

## **E-Learning among the undergraduates in Malaysia during COVID-19**

**Abdul Cader Mohamed Nafrees<sup>1</sup> & Mohamed Riyaz Rahfath Aara<sup>2</sup>**

<sup>1,2</sup>Faculty of Islamic Studies and Arabic Languages, South Eastern University of Sri Lanka

Correspondence: [1nafrees@seu.ac.lk](mailto:1nafrees@seu.ac.lk)

### **Abstract**

Covid-19 pandemic around the globe stop human movement, but technology advancement assisting the human to complete their daily tasks even during the lockdown situation. This study focused on undergraduates' experiences and expectations of E-Learning during COVID-19 among the undergraduates of Malaysian students to conduct a comparative analysis between undergraduates of Sri Lankan and Malaysian universities. This study was used both qualitative and quantitative methods, further a random sampling technique was used for data collection and the collected data were analyzed using SPSS. Students were happy to engage with online learning even after they have lesser experience in online learning and majority of the students having required digital devices, even though they agreed that the monthly expenditure for internet connectivity was significantly high, and the services from the E-Learning activities and university were less than their expectations, it is also confirmed that the Malaysian undergraduates positively agreed E-Learning provides course resources as students expected. Furthermore, it is strongly recommended to develop an AI-based E-learning tool that can reply to the student queries in real-time, and the government should provide free internet data access to the students. Furthermore, it is good to keep the blended learning mode rather than a fully online platform. There were few numbers of previous research works identified for the literature review purpose. It is planned to conduct a comparative analysis between Sri Lankan and Malaysian undergraduates about E-Learning during the pandemic.

**Keywords:** COVID-19, Pandemic, E-Learning, Online Learning, Lockdown

### **1. Introduction**

We human facing a serious pandemic situation in the name of COVID-19, which makes us alone due because of the lockdown procedure which is the main way to stop the spreading of this virus. World Health Organization stated that the pandemic is the spread of a specific disease; and COVID-19 is a pandemic that originated in China, 2019 (World Health Organization, 2020). In the meantime, WHO strongly advised social distancing is one of the major plans to reduce virus spreading that acceptable around the globe anonymously. On the other hand, Information and Communication Technology (ICT) is a major role in all aspects of human life to make their life easy. Which creates a virtual environment in all the sectors such as business, traveling, health, education, and many more. In that sense, the majority of the countries bring both school and higher education into a virtual platform that is E-Learning. ICT increases the quality of the teaching and learning (Ratheeswari, 2018).

The Centre of Teaching and Learning (CTL) at Universiti Teknologi Malaysia (UTM) is reflected as one of the major tools for providing information at the university (Al-Rahmi et al., 2018). The E-learning

platform known as virtual learning environments was developed in Malaysian universities in cooperating with CTL around two decades ago with the help of the Ministry of Education. Undergraduates reported that that e-learning is a useful virtual environment for them to upload course materials, assignments, and slides. There are many online systems and applications using in Virtual Learning Environment (VLE), Google classroom, ZOOM, and WebEx; not only that, but social media also using with this E-Learning. Although, Educational Institutes were showing more interest in online educational systems rather than social media as those systems mainly developed for educational purposes.

Distance learning or E-Learning is not new to the educational sectors, but very few educational sectors or few teachers and students experienced the virtual educational platform before the origin of COVID-19 or the pandemic. Although, the majority of the higher educational institutes, teachers, and students were very new to these virtual educational environments and related online systems. Somehow, either like or not; the pandemic was forced us to move to new educational normal with E-Learning. Therefore, we as a research community to find the gap between the E-Learning environment and the educational community to provide the possible solutions for increase the quality of the education and staff and students' interest in this technology.

There are many more research works conducted around the globe and those researches were mainly based on relevant researcher's home country or their university. As a researcher, we were conducted a few types of researches based in Sri Lanka to check the students' awareness and perception of Online learning or E-Learning. But, very few studies have analyzed the comparison between universities in different countries. Therefore, this study aims to check the awareness of E-Learning in Malaysian universities; further, this study's future work planned to conduct a comparative study between Sri Lankan and Malaysian universities in the future.

This study conducted from the undergraduates of Malaysian universities using Descriptive analysis via SPSS to check students' awareness and expectations on E-Learning during the COVID-19 pandemic. A set of structured questions developed using Google form and share with the students of Malaysian universities. Furthermore, recently published research works have been used for the purpose of a review of the literature survey.

