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Please cite this article as Shofi M., & NA Gani, (2023), Investigating System Quality Affecting Towards E-Learning Acceptance Among Local Community In Malaysia.,Jilid 4, Bilangan 3, Paper ID 6-75

INVESTIGATING SYSTEM QUALITY AFFECTING TOWARDS E-LEARNING ACCEPTANCE AMONG LOCAL COMMUNITY IN MALAYSIA

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DOI:
Received 17 November 2023, Accepted 20 December 2023, Available online 29 December 2023

ABSTRACT

This research explores the impact of the COVID-19 pandemic on distance learning students and investigates disruptions in their study activities. The study focuses on understanding the role of system quality as an independent variable in shaping students' attitudes and intentions toward e-learning. Utilizing an extended Technology Acceptance Model (TAM) and integrating system quality, the research, conducted among 122 respondents in Ampang Indah, reveals a positive relationship between system quality and e-learning acceptance. The validated TAM model explains a significant variance in students' attitudes and intentions toward e-learning, emphasizing the crucial role of technical system quality. The study provides practical insights for optimizing e-learning environments in the context of pandemic-induced changes.

ARTICLE INFO

Keywords:

E-learning Acceptance, Technology Acceptance Model (TAM), System Quality

1.0 INTRODUCTION

The rise of e-learning in modern education, particularly accelerated by the COVID-19 pandemic, has transformed traditional educational approaches (Abdullah & Ward, 2016). This transition to digital learning platforms has highlighted the importance of integrating technology to ensure continuous access to education (Abdullah & Ward, 2016). E-learning, defined as learning through the Internet, has emerged as a crucial tool in enabling educational access in challenging circumstances, thus increasing its significance in contemporary society (Abdullah & Ward, 2016). The increasing acceptance and utilization of e-learning across various sectors underscore its profound impact and relevance (Alqahtani & Rajkhan, 2020). With the rapid progress of information technology, the inclusion of e-learning has become essential, reshaping individuals' engagement with educational resources (Alqahtani & Rajkhan, 2020).

Furthermore, e-learning not only updates traditional educational methods but also significantly influences the current landscape, especially in the context of the COVID-19 pandemic (Abuhassna et al., 2021). The need to adapt to remote learning environments has emphasized the critical role of e-learning in ensuring uninterrupted educational access (Abuhassna et al., 2021). Educational institutions worldwide are increasingly acknowledging the necessity of e-learning in facilitating a smooth transition to online learning (Abuhassna et al., 2021). Beyond delivering educational content, e-learning acts as a driver for innovation and adaptation in the educational field (Zarei & Mohammadi, 2021). By offering engaging and interactive learning experiences, e-learning platforms empower students and educators to explore new teaching and learning approaches (Zarei & Mohammadi, 2021).

Several factors impact the effectiveness and acceptance of e-learning, including system quality, user experience, and technological infrastructure (Jain & Fernando, 2022). A comprehensive understanding of these factors is crucial in optimizing e-learning environments to enhance user satisfaction and engagement (Jain & Fernando, 2022). Previous research has provided valuable insights into the acceptance and impact of digital learning platforms on students' attitudes and behaviors (Al-Azawei et al., 2016). Expanding on existing studies can facilitate a deeper exploration of the complexities surrounding e-learning acceptance and its implications for educational practices (Al-Azawei et al., 2016).

In conclusion, the transformative role of e-learning in modern education is evident, with its significance further magnified by the challenges brought about by the COVID-19 pandemic. By leveraging technology to offer accessible and flexible learning experiences, e-learning has become a key driver of educational advancement in the digital age, shaping the future of global education.

2.0 LITERATURE REVIEW

2.1 System Quality

The historical development of research on system quality in e-learning has been marked by significant milestones and contributions in the field. Over the years, scholars have explored the impact of system quality on user satisfaction and engagement in e-learning environments. The historical development of research on system quality in e-learning has seen significant advancements and contributions over time. Scholars have delved into understanding how system quality impacts user satisfaction and engagement in e-learning environments. Studies such as those by (Cidral et al., 2018), (Pham et al., 2019), and Shahzad et al. (2020) have explored the relationship between e-learning service quality, student satisfaction, and

loyalty. These works have highlighted the importance of service quality in enhancing the overall e-learning experience for users. Additionally, research by Lee et al. (2018) emphasizes the role of technology in modern education, indicating the increasing integration of information and communication technology in learning processes.

Moreover, studies like those by Chandradasa & Galhena (2022) and Rachmawati et al. (2019) have expanded on existing models, incorporating variables like organizational culture and environmental factors to develop more comprehensive success models for information systems in e-learning. Furthermore, research by Tennakoon & Lasanthika (2021) and Sewandono et al. (2022) have focused on evaluating the success of e-learning systems, shedding light on various facets of e-learning quality and its impact on user satisfaction.

