0.88
I am willing to take on the challenge of implementing e-learning.	3.83	0.80
I am using my own expenses to subscribe to the internet for the purpose of e-learning	3.75	0.99
My family does not provide support for my e-learning.	3.74	1.04
I did self-learning before the start of the e-learning class.	3.44	0.80
I have a deep knowledge of computing.	3.25	0.92
I am more willing to choose the e-learning method compared to the face-to-face method.	3.18	1.12
I am not willing to continue with e-learning if I have personal problems.	2.73	1.01
	3.70	**0.88**

Participants in the study expressed a strong desire to attend e-learning classes, even if they faced challenges such as internet connectivity issues at home. This was highlighted by the statement "I will find a way to attend e-learning classes even if the Internet at my home is not functioning," which received a mean score of 4.04. The responses suggest a resilient approach

towards ensuring consistent participation in e-learning activities. It was found that respondents had a positive inclination towards using e-learning management systems such as Google Classroom, Zoom, or Meet as tools for online learning. This was highlighted by the mean score of 4.01 obtained for the statement "I am willing to use e-learning management systems". This is also due to the easy-to-use features, saves time, and is affordable (Ali et al., 2008). The finding suggests a readiness among respondents to utilize widely recognized tools for online learning. There was a notable willingness among participants to continue with e-learning even when facing personal challenges, as indicated by the mean score of 2.73. This lower score suggests a significant readiness to persist with e-learning under challenging personal circumstances.

The data reveals a positive and forward-looking stance among respondents regarding their engagement with new e-learning methods and platforms. However, a contrasting reluctance is observed when participants consider the continuation of e-learning in the presence of personal challenges, highlighting potential reservations and varying degrees of readiness to overcome such obstacles.

Table 4: Challenges among University Students in Using e-learning

Item	Mean Score	SD
I do not have the facility of a mobile phone, laptop, tablet or any other device for the purpose of e-learning.	3.95	0.94
I am not receiving enough learning support from my parents/guardians to facilitate the e-learning process at home.	3.93	1.01
I am not interested in joining e-learning classes.	3.92	0.97
I live in a rural area where it is difficult to access the Internet.	3.67	1.11
I browse social media while e-learning is in progress.	3.63	1.03
I am not proficient in the use of social media, email, and online education platforms.	3.62	0.96
I play games while e-learning is in progress.	3.44	1.03
I am only following the university administration's instructions to attend the e-learning process.	3.31	1.05
I do not have enough money to buy e-learning equipment.	3.21	1.02
I need to help my parents at home while the e-learning process is in progress.	3.15	1.05
I often do other tasks while e-learning is in progress.	3.15	1.04
I have a lack of knowledge and skills in the process of e-learning.	3.09	0.90
I do not have stable Internet access.	3.06	0.96
My focus during e-learning only lasts for the first 15 minutes.	3.04	1.04
I am having difficulty establishing two-way communication with the lecturer during the e-learning process.	2.96	0.92
I lose focus during e-learning sessions.	2.94	1.04
I feel embarrassed to turn on the camera during e-learning classes.	2.55	1.10
	3.29	**1.01**

Based on the survey responses, it has been observed that the participants face multiple challenges while engaging in e-learning activities. The most significant challenge highlighted by the participants is the unavailability of mobile phones, laptops, tablets or other electronic devices that are required to participate in e-learning. This concern was expressed clearly through the statement, "I do not have the facility of a mobile phone, laptop, tablet, or any other device for the purpose of e-learning," which received a mean score of 3.95. This suggests that many participants are apprehensive about the lack of access to essential devices for engaging in e-learning activities. The relatively high mean score underscores the importance of this technological limitation among the participants.

It has been noted that there is a concern regarding the perceived lack of support from parents or guardians in facilitating the e-learning process at home. Participants have expressed that they do not receive enough learning support from their parents/guardians to facilitate the e-learning process at home. This statement has received a mean score of 3.93, indicating that there is a shared sentiment among respondents that there is insufficient support in their homes for a successful e-learning experience. The high mean highlights the importance of a supportive learning environment.

On a slightly different note, participants express a relatively lower level of interest in e-learning classes, as indicated by the statement, "I am not interested in joining e-learning classes," which received a mean score of 3.92. While not as high as the previous concerns, this score suggests a notable degree of disinterest or reluctance among respondents in engaging with e-learning classes. These findings are consistent with previous research, which has found that one of the main challenges of online courses is the monotony of the learning scenario and the easy visual fatigue experienced by learners (Yuefan et al., 2022). This sentiment could impact the overall effectiveness of the online learning experience.

On the other hand, the statement that received the lowest mean score was "I feel embarrassed to turn on the camera during e-learning classes." It received a mean score of 2.55, indicating a lack of consensus among the participants. The moderate mean score suggests that the participants had varying opinions on the matter, and there was no clear agreement or disagreement. This diversity of perspectives on visual engagement during online classes could impact the dynamics of virtual interactions.

