

Factors Influencing Student Acceptance of SIDIA E-Learning

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ABSTRACT

Digital learning platforms are widely utilized in higher education to support academic activities, yet student engagement with these systems often varies across contexts. Understanding the factors that shape continued usage therefore becomes essential. This study explores student interaction with the Sinau Digital Universitas Negeri Surabaya (SIDIA) e-learning platform by examining both user-related perceptions and system-related characteristics. Data were obtained from undergraduate students who had prior experience using SIDIA for at least one academic semester, and a quantitative analytical approach was applied. The relationships among the observed variables were evaluated using Partial Least Squares–Structural Equation Modeling (PLS-SEM). The results demonstrate that expectations regarding system usefulness and ease of operation, along with social and environmental support, contribute to the formation of user satisfaction. In addition, the quality of the system, the information it delivers, and the services supporting it play an important role in strengthening satisfaction levels. User satisfaction is further shown to influence students' intention to continue using the platform and their actual engagement with the system. These findings indicate that satisfaction functions as a key connecting mechanism between user perceptions, system attributes, and sustained utilization of e-learning services. The study offers insights for higher education institutions in developing and managing digital learning systems that promote long-term use and effective learning support.

Keyword: e-learning, UTAUT, information system success, user satisfaction, technology acceptance.

Article Info:

Article history:

Received January 21, 2026

Revised February 18, 2026

Accepted March 06, 2026

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1. INTRODUCTION

Information technology has become an essential foundation for managing academic activities in higher education institutions. Universities increasingly depend on digital systems to support learning processes and administrative operations, including course management, academic records, scheduling, and institutional services. The implementation of such systems is intended to streamline academic workflows, improve transparency, and support the overall effectiveness of academic management for both students and administrators.

Despite their extensive implementation, academic information systems do not always achieve optimal levels of utilization among students. Various practical challenges, such as system complexity, limited perceived benefits, and insufficient technical or organizational support, may discourage active and continuous use. These conditions can reduce system

engagement and weaken the role of academic information systems in supporting learning activities. Consequently, identifying factors that influence student acceptance and usage behavior remains a critical issue in the evaluation of academic information systems.

Previous studies in the field of information systems have introduced several theoretical approaches to explain technology-related user behavior. Among these approaches, the Unified Theory of Acceptance and Use of Technology (UTAUT) has been widely employed to explain how user expectations, perceived effort, social environment, and supporting conditions influence technology usage. The comprehensive structure of this framework has allowed researchers to examine technology adoption across diverse organizational and educational contexts.

Empirical findings suggest that user perceptions regarding system usefulness and ease of interaction play an important role in shaping behavioral intention, while social support and adequate infrastructure facilitate continued system use. However, the strength and relevance of these factors may vary depending on institutional context, user characteristics, and the specific type of information system being examined. Therefore, context-specific investigation is required to obtain a more accurate understanding of technology acceptance behavior in higher education environments.

Based on this background, this study examines student acceptance and actual use of the Sinau Digital Universitas Negeri Surabaya (SIDIA) academic information system by applying the UTAUT framework. The study focuses on the influence of performance expectancy, effort expectancy, and social influence on behavioral intention, as well as the role of facilitating conditions and behavioral intention in shaping actual system usage. The results are expected to enrich technology acceptance research and provide practical guidance for higher education institutions seeking to improve the quality and utilization of academic information systems.

2. METHODS

This study applies a quantitative research strategy to examine patterns of student interaction with the Sinau Digital Universitas Negeri Surabaya (SIDIA) e-learning system. The analytical framework incorporates variables related to user perceptions and system attributes in order to explain acceptance and usage behavior. The observed constructs include expectations regarding system performance and ease of use, social and environmental influences, and supporting conditions, alongside system quality dimensions such as system quality, information quality, and service quality. User satisfaction is treated as an intermediary variable linking these factors to behavioral intention and actual system usage.