## **2. Methodology**

This reported work was followed an exploratory survey design where it was used both quantitative and qualitative methods. Exploratory research design can be used to conduct when there were few studies only available; where this design mostly used in qualitative methods but quantitative methods also engage with this technique (Kimathi Witt, n.d.). A structured questionnaire was developed using Google form and shared with the Malaysian undergraduates via E-mail and WhatsApp media; that was used random sampling technique to collect the required amount of data. The random sampling technique is the way to give a chance to every item in the population to be selected (Taherdoost, 2018). There were 1000 questionnaires that were circulated and got 620 usable responses. After that, the collected data were exported to SPSS for Analysis purposes. In descriptive statistics, frequencies, and percentages were calculated. There were 30 research included for the purpose of review of the literature, that are sort listed based on the following criteria; and the research papers were searched using logical operations, that is AND or OR phrases;

1. Published after 2015

2. Fully published research articles
3. Reputed Journals and International Conferences.
4. Research paper related to E-Learning or Online learning or distance learning

Apart from the above procedure, this study mainly focused on the student awareness based on the following major research questions (RQ) or problems, and these RQs were designed based on our previous research study and the literature reviews;

1. Are students' happy in e-learning compared to traditional learning methods?
2. What is the students' expectation in e-learning to make them comfortable during their studies?
3. What is students' situation while they are studying from home? In terms of device compatibility, internet facility, and economic status.

At last, conclusions, suggestions, limitations, and future research plan were discussed based both of analysis and literature reviews of our study.

### 3. Results & Discussion

Based on table 1, students' happiness towards E-Learning was 42.9% but a significant number of students stated that they were not happy too (37.1%). Meanwhile, a large number of students were chosen ZOOM (85.5%) and Google classroom (56.5%) as easy tools for E-learning purposes compared to the other tools in the table below, which parallels the results of the study that confirmed the students feel good about using Google classroom but contradict the use of ZOOM by the students (Minghat et al., 2020). Furthermore, Undergraduates were chosen E-learning due to the flexibility (53.2%), Assignment management electronically (61.2%), better interaction between students and teacher (58.6%), and good interaction between students (51.6%). And, majority of the students were using the laptop for their online learning activities (53.2%).

Table 1: Students' demographic profile summary

Variable	Frequency	Percentage
Gender		
Male	280	58.4
Female	340	45.2
Field of Study		
Science	130	21
Arts	140	22.6
Management	220	35.5

Technology	130	21
Student Happiness towards E-Learning		
Yes	260	42.9
No	230	37.1
Maybe	130	21
Monthly Expenses		
Yes	470	75.8
No	150	24.2
Devices for E-Learning		
Laptop	330	53.2
Tab/ iPad	60	9.7
Smartphone	230	37.1
Easiness of Online Tools		
ZOOM	530	85.5
WebEx	110	11.7
VLE	20	3.2
Google Class room	350	56.5
Moodle	30	4.8
None	40	6.5
Reasons for choosing E-Learning		
Flexibility	330	53.2
Assignments can be completed electronically	410	61.2
Easy interaction between teacher and students is easy	360	58.1
Easy Interactions between students	320	51.6
Course materials accessibility from anywhere & anytime	140	22.6

According to table 2, the Majority of the students agreed that the contents of the sessions were complete their expectations (33.9%); but more than half of the participants of this study were neutral about both used instructional medium by the teachers (53.2%) and usefulness of group discussion (58.1%). These

results were in line with the previous study conducted in Indonesia stated that the majority of the students agreed that ICT makes it easy in learning (R. Rusli, Rahman, & Abdullah, 2020).

Table 2: Students' expectation on E-Learning

Values	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Lecturer/ Instructor used the relevant instructional medium	1.6	25.8	53.2	17.7	1.6
content of the sessions met my expectations	6.5	33.9	38.7	19.4	1.6
Group discussions were found useful	0.0	29	58.1	9.7	3.2

Finally, in table 3 below summarized that the students' expectations towards course resources, such as workload (54.8%), enough facilities to manage course works (58.1%), swift responses to the students' questions (41.9%), session organization (61.3%), and easy information access from online tools (53.2%) were neutral. But, the results of the research conducted in Indonesia were against this study, that the overall students' satisfaction was supported on easiness and usefulness of E-learning (Yacob, Kadir, Zainudin, & Zurairah, 2012).

