

Optimizing Social Media Platforms for Enhanced Distance Learning Support Systems: A Case Study of Universitas Terbuka

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Abstract

The rapid evolution of information and communication technology (ICT) has revolutionized education, particularly in the context of distance learning. Social media has emerged as a crucial component in the educational landscape, offering opportunities for collaboration and interaction. This article explores the optimization of social media platforms to enhance distance learning support systems, focusing on the case of Universitas Terbuka, a renowned institution for Open Distance Learning (ODL) programs. The study employs the UTAUT model to investigate the factors influencing the voluntariness of social media use for distance learning. Through a quantitative research design involving 233 respondents, Structural Equation Modeling (SEM) is used to analyze the relationships between variables. The findings reveal that factors such as effort expectancy, social influence, and facilitating conditions significantly impact students' willingness to use social media for distance learning. These results suggest the importance of fostering social influence and ease of use expectations to enhance the distance learning experience at Universitas Terbuka and similar institutions. Overall, this study underscores the transformative potential of social media in education and its role in shaping the future of learning environments.

Keywords: distance learning; education; social media; technology adoption

1. Introduction

The swift advancement of information and communication technology (ICT) has brought major changes in significant transformations across of life, especially in education. In recent years, social media has become an inseparable part of everyday life, including in educational practice (Manca and Ranieri 2016). Being a crucial component of the educational journey, social media has exerted a favorable and notable influence on the realm of distance learning (Jogezai et al. 2021). The COVID-19 pandemic that has hit the world since 2020 has forced the education sector to switch from conventional learning to distance or online learning (Almaiah, Al-Khasawneh, and Althunibat 2020). Many educational institutions have begun to utilize social media as a platform for sharing information, communicating, and exchanging learning materials quickly and efficiently (Dwivedi et al. 2020). Various widely-used social media platforms, such as Facebook, Twitter, Instagram, and WhatsApp, are employed in the distance learning context (Ubaedillah et al. 2021).

The emergence of social media platforms has revolutionized communication and collaboration, particularly within the context of remote learning environments. This research delves into the optimization of social media platforms for enhancing distance learning support systems. Specifically, the study focuses on Universitas Terbuka, renowned for its Open Distance Learning (ODL) programs, which have attracted a substantial number of fresh graduates, with over a hundred thousand new student registrations in early 2023. Social media has great potential to support distance learning due to its collaborative, interactive and flexible nature. In this context, the use of social media is not only limited as a medium of communication between students and lecturers or teachers, but can also facilitate independent learning activities, collaborate, and access rich and varied learning resources (Junco, Heiberger, and Loken 2011). Adoption of social media in distance learning brings a number of benefits, such as increased interaction between students and teachers, wider accessibility of learning resources, and more active collaboration and participation (Al-rahmi, Othman, and Yusuf 2015). In addition, social media also encourages the formation of online learning

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communities that allow students to share information, discuss, and support each other's learning process (Carpenter and Krutka 2015).

Even though social media has great potential in education, its use which is less structured and not accompanied by a clear strategy can cause obstacles in the distance learning process (Au, Lam, and Chan 2015). Distance learning necessitates not only a cognitive but also a psychological and social approach between educators and students. Social media platforms serve as bridges to foster these psychological and social connections, creating an environment conducive to effective learning. The adoption of social media in education also has its own challenges. Several related challenges include issues of time utilization, material quality, privacy, and data security (Gikas and Grant 2013). Therefore, it is important to dig deeper into the role of social media in education, and find the best ways to integrate it effectively and efficiently into distance learning practices. This study discusses the role of social media and what factors are to improve the quality and effectiveness of distance learning,

This study uses variables and indicators that are often used in technology adoption for a person. The variables used in this research are performance expectancy, performance expectancy, effort expectation, social influence, and facilitating conditions and voluntariness of use from the UTAUT model (Venkatesh et al. 2003). These factors were also used in similar research on the intention to use social media as an online learning facility (Arulogun et al. 2020). The hypotheses in this research are as follows:

H1: Performance expectancy has a positive relationship with the voluntariness of using social media for distance learning at Universitas Terbuka.

H2: Effort expectancy has a positive relationship with the voluntariness of using social media for distance learning at Universitas Terbuka.

