

ICONSPADU 2021**International Conference on Sustainable Practices, Development and Urbanisation****UNISEL FOUNDATION STUDENTS' ATTITUDE TOWARDS E-LEARNING AS A SUSTAINABLE PLATFORM OF EDUCATION**Jayemogen Shanmugam (a)*, Fariha Diyana Awang Ali (b), Mirza Madihah Zainal (c),
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Abstract

The Covid-19 pandemic has forced education institutions to adopt online platforms for teaching and learning. Online education platforms are web or digital based applications which enable users to conduct and attend classes virtually. The implementation of online classes through online platforms was sudden and rushed due to the increase and the prolonging of covid-19 cases. Over the past year, these online platforms have become an essential tool in continuing the teaching and learning process across numerous educational sectors. This paper intended to explain the students' attitude towards using e-learning platforms as a sustainable platform of education and at the same time explore their perception of using e-learning as a sustainable tool. A set of questionnaires is administered to 159 foundation students in Universiti Selangor, and the data obtained is statistically analysed to fulfil the research objectives. As online education becomes an essential part of education, it is crucial to understand the sustainability of online pedagogy and the impact it has on the students. Students may not have the same level of acceptance and views towards the use of online platforms. The outcome of this study will assist educators and administrators in planning and using online platforms to conduct online classes that suit the needs and expectations of the students.

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1. Introduction

As the nation and society are all aware, education is a vital process which fosters the development of human talents and attitudes. It is critical to Malaysia's goals to become a developed nation. Education in Malaysia addresses three key phases namely primary, secondary and tertiary. It is rooted from the traditional use of chalk and talk, and textbooks. Since then, it has evolved to better and more complex pastures such as digitised mediums, specifically the Internet at everyone's fingertips. Education seeks to produce a complete individual who is spiritually, academically, physically, and emotionally balanced and harmonious, based on an unflinching belief in God, as directed by the National Philosophy of Education (Faridah et al., 2008). For the current norm, the Covid-19 pandemic has once again transformed the education spectrum with the emergence of online educational platforms. With this method, education can still propel forward for student development. Simultaneously, education is prolonged and is kept feasible.

As online education becomes an essential part of education, it is crucial to understand the sustainability of online pedagogy and the impact it has on the students. Over the past year, these online platforms have become an essential tool in continuing the teaching and learning process across a variety of educational sectors. Hence, this paper discusses the students' critical views on e-learning as a sustainable channel of education.

1.1. Background of the Study

The Covid-19 pandemic has forced education institutions to adopt online platforms for teaching and learning. Online education platforms are web or digital based applications which enable users to conduct and attend classes virtually. The implementation of online classes through online platforms was sudden and rushed due to the increase and the prolonging of these cases. This is in accordance with research by Ismail et al. (2020), stating that to keep up with an increasingly competitive global education and compare itself against world-leading institutions, the learning environment has been improved with online learning.

As a consequence, both academicians and students must start preparing to adapt to new learning approaches that do not need physical interactions. Isa and Hashim (2006) added that the main goal of the e-learning strategy was to encourage and support university academicians to supplement their traditional face-to-face instruction with online instruction, as well as to develop high-quality web-mediated teaching materials for students to access in order to improve their understanding and academic performance. Al-Rahmi et al. (2018) mentioned in their study that in addition to offering a range of exercises and tests, these online courses are designed to keep students engaged and motivated.

1.2. Research Gap

A study of the literature indicates that the majority of research is conducted to determine students' perceptions and attitudes about e-learning, while studies linked to students' perceptions of e-learning during the Covid-19 epidemic are few and far between. Considering e-Learning is still in its infancy in Malaysia, it is critical to address the variables that impact students' adoption of it.

1.3. Literature Review

Anuwar (2004) mentioned in his study online learning is not a new phenomenon among Malaysians. In Malaysia, students enrolled in open and distance learning (ODL) programs are introduced to e-learning. Meanwhile, according to Raghavan and Kumar (2008), the perceived disparity in higher education opportunities amongst working people and full-time university students is one of the reasons for the development of open and distance education in Malaysia. It has been around for quite some time in Malaysia but only due to recent circumstances, it has been rising continuously. In fact, according to the Malaysian Ministry of Higher Education (2020), all teaching and learning activities will be done until the end of December 2020 in all public and private institutions in Malaysia.

