

Investigating Relationship of System Quality Towards E-Learning Acceptance

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ABSTRACT

E-learning is an adaptable and accessible platform for learners in a variety of circumstances. E-learning has become a disruptive force in the field of education. This abstract provides a comprehensive overview of the key factors of system quality in e-learning that provides analysis of the role of system quality in shaping the acceptance of e-learning platforms. An indepth comprehension of the various determinants that impact the acceptability of e-learning among stakeholders is imperative, notwithstanding its increasing prevalence. The objective of this research is to examine and determine the various aspects that influence the acceptability of e-learning, including learners, educators, and institutions. The method that used for this research is quantitative method through the use of a questionnaire as a tool for study. In Kemboja 4a, Rawang, 108 respondents received the questionnaires. A deeper comprehension of the acceptance of e-learning in that region is made possible by this research. Some recommendations for further research were made by this study. The study discovered a connection between system quality and e-learning adoption. Future studies should investigate the elements influencing the acceptance of e-learning more thoroughly.

Keywords: System Quality, E-Learning Acceptance, Platform,

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INTRODUCTION

The integration of e-learning in education has become a pivotal solution, especially highlighted during the COVID-19 crisis, as it offers a transformative shift influenced by technological advancements (Dhawan, 2020). This shift has democratized access to knowledge and enhanced teaching and learning activities, providing learners with flexibility and accessibility to education irrespective of geographical constraints (Deepika et al., 2020). The sudden outbreak of the COVID-19 pandemic has underscored the importance of e-learning in ensuring the continuity of education delivery despite physical distancing measures (Dhawan, 2020).

In today's environment, e-learning methodologies have played a crucial role in adapting education from offline to online pedagogy, reflecting a significant shift in how education is perceived and delivered (Nivedhya et al., 2023). The pandemic has accelerated the adoption of e-learning practices, emphasizing the importance of flexible educational solutions that can be accessed remotely (Hemajothi & Jain, 2022). Nursing students' perceptions of e-learning during the pandemic have highlighted the significance of this mode of education in maintaining educational processes during crises (AlOsta, 2021).

The concept of e-learning has significantly influenced the current educational landscape, particularly during the COVID-19 pandemic, where it has served as a resilient alternative to traditional classroom learning (Dhawan, 2020). A systematic review of e-learning systems adoption has shed light on the practical implications of e-learning in educational institutions, providing guidance for managers, scholars, and policymakers in navigating the educational field (Fattah et al., 2022).

E-learning has played a crucial role in ensuring the continuity of education delivery, especially during crises like the COVID19 pandemic (Dhawan, 2020). It has transformed the way education is accessed and delivered, emphasizing the importance of technological solutions in maintaining educational processes in challenging times (Deepika et al., 2020).

Various factors influence e-learning adoption, including the shift from offline to online pedagogy, learners' perceptions, and challenges faced during the pandemic (Nivedhya et al., 2023; Hemajothi & Jain, 2022). Understanding these factors is essential in enhancing the effectiveness and efficiency of e-learning practices in education.

Previous studies have highlighted the importance of e-learning in maintaining educational processes during crises like the COVID-19 pandemic AlOsta (2021). Systematic reviews have provided insights into the adoption of e-learning systems and their implications in educational settings (Fattah et al., 2022).

The objective of this study is to explore the role of e-learning in education, particularly during crises, and to understand the factors influencing its adoption (Dhawan, 2020; Deepika et al., 2020; Nivedhya et al., 2023; Hemajothi & Jain, 2022). By reviewing previous studies and examining the impact of e-learning on educational practices, this study aims to provide valuable insights for educators, policymakers, and stakeholders in the field of education.

LITERATURE REVIEW

E-Learning

The acceptance and successful adoption of e-learning systems have become central concerns in the realm of education, particularly with the proliferation of digital technologies (Smith & Brown, 2019). System quality, one of the dimensions of information system success (DeLone & McLean, 2003), plays a pivotal role in shaping users' attitudes, satisfaction, and ultimately, their acceptance of e-learning platforms. E-learning has become an integral part of modern education, offering flexibility, accessibility, and scalability (Smith & Brown, 2019). However, the acceptance and effective utilization of elearning platforms depend on a myriad of factors. Among these, system quality, defined as the technical attributes and features of e-learning systems, plays a crucial role in influencing users' perceptions and acceptance (MOJET Vol.10 Issue 2,2022). In investigating the factors affecting e-learning acceptance, an essential independent variable of paramount significance is "system quality." System quality, as defined in the literature, encompasses the technological infrastructure, software design, and overall usability of e-learning platforms (Davis, 1989).