The study involved undergraduate students of Universitas Negeri Surabaya who had actively utilized the SIDIA platform in their academic activities. A purposive sampling technique was employed to ensure that participants had sufficient experience with the system, defined as at least one academic semester of use. Data collection was conducted through an online questionnaire using a five-point response scale. After screening for completeness and response consistency, a total of 382 valid responses were included in the analysis.

Data analysis was carried out using Partial Least Squares–Structural Equation Modeling (PLS-SEM) with the assistance of SmartPLS version 4. The evaluation process followed two sequential stages. First, the measurement model was examined to assess the adequacy of construct validity and reliability. Second, the structural model was evaluated to determine the strength and significance of the hypothesized relationships among variables, with statistical inference based on path coefficients, t-values, and p-values at a 0.05 significance level.

3. RESULTS AND DISCUSSION

This section summarizes the outcomes obtained from the statistical analysis and interprets their relevance within the framework of the proposed research model. The analysis was performed using Partial Least Squares–Structural Equation Modeling (PLS-SEM) to examine both the adequacy of the measurement instruments and the relationships among the studied variables. The presentation of results aims to clarify how the examined constructs operate within the context of the SIDIA e-learning system.

3.1 Measurement Model Evaluation

The measurement model was examined to ensure that the indicators employed in this study appropriately capture the underlying latent constructs. The evaluation emphasized two primary aspects, namely the accuracy of indicator representation and the consistency of measurement. Indicator quality was assessed by observing the strength of indicator–construct relationships and the proportion of variance explained by each construct, while reliability was evaluated through internal consistency measures.

Variable	AVE	Composite Reliability	Remarks
Usage	0,868	0,952	Reliable
Behavioral Intention	0,86	0,949	Reliable
Satisfaction	0,881	0,957	Reliable
Performance Expectancy	0,842	0,941	Reliable
Effort Expectancy	0,832	0,937	Reliable
Social Influence	0,844	0,942	Reliable
Facilitating Conditions	0,82	0,932	Reliable
System Quality	0,857	0,947	Reliable
Information Quality	0,845	0,942	Reliable
Service Quality	0,834	0,947	Reliable

Table 1. Results of Convergent Validity and Construct Reliability

The analysis indicates that the indicators demonstrate satisfactory associations with their respective constructs, as reflected by loading values that meet established methodological standards. In addition, the values obtained for Average Variance Extracted (AVE) exceed the minimum acceptable level across all constructs, indicating adequate explanatory power of the indicators. The reliability assessment further shows that internal consistency values, as measured by Cronbach's Alpha and Composite Reliability, remain within acceptable ranges for all variables. These results confirm that the measurement instruments applied in this study are both reliable and suitable for subsequent structural model analysis.

3.2 Structural Model Evaluation

The structural model assessment examined the relationships among variables in the proposed framework using path coefficients and bootstrapping results. The analysis indicates that performance expectancy, effort expectancy, social influence, facilitating conditions, system quality, information quality, and service quality have significant effects on user satisfaction. In addition, user satisfaction significantly influences behavioral intention, which

subsequently affects actual system usage. These findings confirm that the hypothesized relationships in the model are statistically supported at a significance level of 0.05.

Hypothesis	Variable Relationship	Path Coefficient	T-Statistics	P-Values	Decision
H1	Performance Expectancy → Satisfaction	0,288	7,812	0	Accepted
H2	Effort Expectancy → Satisfaction	0,256	7,176	0	Accepted
H3	Social Influence → Satisfaction	0,242	7,313	0	Accepted
H4	Facilitating Conditions → Satisfaction	0,217	6,135	0	Accepted
H5	Information Quality → Satisfaction	0,292	8,482	0	Accepted
H6	Service Quality → Satisfaction	0,241	7,33	0	Accepted
H7	System Quality → Satisfaction	0,309	9,068	0	Accepted
H8	Satisfaction → Behavioral Intention	0,675	26,068	0	Accepted
H9	Behavioral Intention → Usage	0,73	29,683	0	Accepted

Table 2. Hypothesis Testing Results Based on the Structural Model

3.3 Discussion of the Influence of Technology Acceptance Factors on Behavioral Intention

The findings indicate that students' intention to continue using the SIDIA e-learning system is strongly influenced by their expectations regarding system performance. When students perceive that the system effectively supports learning activities and academic tasks, they are more likely to maintain its use. Within the SIDIA context, perceived performance benefits encourage students to incorporate the platform into their learning processes, reinforcing the relevance of performance-related perceptions in explaining behavioral intention.