Online learning or e-learning is defined as delivering content over the Internet or Internet-based learning. In a previous research by Siti Sarah et al., (2011), it is described as non-traditional learning that occurs outside of the actual classroom. Furthermore, Clark (2002) regards it as material and instructional approaches given through a computer to build knowledge and skills relevant to an individual or organizational objectives. Rather than having students work in groups, this style of learning encourages them to work on their own at home, leisure and pace. Another definition would be, it is centered on the use of electronic media and gadgets as a tool for expanding communication access and engagement, training, and new methods of understanding and establishing learning. (Selvarajah et al., 2017).

In continuation of a research by Anuwar (2004), among the benefits of having online learning include flexibility, accessibility and convenience. With this, learners may access the resources whenever they want and study at their own speed and location. Next, it consists of cross platforms and low delivery costs. Here, students may access from any operating system of their desires and relatively it won't cost as much being that everything is online – no transportation nor physical costs needed. Lastly, it provides ease of update and collaborative learning. In this manner, it enables information to be readily and frequently updated and made instantly available to all learners. This technology encourages collaborative learning, which leads to more interesting and deeper learning experiences. Since everything is uploaded online, it can be retrieved by anyone at any time hence sustainable education is achieved. In addition, e-learning is useful for building a sense of community among students, reducing costs such as travel, improving communication between students and instructors, as well as developing autonomous problem-solving abilities.

Online learning may be perceived as welcoming by most learners especially during this pandemic. According to research done by Johari and Ismail (2011), their findings revealed that the majority of students in online education responses positively towards to the e-learning portal. Their findings were supported by Chizmar and Walbert (1999) stating that flexibility and convenience of e-learning allows students to choose from a variety of learning experiences, which allows them to identify the techniques that best suit their learning style. Since self-efficacy is associated with an individual's belief in one's own skills to organize and execute the actions necessary to accomplish certain objectives, it creates a bridge of possible connections on e-learning acceptance. Learners who have a high level of self-efficacy in technology will have a deep conviction that learning via the use of technology is beneficial to them.

Aside from that, students may also take part in online conversations at times which suited their schedules. Another scholar Song et al. (2004) added that some distance learners prefer e-learning to face-

to-face sessions since they are acquainted with technology in general. Another key item why e-learning is crucial nowadays is the fact that this technology encourages students to create more friends therefore improving their e-learning experience. This is reinforced by Knowles (1980) stating that the learner's learning environment is characterized by collaborative support, mutual respect, trust, physical comfort, freedom of speech, and acceptance of diversity.

2. Problem Statement

The autonomy of e-learning, in which students choose their own learning environment, pace, and progress, has received a lot of attention. Although e-learning seems to be the current norm nowadays, students may not have the same level of acceptance and views towards the use of online platforms. According to Bhuasiri et al. (2012), student traits which were viewed as crucial aspects in online learning in developing nations, were found to have a substantial impact on online learning and its acceptance in several studies. This is supported by Chu and Chu (2010) mentioning that these attitudes include internet self-efficacy, computer and internet expertise, computer usability anxiety, and approaches to online learning.

When it comes to online learning, hands-on tasks are commonly required in e-learning, whether participating in an online conversation or activities. Students face additional concerns and obstacles as a result of this, such as confidence and experience of using computer, computer ownership, technical problems, self-motivation, and time management, as mentioned in a research by Isa and Hashim (2006).

3. Research Questions

This study aimed to answer the following research questions:

- i. How do students perceive the usage of e-learning as a sustainable tool of education?
- ii. What is the students' attitude towards using e-learning as a sustainable tool for education?
- iii. How does the perceived usefulness of e-learning influence students' attitude on the usage of e-learning as a sustainable tool for education?

4. Purpose of the Study

This paper is designed to clarify the students' attitude towards using e-learning platforms as a sustainable platform of education and at the same time explore their perception of using e-learning as a sustainable tool. The outcome of this study will assist educators and administrators in planning and using online platforms to conduct online classes that suit the needs and expectations of the students. Not only that, fellow students themselves may learn more and might change their perspectives of e-learning especially during this pandemic which disrupts all sectors within the nation. Education is indeed crucial and particularly throughout these trying times, e-learning or online learning serves as the scaffold for them to prosper.