H3: Social influence has a positive relationship with the voluntariness of using social media for distance learning at Universitas Terbuka.

H4: Facilitating conditions have a positive relationship with the voluntariness of using social media for distance learning at Universitas Terbuka.

2. Method

This study adopts a quantitative research design to analyze the relationship between variables related to social media optimization in distance and open learning. The main research method used is the Structural Equation Model (SEM), chosen for its ability to assess the relationship between observable and latent variables. In this method, the required number of samples is ten times the number of indicator variables (Hair, Ringle, and Sarstedt 2011). The number of indicators in this study were 15 indicators with minimum 150 respondents were needed. A sample of 233 respondents was taken from Universitas Terbuka students from various study programs and regions in Indonesia. A structured questionnaire designed to collect data on various indicators of social media use in distance education.

The survey instrument was created using a Likert scale that ranged from 'strongly disagree' (1) to 'strongly agree' (5), aimed at enhancing the validity and reliability of the data collected through the questionnaire. The questions were designed using a Likert-type scale to measure respondents' perceptions and attitudes towards the various aspects being investigated. The data collected from the survey were analyzed using the Structural Equation Model technique through the SmartPLS software. SEM makes it possible to study measurement models and structural models, thereby enabling a thorough understanding of the relationships between variables. The independent variables consist of performance expectancy, effort expectations, social influence, and facilitating conditions while the dependent variable is the voluntariness of use of social media for distance learning. The variables and indicators in this study can be seen in more detail in table 1.

3. Results

3.1. Descriptive Information

The survey results from 233 respondents provide insights into the utilization of social media in both educational contexts and daily activities. The data offers an overview of internet usage trends, the most popular social media platforms, primary purposes for social media use, and students' perspectives on the role of social media in the teaching-learning process.

Table 1. Variabel and Indicator for Social Media Use in Distance Learning

Num.	Variabel	Indicator	Notation
1	Performance Expectancy	Social media platforms have the potential to enhance my effectiveness as a student.	PE1
		Social media platforms can serve as valuable tools to facilitate learning and engage students within educational institutions.	PE2
		Utilizing social media as a teaching aid will contribute to improving my comprehension as a student.	PE3
2	Effort Expectancy	I anticipate that learning through social media platforms will be a straightforward process for me.	EE1
		I foresee no difficulty in adapting to new educational technologies for learning.	EE2
		Embracing social media platforms for learning purposes will aid in my proficiency in using them.	EE3
3	Social Influence	My peers believe that utilizing social media would enhance our learning experience.	SI1
		My family and friends endorse the use of social media for educational purposes.	SI2
		I have concerns about the potential invasion of privacy if social media platforms are integrated into teaching and learning.	SI3
4	Facilitating Conditions	Issues related to internet availability and signal strength may pose challenges when using social media for learning.	FC1
		Concerns regarding internet data package availability may affect the use of social media for educational purposes.	FC2
		The availability of power or electricity might be a hindrance in utilizing social media for learning.	FC3
		I possess the necessary technical skills to effectively employ social media platforms for studying.	FC4
5	Voluntariness of Use	I am inclined to use social media platforms for educational purposes.	U1
		I am committed to allocating the required time and effort to engage in my studies via social media platforms.	U2

A majority of the respondents (41.6%) are online throughout the day, with most of them spending their time on platforms like WhatsApp (212 users), Instagram (176), Tiktok (125), and Youtube (124). The main objectives for employing social media are information-seeking (47.6%) and educational support (14.2%). Meanwhile, opinions about the role of social media in education vary; the majority agrees that social media aids in understanding subject matter (49.4%) and supports the teaching-learning process (63.5%). A significant portion of the students (52.4%) concur that interacting with instructors via social media is important. Additionally, a considerable percentage (53.6%) believe that social media enhances online learning. The utilization of WhatsApp as a communication tool with instructors is also supported by a majority (74.7%).

These survey findings mirror usage patterns and students' viewpoints on the utilization of social media in the realm of education, particularly in the context of distant higher education in Indonesia. The continuous evolution of technology and social media platforms continues to play a vital role in shaping the dynamics of learning and the interaction between students and educators.

