

Analysis of Information Systems Acceptance and Success Models in Higher Education

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Abstract— Background: The integration of Information Systems (IS) in higher education has transformed interactions among students, lecturers, and administrative staff, making system acceptance and success essential for effective academic processes. Various evaluation frameworks have been developed, with the DeLone and McLean Information System Success Model being one of the most widely applied. **Objective:** This study aims to analyze factors influencing the adoption of academic information systems in higher education using the DeLone and McLean model and to evaluate system success from the perspectives of lecturers, students, and administrative personnel. **Methods:** A quantitative research approach was employed using questionnaire-based data collection. Data analysis was conducted using SmartPLS 3.0 to assess validity, reliability, and structural relationships among variables. A total of 252 respondents were selected using the Slovin formula and proportional stratified random sampling. The evaluated constructs included system quality, information quality, service quality, system use, user satisfaction, and benefits. **Results:** The results show that system quality, information quality, and service quality have a positive and significant effect on system use and user satisfaction. Furthermore, system use and user satisfaction contribute to perceived net benefits, such as improved learning outcomes, increased management efficiency, and academic productivity. High service quality also supports continued system usage. All measurement constructs met validity and reliability criteria, with loading factors above 0.7 and Average Variance Extracted (AVE) values exceeding 0.50. **Conclusion:** In conclusion, the DeLone and McLean model effectively explains academic information system success in higher education, highlighting the importance of system quality, user satisfaction, and generated benefits.

Keywords—Analysis; Information System; Acceptance; Success Models

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I. INTRODUCTION

Higher education in Indonesia has seen a dramatic change in recent years, with a focus on incorporating technology to improve the teaching and learning process. Adopting information system (IS) applications is one of the many technical advancements that shows promise for enhancing accessibility, facilitating remote learning, and increasing flexibility for instructors and students across all educational sectors, including higher education. Effective evaluation is crucial because higher education places a strong emphasis on developing the practical skills required in the workplace. Information technologies provide many benefits, including the capacity to give students quick feedback and flexibility in terms of time and location. However, these information systems platforms' perceived utility, usability, and general quality are crucial to their successful deployment and adoption [1].

This research aims to critically analyze key IS acceptance and success models, examining their applicability, strengths, and limitations in the context of higher education. Calculating the influence of information system application adoption on student learning outcomes and evaluation efficacy. This research employs the Extended DeLone and McLean Model as a lens. The model offers a thorough framework for evaluating the importance and efficacy of information systems inside businesses [2]. By applying this model to the context of higher education information systems, we may better comprehend this complicated problem by gaining important insights into the different factors impacting their adoption and usage.

User satisfaction, intention to use, system quality, information quality, service quality, and actual usage behaviour are just a few of the variables that will be evaluated. To ensure the validity and trustworthiness of our findings, these characteristics will be thoroughly explored within the unique context of Indonesian higher education institutions. This method will assist us in comprehending the distinct obstacles and possibilities that these establishments encounter when putting information systems solutions into practice, as well as their combined influence on the general acceptability and efficacy of IS applications.

Despite being incorporated into education, IS still has to be carefully examined in order to offer recommendations and concepts for its advancement [3]. The installation phase is when the effectiveness of the information system is evaluated. To date, this has been done by utilizing digital resources, such computers and smartphones, to support educational activities [4]. One way information systems are used in learning management to create effective and efficient learning systems is through e-learning [5]. The quality of the program can be excellent if the technology and its implementation are continuously updated or enhanced and e-learning is tested [6]. This assessment is a crucial first step in determining the quality of information

systems deployment. Several studies make clear that any successful use of information technology, including e-learning, requires the voluntary consent of users [7]. Thus, the success of e-learning depends on how well users (lectures and students) comprehend and embrace its use [8].

A lot of earlier research concentrated on education in general, ignoring the important distinctions between academic and higher education. Previous studies have examined a number of factors that affect the uptake and efficacy of information systems in Indonesian higher education, including the acceptability of IS applications. Some major studies include research employing the technology acceptance model (TAM) to measure perceived utility and simplicity of use in students and lecturers acceptability of e-learning [9]. According to research [10] the use of e-learning apps depends on having a sufficient technological infrastructure and internet connectivity. The biggest challenges are frequently issues like sluggish internet connections and technological constraints. According to [11], the ability of lecturers and students to use technology, particularly their digital competency and proficiency with e-learning apps, is assessed. Frequently mentioned as crucial elements for boosting acceptability are technical assistance and training. Studies that were carried out [12]. The adoption of e-learning is also influenced by institutional policies at educational institutions, such as those pertaining to administrative assistance and remote learning. Numerous studies demonstrate that policies pertaining to assistance and distant learning also affect how well e-learning is received. Numerous studies demonstrate that the adoption of information technologies can be accelerated with top management support and well-defined rules. Acceptance is also significantly influenced by the caliber of information systems content and the degree of engagement provided by the platform. Discussion boards, interactive assignments, and multimedia are frequently mentioned as components that improve student engagement and learning efficacy. Aspects of the user interface, navigation, and general learning experience are typically assessed in these studies as well as the user experience of information system.

This acceptability of information systems applications in higher education, where a major emphasis is placed on employable and practical abilities, is the special focus of this study. This study offers valuable information for creating and executing information systems in higher education. The significance of having a thorough understanding of acceptance variables is emphasized to increase the effectiveness of information systems and assessment. Apart from measuring perceived usefulness and ease of use, this research also evaluates the social and emotional impact of information systems in higher education environments. Therefore, in addition to adding to the body of knowledge on IS acceptability, this study provides useful advice for creating and executing information systems applications in higher teacher education.