Table 3: Students' expectation towards course resources

Values	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Workloads were high	4.8	29	54.8	6.5	4.8
Enough facilities were provided to manage the course works	3.2	19.4	58.1	17.7	1.6
Fast reply to students' questions	0.0	35.5	41.9	21	1.6
Sessions organized well	1.6	22.6	61.3	12.9	1.6
Easy Information/ Materials access from online tools	4.8	27.4	53.2	8.1	6.5

Apart from this statistical analysis, previous studies were reviewed to check the student awareness and expectations towards E-learning. A study pointed out that, students were expecting to continue their course works rather than postponed due to this COVID-19 using available online learning tools (Nafrees, Roshan, Baanu, Nihma, & Shibly, 2020). Furthermore, the study confirmed that the prompt feedback on students' questions can support online learning quality (Nafrees, Roshan, Nuzla Baanu, et al., 2020).

A study concluded that the hybrid model is better than either online or face-to-face education method (Razeeth et al., 2019). The Open University of Malaysia introduced an E-learning platform to create a hybrid learning environment that increases the flexibility of education (Abas, Osman Abu, Ismail, Abdullah, & World Health Organization, 2009).

The authors indicated that technical challenges were the main factors that determine students' interest in E-learning (Wai Yee & Cheng Ean, 2020). Another research suggested improving the virtual learning

environment (VLE) processes and proper practice to attract the student's attention towards the use of VLE (Md Ajis, Md Jali, Mazlan, Nordin, & Ahmad Kamal, 2017). Students in east Malaysia were facing internet issues during their online learning, although COVID-19 provides an opportunity to recreate the education systems via an online platform (Sia & Adamu, 2020).

A study revealed that the students who engage with writing courses perform well using online education tools (Soh, Lim, Yee, Ying, & Yin, 2018). Meanwhile, an analysis conducted among Malaysian university students confirmed that students aware of open online courses (Rusreena Rusli, Hashim, Hashim, & Yunus, 2019). Furthermore, the authors mentioned that digital learning methods increase the standard of students' learning (Daud, Jalil, & M. Gunawan, 2015). In another article, it was said that the students were satisfied with e-learning and they were intended to use it in the future too (Al-Rahmi, Othman, & Yusuf, 2015).

#### **4. Conclusion & Recommendation**

There are many types of researches conducted related to E-learning after the COVID-19 pandemic especially among the university communities to move forward with digital education rather than stop or postponed. This study reveals that students' awareness of E-learning practices must be increased, furthermore, students expecting the quickest responses from the instructors and university staff when they rise a doubt or technical issues respectively. And, students were expecting E-learning tools must be user-friendly. In addition to that, Majority of the students were got their expectations towards course resources. Furthermore, it is confirmed that more than 50% of Malaysian students were happy about e-learning and majority of the students having required digital devices, even though they agreed that the monthly expenditure for internet connectivity was significantly high. Similarly, majority of the students positively agreed that the e-learning platforms provide sufficient way to create interactions between them and staff, also, students support the flexibility of the e-learning systems; meanwhile, very few numbers of students supported Course materials accessibility from anywhere and anytime, But the main result of this study slightly differ from the study conducted in Sri Lankan University (Nafrees, Roshan, Nuzla, Fathima Nihma, & FHA, 2020).

It is strongly suggested to follow the hybrid method rather than use either fully online or face-to-face mode. In addition to that, it is advisable to conduct research study to check the students' perception towards e-learning. Furthermore, AI-based real-time online tools must be developed to assist the students whenever they need any assistant regarding technical problems. There were some limitations during writing this research paper; there were few numbers of research works available based on our criteria mentioned in the methodology part.

It was collaboratively decided with other researchers to conduct a comparative study between the students from Sri Lankan universities and Malaysian universities on E-Learning to design a common E-Learning platform that can be used as a universal learning platform.