5. Research Methods

Quantitative method was used to gather information on the usefulness of e-learning as a learning tool that influences students' attitudes and perception towards e-learning. A total of 159 UNISEL foundation students from various courses were involved in this study.

The research instruments were adapted from three different journal papers by Erarslan and Topkaya (2017), Jović et al. (2017) and Pilli et al. (2014). The question was divided into four sections; demographic information, students' attitudes towards e-learning, and students' perception on e-learning. The questionnaires were prepared in likert scale from strongly disagree to strongly agree and was analysed through Statistical Package for the Social Sciences (SPSS) Software.

6. Findings

This section will provide a presentation of the survey's findings and analysis. A total of 159 replies were obtained from the intended respondents, resulting in a survey response rate of 100%. The responses gathered have been analysed using SPSS software.

This section begins by putting the respondents in context by looking at their demographic data. The findings and data analysis, as well as the summary, follow next. Descriptive and Pearson correlation analyses were used in the findings and analysis. Tables were utilised to facilitate a simple, reader-friendly writing style. Finally, a summary of this section is provided.

6.1. Demographic information

Table 1. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	56	35.2	35.2	35.2
	Female	103	64.8	64.8	100.0
	Total	159	100.0	100.0	

Table 2. Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 20	149	93.7	93.7	93.7
	21-25	10	6.3	6.3	100.0
	Total	159	100.0	100.0	

Table 3. Programme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	FIM	54	34.0	34.0	34.0
	FIS	23	14.5	14.5	48.4
	FIT	35	22.0	22.0	70.4
	FTESL	47	29.6	29.6	100.0
	Total	159	100.0	100.0	

Table 4. Computer Use for Non-Educational Purposes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 hours	107	67.3	67.3	67.3
	5-10 hours	33	20.8	20.8	88.1
	More than 10 hours	19	11.9	11.9	100.0
	Total	159	100.0	100.0	

Table 5. Computer Use for Educational Purpose

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 hours	27	17.0	17.0	17.0
	5-10 hours	66	41.5	41.5	58.5
	More than 10 hours	66	41.5	41.5	100.0
	Total	159	100.0	100.0	

6.2. Students' Perception on E-learning as a Platform for Online Learning

To determine the students' perception of e-Learning as a platform for their online learning, the responses to 14 statements under this variable were analysed. The scale for students' perception was categorized into 'general factors', 'student factors' and 'ease of use'. Since the scale for the students' perception on the effectiveness of e-Learning is interval (5-point Likert scale) its central tendency is the mean scores with standard deviation for its variability (Manikandan, 2011). Hence, mean score interpretation was conducted to analyse this variable.

The average mean scores of all 14 statements investigating students' perception are presented in Table 6. Based on the data shown in Table X, the average mean score for all 14 statements on students' perception of e-Learning is 3.28 (S.D. = 0.561). According to Norasmah and Salmah (2011), this score falls under the category of moderately high (positive) perception. This result reveals that the UNISEL Foundation students mostly find that the usage of e-Learning is moderately (high) useful as a platform of online learning.

Table 6. UNISEL Foundation Students' Average Perception of E-learning as a Platform for Online Learning

Mean	Median	Std. Deviation
3.28	3.29	0.561

As shown in Table 7, out of all the three categories within the scale of students' perception of e-Learning, general factors obtained the highest mean score (M = 3.35, S.D. = 0.55) compared to the other categories in this scale. Overall, UNISEL Foundation students found e-Learning to be useful and it is mostly contributed by general factors such as the appeal of interface and features of the platform, the satisfaction with the content and the updated information within e-Learning. This is followed by ease of use (M = 3.27, S.D. = 0.60) and student factors (M = 3.17, S.D. = 0.66).