The adoption and success of e-learning systems are influenced by various factors, as evidenced by research in the field. Theoretical frameworks such as the Technology Acceptance Model (TAM) and the DeLone & McLean Information System Success Model provide insights into the determinants of e-learning acceptance and success (Tarhini et al., 2017; Cidral et al., 2018; Seta et al., 2018). These models emphasize factors like performance expectancy, system quality, and user satisfaction as crucial elements influencing users' behavioral intentions and perceptions of e-learning platforms (Tarhini et al., 2017; Cidral et al., 2018; Seta et al., 2018).

In the real world, challenges exist in understanding the complexities of e-learning adoption, especially during events like the COVID-19 pandemic, which have accelerated the need for effective e-learning systems (Almaiah et al., 2020; Shehzadi et al., 2021). Factors such as social influence, self-efficacy, and trust play significant roles in shaping users' attitudes and behaviors towards e-learning platforms (Almaiah et al., 2020). However, gaps in research still exist, particularly in fully understanding students' perspectives and external influences on e-learning success (Sugandini et al., 2022).

Demographic factors, such as gender and social context, also impact readiness for e-learning adoption, highlighting the importance of considering diverse user characteristics in designing and implementing e-learning systems (Mutambik et al., 2020). Additionally, factors like online learning skills and motivation pathways influence the effectiveness and engagement of e-learning experiences (Ho et al., 2010; Mansor et al., 2022).

The attention from researchers and policymakers towards e-learning has increased, given its significance in modern education systems. The components of e-learning success, including system quality, information quality, and user satisfaction, are crucial for enhancing learning outcomes and educational excellence (Seta et al., 2018; Khasawneh, 2017). The development of theoretical frameworks like the TAM and the DeLone & McLean model further supports empirical investigations into e-learning adoption and success, providing a structured approach to understanding the complex interplay of factors influencing e-learning systems (Seta et al., 2018).

In conclusion, e-learning adoption and success are multifaceted phenomena influenced by a range of factors, from theoretical frameworks to real-world challenges and demographic considerations. Understanding these determinants and components is essential for improving e-learning experiences and maximizing the benefits of digital education in society.

System Quality

System quality is a multifaceted concept that has evolved over time. Initially, the focus was primarily on technical attributes and performance, but recent literature emphasizes a more holistic view that includes user satisfaction, service quality, and information quality as integral components of system quality (Greenhalgh et al., 2017). The DeLone & McLean Information System Success Model provides a structured framework for evaluating system quality, highlighting the interplay between information quality, system quality, and user satisfaction (Greenhalgh et al., 2017). This shift in understanding is crucial as it recognizes that system quality is not solely determined by technical excellence but also by user-centric factors that contribute to overall system effectiveness.

The determinants of system quality encompass information quality, service quality, user satisfaction, and technical performance, all of which collectively contribute to the overall quality and effectiveness of a system (Kumar et al., 2018). The impact of system quality on society is profound, affecting service delivery, user experiences, and organizational performance (Meinert et al., 2018). In healthcare, for example, system quality directly influences patient outcomes and the efficiency of healthcare services (Meinert et al., 2018).

Challenges in understanding system quality include the need for standardized methodologies, quality assessment tools, and the integration of user feedback to enhance system performance (Meinert et al., 2018). Researchers and policymakers have increasingly focused on system quality due to its significant impact on organizational success and user experiences (Meinert et al., 2018). The development of theoretical frameworks like the DeLone & McLean model aids in empirical investigations and provides a structured approach to evaluating and enhancing system quality (Greenhalgh et al., 2017).