Effort expectancy is also shown to significantly influence behavioral intention. This suggests that students' willingness to use SIDIA is closely associated with how easily the system can be understood and operated. When system features are intuitive and require minimal effort to use, students are more likely to develop positive intentions toward continued usage. This finding highlights the importance of user-friendly system design in sustaining engagement with e-learning platforms.

Furthermore, social influence is found to have a meaningful impact on behavioral intention. Encouragement and expectations from lecturers, peers, and the broader academic environment contribute

to students' decisions to use SIDIA. This result underscores the role of social context in technology adoption, particularly within higher education settings where instructional practices and peer interaction strongly shape learning behavior.

3.4 System-Related Factors and Their Role in User Satisfaction and Usage

The results show that students' satisfaction with the SIDIA e-learning system is closely related to the overall quality of the platform. Consistent system operation, the availability of relevant academic information, and effective support services contribute to positive user experiences during system use. Accordingly, satisfaction emerges from students' combined assessment of system reliability and the quality of assistance provided throughout their interaction with the platform.

In addition, user satisfaction and behavioral intention are shown to significantly influence actual system usage. Students who report higher satisfaction levels and stronger intentions are more likely to use SIDIA consistently in their academic activities. This pattern supports the Information System Success Model, which emphasizes satisfaction as a central factor driving sustained system utilization. Within the SIDIA context, satisfaction functions as a bridge between system characteristics and students' actual usage behavior.

3.5 Implications of the Research Findings

From an applied perspective, the results highlight the importance for higher education institutions to consistently enhance the performance of the SIDIA e-learning system. Attention should be directed toward maintaining system stability, ensuring user-friendly operation, and providing effective support services. Improvements in these areas can contribute to higher levels of student satisfaction and promote more regular use of the platform. Moreover, the involvement of lecturers is essential, as their encouragement and active engagement can strengthen students' willingness to adopt and utilize the system.

From an academic perspective, the findings demonstrate the relevance of combining technology acceptance and information system success perspectives to better explain e-learning usage in higher education settings. The integration of user perception factors with system quality dimensions allows for a broader understanding of technology acceptance behavior, offering a more holistic explanation of how students respond to and engage with digital learning systems.

CONCLUSION

This study demonstrates that student acceptance and use of the SIDIA e-learning system are shaped by both technology acceptance factors and system-related quality aspects. The results show that students' satisfaction is influenced not only by perceptions of usefulness and ease of use, but also by the reliability of the system, the relevance of information provided, and the quality of supporting services. These elements collectively contribute to how students evaluate their overall experience with the platform.

The findings further indicate that user satisfaction functions as a key link between students' perceptions and their subsequent intention and behavior in using the system. When positive experiences are established, students tend to show stronger motivation to utilize SIDIA and to integrate it more consistently into their academic activities. This suggests that effective e-learning implementation requires alignment between technical performance and positive user interaction.

In practical terms, higher education institutions are encouraged to continuously enhance the quality of their e-learning systems. Efforts to maintain stable system performance, improve information clarity, and ensure responsive support services may help increase user satisfaction and promote sustained usage. In addition, lecturers play an important role in fostering student engagement, as their involvement in encouraging and integrating SIDIA into learning processes can further strengthen system utilization.

Several limitations should be acknowledged in this study. The analysis was based on student respondents from a single institution and relied on survey data. Future studies may extend this work by involving additional stakeholder groups, such as lecturers and administrative staff, or by incorporating other explanatory variables and cross-institutional comparisons. Such approaches may provide a broader understanding of factors influencing e-learning system acceptance and usage.

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