Table 7. UNISEL Foundation Students' Perception of E-learning as a Platform for Online Learning by Categories

Categories	Mean	Median	Std. Deviation
General factors	3.35	3.20	0.55
Student factors	3.17	3.00	0.66
Ease of use	3.27	3.17	0.60

From the findings on Table 7, the results demonstrated that the UNISEL Foundation students found e-learning useful mainly due to general factors such as features of the platform, the satisfaction with the content and the updated information within e-Learning. Good encounters with an innovation bring knowledge and lead to good perception while poor experiences lead to negative perception and avoidance (Al-Rahmi et al., 2015). In addition to the findings, the data discovered evidence of the role of multimedia in assisting students' knowledge. A similar conclusion was reached by Nafrees (2021), in which e-learning was confirmed to act as a platform that assists students in learning.

Apart from that, others have shown that students' factors are also affecting students' perception toward e-learning. Based on the findings, the result also shows that the usage of e-learning helps the foundation students to enhance their effectiveness in learning, improve their academic performance and enable them to accomplish tasks quickly. This result ties well with previous studies wherein by allowing easy access to a large amount of content, e-learning improves the effectiveness of knowledge and certifications (Arkorful & Abaidoo, 2014). The findings on the ease of use category of e-learning shows that the foundation students enjoyed using e-learning as it is easy to learn, easy to interact with and useful. In line with previous studies, e-learning was found to have features that are easy to be used and cater the needs of the students (Iro-Idoro & Jimoh, 2021). The current findings confirm prior study on the same concerns relating to online learning conducted during COVID-19 pandemic, and the results revealed that students are not satisfied with e-learning, facing numerous hurdles (Mukhtar et al., 2020).

6.3. Students' Attitude Towards Using E-learning as a Platform for Online Learning

To investigate the students' attitude towards the use of e-Learning as a platform for online learning, responses obtained from the 16 statements under this variable were obtained. Categorized into attitudes in terms of 'task orientation', 'academic efficacy', 'information and design appeal', 'enjoyment' and 'anxiety', the statements were interpreted and described based on their mean scores according to Norasmah and Salmah's (2011) mean score interpretation.

Based on the data in Table 8, it shows that the attitudes of students towards the usage of e-Learning as a platform of online learning is moderately high (M = 3.33, S.D. = 0.501). This reflects a moderately high, positive attitude towards e-Learning.

Table 8. UNISEL Foundation Students' Average Attitude towards the usage of E-learning as a Platform for Online Learning

Mean	Median	Std. Deviation
3.33	3.38	0.501

Table 9 shows that the highest mean score for students' attitude towards the usage of e-Learning is obtained by the information and design appeal category ($M = 3.47$, $S.D. = 0.503$). Using the mean score interpretation by Norasmah and Salmah (2011), this score places the students' attitude in the moderately high range, showing that students have moderately high, positive attitude towards the usage of e-Learning in terms of information they can get and the attractiveness of the platform's design.

Table 9. UNISEL Foundation Students' Attitude towards the usage of E-learning as a Platform for Online Learning by Categories

Categories	Mean	Median	Std. Deviation
Task orientation	3.30	3.20	0.513
Academic efficacy	3.45	3.50	0.613
Information and Design Appeal	3.47	3.40	0.503
Enjoyment	3.33	3.50	0.658
Anxiety	2.92	3.00	0.776

As reported on Table 9, most foundation students have an optimistic attitude on using e-learning especially on information design and appeal, academic efficacy and enjoyment. Most of the foundation students agreed that the information on e-learning is well-organized making it easier for them to find all the needed information. Apart from that, the resources and lectures uploaded on e-learning contribute to the students' positive attitude towards e-learning. These results go beyond previous studies showing that the information design of e-learning is the major reason for the students' acceptance of e-learning (Dookhan, 2018; Muslim & Ahmad, 2018).

Several studies found that student attitude, which is an essential element in e-learning, had a significant impact on e-learning and its acceptance (Bhuasiri et al., 2012). Effective e-learning should promote collaborative learning, active learning and diversified learning by giving the students a sense of enjoyment when doing the task (Cheung & Cable, 2017). This is consistent with what has been found in this study where students enjoy the learning process using e-learning. However, it is important to highlight that students do feel nervous completing the task online and they also face difficulty in completing the task. It should be pointed out that the current evidence suggests that despite the students' positive attitude, they still have problems in completing the tasks given to them.