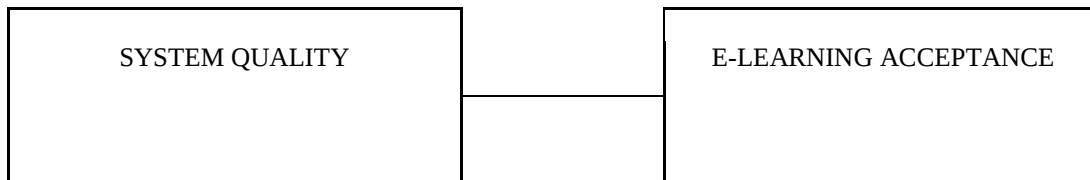
In conclusion, system quality plays a critical role in various sectors such as healthcare, business, and technology. Understanding the determinants, components, and importance of system quality is essential for optimizing system performance and meeting the evolving needs of society. By considering both technical aspects and user-centric factors,

organizations can ensure that their systems are not only technically sound but also effective in delivering value to users and organizations.

TAM Model

The technology acceptance model (TAM) was designed by Davis (1989) as a psychological framework to understand and forecast the extent to which customers adopt information technology. Later on, it has been extended and altered to include many scenarios, such as e-learning. The Technology Acceptance Model (TAM) is predicated on the notion that users' assessments of a technology's efficacy and utility have a substantial influence on their propensity to adopt and incorporate that technology into their daily operations. Davis (1989) formulated it by utilising the theory of reasoned action (TRA) introduced by Fishbein and Ajzen (1975) in the realm of psychological investigation. The Theory of Reasoned Action (TRA), as proposed by Malini Masrom (2007), posits that an individual's behaviour is shaped by their behavioural intention, which is decided by their attitude towards the behaviour and the subjective norms connected with doing the behaviour. Essentially, this notion suggests that a person's behaviour and their likelihood to engage in that behaviour depend on their attitude towards the behaviour and their perceptions of the behaviour. Moreover, a recent comprehensive assessment has determined that the application of the Technology adoption Model (TAM) in the field of educational technology adoption has proven to be effective in comparison to other theoretical frameworks.

RESEARCH FRAMEWORK



METHODOLOGY

This section discusses the research design, target population, sample size, data collection techniques, and research Instrument/questionnaire, and data analysis of the current study. Further details on the process are provided in Table 1 below.

Table 1: Research methodology

Research Design	This research employs a quantitative methodology, collecting data through the use of questionnaires that comprised multiple answer options.
Target Population	The survey was completed by 108 members of the Selangor community, with a focus on Kemboja 4A, Rawang, Selangor.
Sample Size	the qualitative approach and the quantitative approach are using in this methodology
Data Collection	The questionnaire was disseminated to the target group via an internet platform, specifically Google Form, which was chosen for its convenience and ability to effectively contact the respondents.
Instrument/ Questionnaires	It is comprised of the following six sections: The questionnaire consists of three sections. Section A includes demographic questions, with a total of five items. Section B focuses on the acceptability of e-learning and consists of four items. Lastly, Section C assesses perceived usefulness, also consisting of four items. Section D: Perceived Ease of Use (consisting of 4 elements). Section E: Evaluation of System Quality (4 Items). Section F: Social Influence (5 Items) The study employs a Likert scale, which encompasses a range of responses from strongly disagree to strongly agree (strongly agree, agree, neutral, disagree, strongly disagree).

Data Analysis	Cronbach's alpha is utilised in reliability tests to assess the consistency of a questionnaire, with Likert scale items serving as the primary indicators. Descriptive statistics were employed to analyse the questionnaire data. Several surveys have been coded and will be assessed using the statistical software Statistical Package for the Social Sciences (SPSS) Version 29 in order to address the study question and hypothesis. The correlation between E-Learning acceptance and system quality was ascertained through the implementation of a regression analysis.
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FINDINGS AND DISCUSSION