The works of Ohliati & Abbas (2019) and Mafazi (2021) have examined factors such as information quality, system quality, and service quality in relation to student satisfaction with learning management systems, providing insights into the determinants of user satisfaction in e-learning platforms. Additionally, studies by Dreheeb et al. (2016) and Al-Alwani (2014) have highlighted the importance of system quality in influencing user satisfaction and continuation of use in e-learning systems.

Recent research has focused on integrating system quality into theoretical frameworks such as the Technology Acceptance Model (TAM) to understand its influence on students' attitudes and intentions towards e-learning. Methodologies employed in this research topic include quantitative approaches using structured questionnaires to gather data on system quality perceptions. The research design often involves reliability analysis, correlation coefficients, and validation of models to assess the relationship between system quality and e-learning acceptance.

Recent trends in the study of system quality have seen a shift towards exploring more nuanced concepts and constructs in this topic. Scholars have delved into the intricacies of system quality factors such as reliability, usability, accessibility, and performance in e-learning systems. Developments in theories and models, such as the extended TAM, have provided a comprehensive framework for understanding how system quality influences user behavior in digital learning environments. Research methods have evolved to include advanced statistical analyses, usability testing, and user experience evaluations to capture the multidimensional nature of system quality. These trends suggest a growing emphasis on enhancing the user experience and optimizing system quality in e-learning platforms, paving the way for more user-centric and effective digital learning environments in the future.

2.2 E-Learning Acceptance

The historical development of research on e-learning acceptance has been characterized by significant milestones and contributions in the field. Scholars have explored the factors influencing students' attitudes and intentions towards e-learning, particularly in the context of technological advancements and changing educational landscapes. The historical development of research on system quality in e-learning has seen significant advancements and contributions over time. Scholars have delved into understanding how system quality impacts user satisfaction and engagement in e-learning environments. Studies such as those by (Cidral et al., 2018), (Pham et al., 2019), and Shahzad et al. (2020) have explored the relationship between e-learning service quality, student satisfaction, and loyalty. These works have highlighted the importance of service quality in enhancing the overall e-learning experience for users. Additionally, research by Lee et al. (2018) emphasizes the role of technology in modern education, indicating the increasing integration of information and communication technology in learning processes.

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2.3 Theory Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) has emerged as the most prevalent model for evaluating students' attitudes toward adopting emerging technologies in various contexts and disciplines. TAM proves to be a valuable tool for exploring students' perceptions. However, during the COVID-19 pandemic, certain external factors can be integrated into the model. This study introduces a significant factor, online learning anxiety, which has been included in previous studies due to its importance. Therefore, this study investigates students' perceptions of online learning and delves into whether the proposed factor impacts students' actual usage of online learning.

3.0 METHODOLOGY

Research Design	The study utilizes a quantitative research approach, employing a structured questionnaire and applying appropriate statistical methods for data analysis. This research design appears to be sound and wellsuited to addressing the research questions.
Target Population	Targeted students among community in Ampang Indah.
Sample Size	A total of 122 respondents involved in the survey.
Data Collection	The survey was conducted online via Google Form and shared with the Ampang Indah community head via WhatsApp.
Instrument/ Questionnaire	The questionnaire comprises eight parts with a total of 15 questions, employing a 1-5 Likert scale. Part A focuses on demographic information with six items. Parts B assess system quality consisting five items. Finally, Part C evaluates e-learning acceptance through four items.

Data Analysis This article analyzes collected information through data cleaning, organization, and analysis. The reliability of the data and the relationships between independent and dependent variables are evaluated using Cronbach's Alpha values and the Pearson correlation coefficient.

4.0 RESEARCH FRAMEWORK

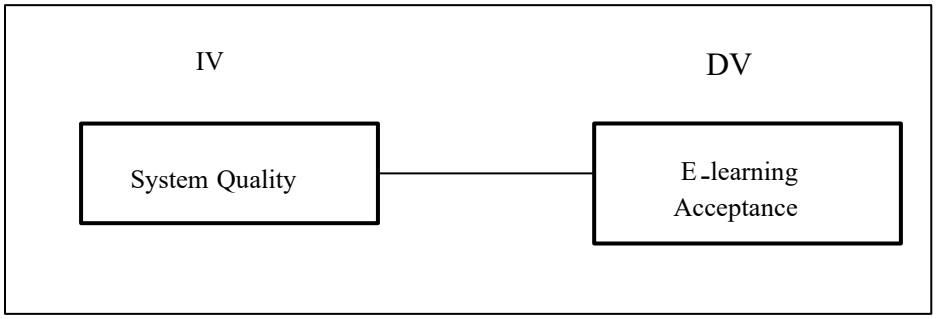

Figure 5.0 Research Framework

Based on Figure 5.0, the research framework consists of two variables: the independent variable, system quality, and the dependent variable, e-learning acceptance. The operational framework illustrates the relationship between system quality and its influence on e-learning acceptance.