In conclusion, participants have shared concerns regarding technology access, learning support, and differing levels of interest in e-learning classes. The lack of a clear consensus on the statement about feeling embarrassed to turn on cameras during virtual sessions indicates diverse perspectives among participants. This points to potential challenges in visual engagement during online learning activities, reflecting the varied sentiments within the participant group. These findings underscore the complexity of experiences and reservations that individuals may encounter as they adapt to and fully participate in e-learning environments.

CONCLUSION

In conclusion, the survey data gives a comprehensive overview of students' attitudes, and challenges towards e-learning. The high mean score for commitment to learning highlights the importance of dedication and engagement in the educational process. Participants have

generally positive understandings of e-learning, as indicated by positive mean scores for statements related to its definition and alignment with contemporary standards. However, there are significant challenges related to technological access, with concerns about the availability of devices for e-learning. Participants also express apprehensions about the level of learning support at home, emphasizing the crucial role of a supportive environment in facilitating successful e-learning experiences. Although there is a generally positive outlook regarding the future of e-learning, participants express some concerns, such as disinterest in joining e-learning classes and potential challenges in maintaining engagement during online sessions. These insights underscore the importance of addressing technological disparities, enhancing support structures, and tailoring e-learning approaches to foster sustained enthusiasm and inclusivity among students in the evolving landscape of education.

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REFERENCES

Abdul Aziz Ishak, Aida Zuraina Mir Ahmad Talaat (2020). *Pembelajaran atas Talian: Tinjauan terhadap Kesediaan dan Motivasi dalam kalangan pelajar Diploma Logistik dan Pengurusan Rantaian Bekalan, Politeknik Seberang Perai, Pulau Pinang. Jurnal Dunia Pendidikan*. http://myjms.mohe.gov.my/index.php/jdpd.,e-ISSN: 2682-826X | Vol. 2, No. 4, 68-82, 2020

Ali M, Khaled Hossain SM, Ahmed T. Effectiveness of E-learning for university students: Evidence from Bangladesh. *Asian Journal of Empirical Research.* 2018;8(10):352–360. doi: 10.18488/journal.1007/2018.8.10/1007.10.352.360.

Amber Blog (Ed.). (2023, October 27). *Top 10 Challenges of* Online *Learning As A Student*. Amber Blog. Retrieved January 24, 2024, from https://amberstudent.com/blog/post/top-10-challenges-of-online-learning-as-a-student

Gautam, P. (2020). Advantages and disadvantages of online learning. In *E-Learning Industry*.

Lattea. (2023, September 27). *TOP CHALLENGES ONLINE COLLEGE STUDENTS FACE AND HOW TO COPE*. WVU Online. Retrieved January 24, 2024, from https://online.wvu.edu/blog/education/online-learning/top-challenges-online-college-students-face-and-how-to-cope

Mukhtar, K., Javed, K., Arooj, M., Sethi A. Advantages, limitations and recommendations for online learning during COVID-19 pandemic era. 2020;36 (COVID19-S4): COVID19-S27-S31. Doi: https://doi.org/10.12669/pjms.36.COVID19-S4.2785

Nur Fatin Ashikin Mohamed Aziz, Eta Wahab, Alina Shamsuddin, Nor Hazana Abdullah, Wan Nurul Karimah Wan Ahmad, (2020). *Hubungan antara Sikap dan Penerimaan Pelajar terhadap Amalan Pembelajaran atas Talian, Research in Management of Technology and Business*. Vol. 1 No. 1 (2020) 104–113 © Universiti Tun Hussein Onn Malaysia Publisher's Office., e-ISSN: 2773-5044

Noraznida Binti Husin, Nur Syaheera Binti Atan, (2020). *Faktor-faktor yang Mempengaruhi*

Penerimaan E-Pembelajaran dalam Subjek Pengiraaan di Kolej Universiti Islam Antarabangsa Selangor. Proceeding of the 7th International Conference on Management and Muamalah 2020 (ICoMM 2020) e-ISSN: 2756-8938

Musingafi, M., Mapuranga, B., Chiwanza, K., & Zebron, S. (2015). Challenges for Open and Distance learning (ODL) Students:Experiences from Students of the Zimbabwe Open University. Journal of Education and Practice , 6 (18), 60-65.

Rosmawati J, Anis Sakinah Z.A & Ainul Azniza A.Z, (2020). *Kajian Rintis Keberkesanan Makmal Maya di Kalangan Pelajar Politeknik.* The 3rd International Conference on Social Sciences & Humanities 2020ICOSH3 2020. Indonesia, Vol.3 No. 1. ISSBN 978-967-2224-60-0

Tosto SA, Alyahya J, Espinoza V, McCarthy K, Tcherni-Buzzeo M. Online learning in the wake of the COVID-19 pandemic: Mixed methods analysis of student views by demographic group. Soc Sci Humanit Open. 2023;8(1):100598. doi: 10.1016/j.ssaho.2023.100598. Epub 2023 Jun 22. PMID: 37366390; PMCID: PMC10284669.

Yuefan Xia, Yawen Hu, Chenyi Wu, Ling Yang, & Man Lei. (2022, December 22). Challenges of online learning amid the COVID-19: College students' perspective. *Sec. Educational Psychology.* https://doi.org/10.3389/fpsyg.2022.1037311