3.2. Model Analysis

The measurement results reveal the outer loadings, Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) for each construct and its associated items. The constructs, including Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Voluntariness of Use, have been analyzed based on their respective items. There was one invalid item, FC1, which was not used in this study. The comprehensive outcomes pertaining to the measurement constructs are displayed in table 2. After carefully examining the measurement model and assessing the results, the analysis of the data advanced to include an evaluation of the structural model. This was done to gauge the theoretical relationship between the constructs and the anticipated outcomes of the conceptual framework.

Table 2. Constructs and items measurement results

Constructs and Items	Outer Loadings	Cronbach's Alpha	CR	AVE
Performance Expectancy		0.873	0.922	0.797
PE1	0.896			
PE2	0.893			
PE3	0.889			
Effort Expectancy		0.879	0.926	0.807
EE1	0.833			
EE2	0.92			
EE3	0.938			
Social Influence		0.782	0.872	0.696
SI1	0.851			
SI2	0.877			
SI3	0.771			
Facilitating Conditions		0.833	0.898	0.745
FC2	0.85			
FC3	0.861			
FC4	0.878			
Voluntariness of Use		0.795	0.906	0.828
U1	0.89			
U2	0.93			

3.3. Measurement Model

The study's hypotheses were tested using Smart PLS to explore the relationships between various constructs concerning the usage of social media in the context of distant higher education in Indonesia. The table 3 presents the hypothesis path coefficients, their respective t-statistics, and the associated p-values.

Table 3. Structural Path

Hypotheses	Path	Coefficient	T-statistics	P-Values
H1	Performance Expectancy -> Voluntariness of Use	0.147	1.916	0.056
H2	Effort Expectancy -> Voluntariness of Use	0.294	4.468	0
H3	Social Influence -> Voluntariness of Use	0.36	4.66	0
H4	Facilitating Conditions -> Voluntariness of Use	0.089	2.007	0.045

The results reveal the outcomes of testing the hypotheses concerning the relationships between Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, and Voluntariness of Use. The coefficients, t-statistics, and p-values for each hypothesis are presented in the table.

H1 investigated the relationship between Performance Expectancy and Voluntariness of Use. Although the coefficient is 0.147 and the p-value is 0.056, indicating a tendency towards significance, it falls short of being statistically significant. H2 explored the connection between Effort Expectancy and Voluntariness of Use. The coefficient is 0.294, with a high t-statistic of 4.468 and a p-value of 0.000, indicating strong statistical significance. H3 examined the association between Social Influence and Voluntariness of Use. The coefficient is 0.36, and the t-statistic is 4.66, both indicating a strong relationship, with a p-value of 0.000. H4 investigated the relationship between Facilitating Conditions and Voluntariness of Use. The coefficient is 0.089, with a t-statistic of 2.007 and a p-value of 0.045, indicating statistical significance.

These findings provide insights into the factors influencing students' willingness to use social media for distant higher education in Indonesia and contribute to the overall understanding of the dynamics of social media usage in educational contexts.

4. Discussion and Conclusion

This study findings effectively capture usage trends and student perspectives regarding the integration of social media in education, not only shed light on the pervasive use of social media in various aspects of daily life but also emphasize its evolving role as a dynamic support system for distance learning in Indonesia. They underscore the continuous evolution of technology and social media platforms as pivotal factors in reshaping the dynamics of learning and the interactions between students and educators. In essence, this study reflect the growing influence of social media in education, portraying it as a versatile tool that not only connects individuals but also contributes to effective teaching and learning experiences. As technology continues to advance, it is evident that social media will remain a transformative force in education, fostering collaboration, enhancing engagement, and shaping the future of learning environments. Based on these results, it can be concluded that hypotheses H2, H3, and H4 have a significant impact on the willingness to use social media for distance learning at Universitas Terbuka. Specifically, social influence (H3) has the most significant impact, followed by ease of use expectations (H2) and facilitating conditions (H4).

Therefore, the recommendations derived from these findings are that the academic community of Universitas Terbuka should enhance the factors with significant impact, namely social influence and ease of use expectations. Efforts should be directed towards amplifying social influence, such as fostering collaboration among students and interactions with instructors through social media. Additionally, emphasizing the ease of use expectations of social media for distance learning is crucial, so that students perceive the benefits and convenience of utilizing these platforms. By doing so, these steps can effectively enhance the distance learning experience and encourage active student participation within the Universitas Terbuka environment.

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