5.0 FINDINGS AND DISCUSSION

This section shows the finding of respondent's demographic data along with reliability analysis and correlation coefficient.

Descriptive Analysis

Table 6.1 Respondent's Demographic Data

Demographic	Items	Frequency	Percentage (%)
Gender	• Male	35	28.7
	• Female	87	71.3
Total		**122**	**100**

Age	• Less than 20 years old	13	10.7
	• 20-30 years old 30-	89	73
	• 40 years old 40-50	8	6.6
	years old	9	7.4
	• Above 50 years old	3	2.5
Total		**122**	**100**
Occupation	• Government	17	13.9
	• Non-Profit Sector	4	3.3
	• Student Private	58	47.5
	Others	27	22.1
		16	13.1
Total		**122**	**100**
Education	• Phd Degree	1	0.8
	• Master Degree	1	0.8
	• Bachelor Degree	52	42.6
	• Diploma	43	35.2
	• SPM	15	12.3
	Secondary Schools	7	5.7
	Primary Schools	0	0
	Others	3	2.5
Total		**122**	**100**
Race	• Malay	117	95.9
	• Chinese	2	1.6
	• Indian	3	2.5
Total	Others	0	0
		122	**100**
Experience Involved with E-learning	• • Less than 1 year	31	25.4
	• 1-2 years 3-	49	40.2
	• 5 years	36	29.5
	More than 5 years	6	4.9
Total		**122**	**100**

In table above shows that the respondent's demographic data shows a majority of female respondents (71.3%). Respondents in the 20-30 age group (73%), mainly students (47.5%) with Bachelor's degrees (42.6%) also coming from Malay race with (95.9%) and the respondent gain experience involved with E-learning between 1 – 2 years' experience for (40.2%).

Table 6.2 Result of Reliability Test Reliability Analysis

VARIABLES	N. OF ITEMS	CRONBACH'S ALPHA
Independent Variables		
System Quality	5	.930
Dependent Variables		
E-Learning Acceptance	4	.910

Table 6.2 shows the Cronbach's Alpha values for the independent and dependent variables in this study. The independent variable, system quality, was assessed using five questions. According to Table 6.2, the Cronbach's Alpha for this section's questions was α= 0.930, indicating good reliability. Consequently, the coefficients obtained for the social variable were deemed reliable. The dependent variable's Cronbach's Alpha score was α = 0.910.

Table 6.3 Result of Reliability Test: Correlation Coefficient of System Quality and E-Learning Acceptance

Correlations

		SYSTEMQUALITY	ELEARNINGACCEPTANCE
SYSTEMQUALITY	Pearson Correlation	1	.809**
	Sig. (2-tailed)		<.001
	N	122	122
ELEARNINGACCEPTANCE	Pearson Correlation	.809**	1
	Sig. (2-tailed)	<.001	
	N	122	122

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

Table 6.3 shows a strong positive correlation between system quality and e-learning acceptance, with a correlation coefficient of 0.809. Both significance values are 0.001, which is lower than the highly significant level of 0.05.

6.0 CONCLUSION

This research proposal underscores the significance of gaining insights into the factors influencing the acceptance of e-learning within Malaysian communities. The proposed study's primary objective is the development and validation of an extended Technology Acceptance Model (TAM) specifically tailored to the unique context of e-learning environments. This model takes into account of variable system quality. By doing so, it aspires to provide a comprehensive understanding of students' attitudes and intentions to continue using e-learning. Notably, the proposed TAM model has proven to be a robust predictor, explaining 71.9% of variance in attitude and an impressive 77.9% in continuance intention among surveyed students.

This research underscores the critical role of students' wholehearted embrace of e-learning technology in achieving its success. Rooted in the TAM framework, the study's dependent variables offer nuanced insights into students' acceptance, particularly in the context of the COVID-19 pandemic. The findings highlight the pivotal importance of technical system quality in shaping students' acceptance of e-learning. Moreover, the research strongly advocates for adopting a technological perspective on eLearning.

In summary, this research proposal highlights the growing importance of e-learning in the Malaysian context and provides valuable insights into how to enhance its acceptance and effectiveness, particularly during challenging times such as the COVID-19 pandemic. These recommendations serve as practical guidance for institutions seeking to optimize their elearning environments and foster positive learning experiences.

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