#### **References**

- Abas Z. W., Osman Abu Ismail N., Abdullah M. N., & World Health Organization. (2009). E-Learning in Malaysia: Moving Forward in Open Distance Learning. *International Journal on E-Learning*, 8((4)), 97–107.
- Al-Rahmi W. M., Alias N., Othman M. S., Alzahrani A. I., Alfarraj O., Saged A. A., & Rahman N. S. A., (2018). Use of E-Learning by University Students in Malaysian Higher Educational Institutions: A Case in Universiti Teknologi Malaysia. *IEEE Access*, 6, 14268–14276.  
<https://doi.org/10.1109/ACCESS.2018.2802325>
- Al-Rahmi W. M., Othman M. S., & Yusuf L. M. (2015). The effectiveness of using e-learning in Malaysian higher education: A case study universiti Teknologi Malaysia. *Mediterranean Journal of Social Sciences*, 6(5), 625–637. <https://doi.org/10.5901/mjss.2015.v6n5s2p625>
- Daud R., Jalil, Z. A., & M. Gunawan M. N. F. (2015). Community College Students' Perception Towards Digital Learning in Malaysia. *Procedia - Social and Behavioral Sciences*, 195, 1798–1802.  
<https://doi.org/10.1016/j.sbspro.2015.06.389>
- Md Ajis A. F., Md Jali J., Mazlan M. A., Nordin S. K., & Ahmad Kamal J. I., (2017). Assessing Virtual Learning Environment in Malaysia's Public University. *Library Philosophy and Practice (e-Journal)*, 1627.
- Minghat A. D., Ana, A., Purnawarman P., Saripudin S., Muktiarni M., Dwiyantri V., & Mustakim S. S., (2020). Students' Perceptions of the Twists and Turns of E-learning in the Midst of the Covid 19 Outbreak. *Revista Romaneasca Pentru Educatie Multidimensionala*, 12(1), 15–26.  
<https://doi.org/10.18662/rrem/12.1sup2/242>
- Nafrees A. C. M., Roshan A. M. F., Baanu A. N., Nihma M. N. F., & Shibly F. H. A. (2020). Awareness of Online Learning of Undergraduates during COVID 19 with special reference to South Eastern University of Sri Lanka. *Journal of Physics: Conference Series*, 1712(1).  
<https://doi.org/10.1088/17426596/1712/1/012010>
- Nafrees A. C. M., Roshan A. M. F., Nuzla Baanu A. S., Shibly F. H. A., Maury R., & Kariapper R. K. A. R. (2020). An Investigation of Sri Lankan University Undergraduates' Perception About Online Learning During COVID-19: With Superior References to South Eastern University. *Solid State Technology*, 63(6), 8829–8840.
- Ratheeswari K. (2018). Information Communication Technology in Education. *Journal of Applied and Advanced Research*, 3(S1), 45. <https://doi.org/10.21839/jaar.2018.v3is1.169>
- Razeeth M. S. S., Kariapper R. K. A. R., Pirapuraj P., Nafrees A. C. M., Rishan U. M., & Nusrath Ali S. (2019). E-LEARNING AT HOME VS TRADITIONAL LEARNING AMONG HIGHER EDUCATION STUDENTS: A SURVEY BASED ANALYSIS. *9th International Symposium, South Eastern University of Sri Lanka*, (November), 213–221. South Eastern University of Sri Lanka.

- Rusli R., Rahman A., & Abdullah H. (2020). Student perception data on online learning using heutagogy approach in the Faculty of Mathematics and Natural Sciences of Universitas Negeri Makassar, Indonesia. *Data in Brief*, 29, 105152. <https://doi.org/10.1016/j.dib.2020.105152>
- Rusli, Rusreena, Hashim H. U., Hashim H., & Yunus M. M. (2019). Learners' Awareness towards the Use of MOOCs in Teaching and Learning. *Creative Education*, 10(12), 3012–3019. <https://doi.org/10.4236/ce.2019.1012225>
- Sia J. K.-M., & Adamu A. A. (2020). Facing the unknown: pandemic and higher education in Malaysia. *Asian Education and Development Studies*, 1(1). <https://doi.org/10.1108/AEDS-05-2020-0114>
- Soh O.-K., Lim L.-A. D., Yee L. Y., Ying L. K., & Yin L. L. (2018). A Review on the Students' Perceptions of Online Learning Tools in Improving English Writing Skills. *International Journal of Academic Research in Progressive Education and Development*, 7(4), 324–348. <https://doi.org/10.6007/ijarped/v7-i4/4979>
- Taherdoost H. (2018). Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management (IJARM)*, 5(2), 18–27. <https://doi.org/10.2139/ssrn.3205035>
- Wai Yee S. L., & Cheng Ean C. L. (2020). Malaysian Private University Students' Perception of Online Discussion Forums: A Qualitative Enquiry. *Sains Humanika*, 12(2), 31–38. <https://doi.org/10.11113/sh.v12n2.1610>
- World Health Organization. (2020). *Coronavirus Disease (COVID-19)*. Retrieved from <https://www.worldometers.info/coronavirus/>
- Yacob A., Kadir A. Z. A., Zainudin O., & Zurairah A. (2012). Student Awareness Towards E-Learning in Education. *Procedia - Social and Behavioral Sciences*, 67(December), 93–101. <https://doi.org/10.1016/j.sbspro.2012.11.310>