6.4. The Influence of Perceived Usefulness on Students' Attitude on the Usage of E-learning for Online Learning

The correlation between students' perception of e-Learning and their attitude towards it was investigated using Pearson Correlation analysis. The result is presented in Table 10, showing the correlation strength at $r = 0.848$ which is significant at the value of its 2-tailed significance $p = 0.00$. There is a positive significant correlation between students' perceived usefulness of e-Learning and their attitude towards the online learning platform ($r = 0.848$, $p < 0.01$). With the r value of 0.848, the strength of the relationship is very strong (Kowang et al., 2015). This result shows that the more e-Learning is perceived as useful by the students, the more positive their attitudes are towards the use of e-Learning as an online learning platform.

Table 10. Correlation Table

		Students Attitude
Students' Perception	Pearson Correlation	.848**
	Sig. (2-tailed)	.000
	N	159

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

Overall, the results from this study demonstrate that the experience of using e-learning highly affects the students' attitude towards the use of e-Learning as an online learning platform. An explanation for this could be that the students are willing to adopt the beneficial features of e-learning and ready to explore them. This aspect of the study also suggests that educators need to let their students explore the usage of e-learning for them to enjoy using it. E-learning during this pandemic has become a new normal and it is continuously evolving according to the needs of the students. More efforts are required by educators to integrate pedagogy in e-learning in order to enhance students' perceived use of e-learning. It should be noted that, the difference in perception among the students could be resulted from other factors such as internet availability which has nothing to do with the features and design of e-learning (Abbasi et al., 2020). This study has highlighted different categories of e-learning elements that improve the students' perception. Apart from that, it also provides potential bottlenecks for the future success of e-learning. The usage of e-learning can exceed the impact of traditional learning with proper implementation (Algahtani, 2011).

7. Conclusion

This study aimed to explore the students' attitude toward using e-learning platforms as a tool of education as well as their perception of e-learning as a sustainable tool of education. As the nation went into a lockdown due to Covid-19 pandemic, educational organizations had to quickly adopt e-learning platforms to conduct the teaching and learning process. The findings of this study reveals the students generally have a positive attitude toward using e-learning platforms as a tool of education. The students believe that e-learning tools are beneficial to them which resulted in a positive attitude towards using online tools for education. As stated by Girik (2020), students largely welcome the use of online platforms during the pandemic. The students' openness towards online platforms shows that the students are willing to adapt to the new ways of learning. This positive attitude clearly shows the relation between students' learning experience using e-learning platforms and their perception of e-learning as a sustainable tool of education. According to Popovici and Mironov (2015), students are well aware of how digital technologies are changing the learning process. Digital technologies are here to stay in the field of education and there is no turning back to regular chalk and talk methods of teaching and learning in the old days. Online education platforms will play an important role in shaping the future of education worldwide. Therefore, it is important for the students to have a positive outlook on online education and online education platforms. When students' perception is positive, their acceptance and willingness of using online platforms will be higher.

7.1. Recommendations

The researchers of this study have a few recommendations for future researchers. Firstly, there are a lot of research gaps on the effects of online education on students' performance, especially during the pandemic. Future researchers can conduct research to find the relation between the use of e-learning platforms and students' achievements in academics. Secondly, future researchers can also work on finding ways or factors to improve the e-learning platforms. The researchers believe that the betterment of e-learning platforms are crucial in order to establish those platforms as a sustainable tool of education. Lastly, identifying the most useful or essential facility on online platforms would be a good focus for future research. It will help to find the strength of online tools and how to maximize its benefits in teaching and learning.

7.2. Implications

Based on the findings of this study, it is established that students have a positive attitude towards e-learning platforms and have accepted e-learning as a sustainable tool of education. The implication of these findings is the educators now must fully embrace online tools as part of the teaching and learning process. The educators must be as willing as students to adapt and use online tools to conduct their lessons. As for the curriculum designers, it is now necessary to develop a curriculum which supports the use of online tools. This will make it easier for the educators and educational institutions to be innovative and provide contemporary courses to meet the future needs. This study has already shown that the students are open to using online tools to learn. Consequently, policy makers must take this into consideration when planning for the development of education. The government needs to provide sufficient infrastructures such as high-speed internet connections and electronic devices to enable students and educators from all walks of life to have equal opportunity of using online tools.

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