The attributes comprised of gender, age, ethnicity, and educational attainment are utilised in this demographic analysis. Table 1 presents the total number of respondents who participated in the research, amounting to 108 individuals from the community in Rawang, Selangor. This study included a sample of 46 male participants and 54 female participants, categorised based on gender. Furthermore, it is noteworthy to draw attention to that there exist three distinct age groups, namely individuals below the age of 20, those between the ages of 20 and 30, and individuals aged between 30 and 40. Additionally, there are age groups spanning from 40 to 50 years old, as well as individuals aged 50 years and above. The age category with the highest representation is those between 20 and 30 years old, accounting for 50.93% of the total. Conversely, the age group with the lowest representation is individuals between 40 and 50 years old, comprising only 2.78% of the total. The subsequent attribute pertaining to jobs. The survey results indicate that students comprise the majority, accounting for 62.04% of the respondents. Conversely, the category labelled as "others" represents the smallest proportion, with a mere 0.93% of participants. The greatest percentage of individuals with an education level was observed for those holding a Diploma, accounting for 33.33% of the total. Conversely, individuals with a PHD Degree constituted the lowest proportion, representing only 2.78% of the population. The majority of individuals possess a prior experience utilising E-Learning, with a prevalence of 51.85% having engaged in this form of education for a duration of 1-2 years. In contrast, a smaller proportion of individuals, precisely 10.19%, have accumulated a use history of over 5 years.

Demographic Data

Table 2: The study demographic data

Category	List of Item	Percentage
Gender	Male	46.30%
	Female	53.70%
Age	Less than 20 years old	25.93%
	20-30 years old	50.93%
	30-40 years old	11.11%
	40-50 years old	2.78%
	Above 50 years old	9.26%

Occupation	Government	6.48%
	Non-Profit Sector	1.85%
Education	Student	62.04%
	Private	9.26%
	Others	0.93%
	PhD Degree	2.78%
	Master Degree	10.19%
	Bachelor Degree	29.63%
	Diploma	33.33%
	SPM	7.41%
	Others	16.67%
Experience with E-Learning	Less than 1 year	20.37%
	1-2 years	51.85%
	3-5 years	17.59%
	More than 5 years	10.19%

Reliability of Data

For the purpose to evaluate the questionnaire's reliability, a reliability assessment was conducted.

Table 3: Reliability analysis for system quality and E-Learning acceptance.

Reliability Statistics	
Cronbach's Alpha	N of Items
.876	4

There exists a total of four questions that are used for the purpose of analyzing the system quality. The value of Cronbach's Alpha is 0.873, which suggests a good level of reliability. Consequently, the coefficient that has been presented for the query can be deemed credible.

The Pearson Correlation Coefficient Analysis

The Pearson correlation coefficient analysis was used to measure the strength of the linear relationship between system quality and E-Learning acceptance. The research objective is to investigate the relationship between system quality and E-Learning acceptance.

Table 4: The Pearson correlation coefficient analysis between security and behavioural intention.

Correlations			
		E-learning Acceptance	System Quality
E-learning Acceptance	Pearson Correlation	1	.547 ^{**}
	Sig. (2-tailed)		.000
	N	108	108
System Quality	Pearson Correlation	.547 ^{**}	1
	Sig. (2-tailed)	.000	
	N	108	108

The result of the Pearson correlation coefficient analysis is presented in Table 4. The findings reveal that the relationship between system quality and E-Learning acceptance is eligible correlation of 0.547. It shows a significant statistical relationship between system quality and E-Learning acceptance. Therefore, H1 are supported. The findings indicate a statistically significant correlation between the quality of the system and the acceptability of E-Learning. A significant correlation was observed between the quality of the system and the acceptance of E-Learning in terms of user behaviour.

CONCLUSION

The results of this study indicate that the community's acceptance of e-learning in Kemboja 4A, Rawang, Selangor, and system quality are significantly correlated. Investigating Factors Affecting Acceptance of E-Learning in Kemboja 4A, Rawang, Selangor, is the subject of this study. Research on the factors influencing e-learning adoption has shown the complex dynamics influencing people's inclination to accept digital learning. This research has evaluated and examined the impact of several aspects, such as perceived utility, simplicity of use, and content quality, on e-learning adoption through wellstructured surveys, data collecting, and SPSS analysis. The results offer significant perspectives for educators and institutions seeking to increase e-learning usage. The proper delivery of multimedia information, interactive features, and assessment tools in e-learning depends on system performance as well.

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