II. RESEARCH METHOD

The research stages adopted a quantitative approach based on a methodology explained in the form of a flowchart. Fig 1 below illustrates the research flowchart, which represents the research steps from the initial to the final stage.

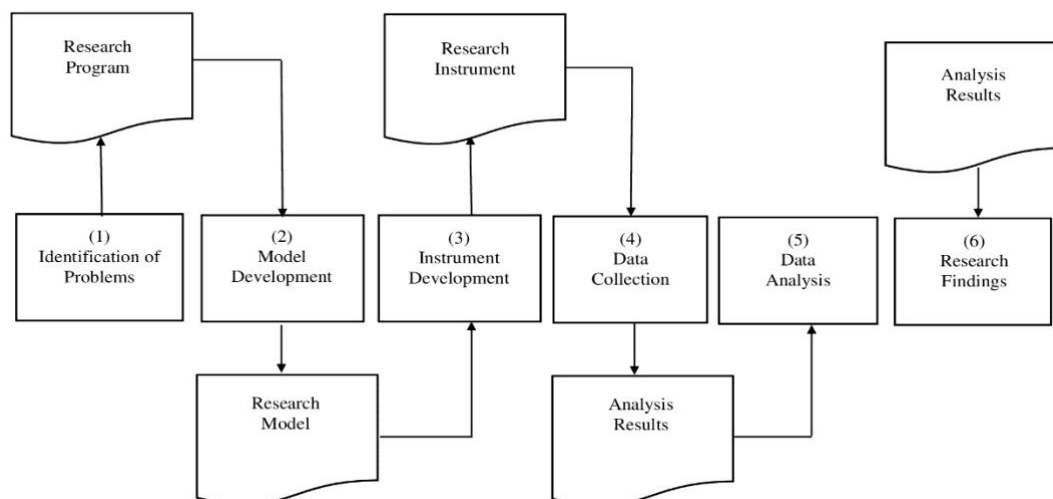


Fig 1. The Research Procedure

The sample technique used purposive sampling for this investigation in gathering data, where the researcher picked respondents based on their fit with the research purpose and themes [13]. Purposive sampling is a method for selecting research samples with specific considerations to increase the representativeness of the data collected subsequently [14]. The target populations were identified, and the research population is made up of the lectures and students who use the higher education applications in Indonesia's Banten Province. The study uses a survey research design and administers a questionnaire via the Google Forms tool. After assessing and choosing survey participants, researchers emailed and WhatsApped 252 respondents with a link to a Google Form for them to complete. Information systems application users willingly completed the survey without being given access to any quantitative study data [15]. In this study, the population was used as the sample, hence the sampling approach was saturated. All of the 252 respondents should be considered responders given the sample size. Each of the five latent variables in this study is assessed using more than three construct items. As a result, a minimum of 100 samples is needed [16]. The determination of the number of research samples was calculated using the slovin formula [17] Assuming the population of information system users is > 700 people and a margin of error of 5%. In addition, this approach is based on the SEM-PLS analysis method, which requires a minimum of 200 respondents for models with

more than five latent constructs. This number is also in line with previous studies in the same field.

This study will use an ordinal scale an ordinal scale that employs a likert scale technique (1-5) to analyze opinions and impressions. Because it gauges attitudes, opinions, and impressions of social issues, this scale is regarded as appropriate and useful [18]. The measurement variables are changed into variable indicators using this Likert scale. These indicators are then used to collect instrument items, which can be statements or questions, both positive and negative. Five favorable (positive) options are available on the list of questions or tools to be used: strongly agree (5), agree (4), disagree (2), neutral (3), and strongly disagree (1). Because two close numbers, for instance, will not yield different results if data is chosen arbitrarily, this Likert scale is included in the category of discrete data (not continuous). The context of a higher education institution was included to each assessment, which was adapted from multiple previous studies.

In this study, structural equation modelling (SEM) was conducted using the Smart PLS 3.0 program. Researchers usage of SEM-PLS is common for several reasons. For the first one, the PLS algorithm is not just used to determine the relationship between indicators and their reflective latent variables. Still, it is also used to identify formative relationship. Second, even with a limited sample size, The path model can be estimated using PLS. Thirdly, SEM-PLS is capable of accurately predicting data in complex models with numerous latent variables. In SEM PLS, there are two models for assessment: an inner model, also known as a structural model evaluation, and an outside model, also known as a measurement model [16],[19],[20],[21],[22].

The Measurement Model (Outer Model Analysis), which includes composite reliability, Mean Variance Extracted (AVE), discriminant validity, convergent validity, and alpha Cronbach's, will be used to analyze the data for this study. Stone Geiser Value (Q²), R-Square, Path Coefficient, and Goodness of Fit Index (GoF) are included in the measurement model (Inner Model Analysis).

III. RESULT AND DISCUSSION

A. Evaluation of The Measurement Model (Outer Model)

The measurement model is evaluated to test its validity and estimate the data reliability on each variable: assessment of Information System, System Quality, Information Quality, Service Quality, Intention to Use, User Satisfaction, USE, and Net Benefit using SmartPLS. First, a convergent validity evaluation is carried out, which includes measuring the loading factors and AVE values. Measurement model path coefficients PLS-SEM results are shown in Fig 2.

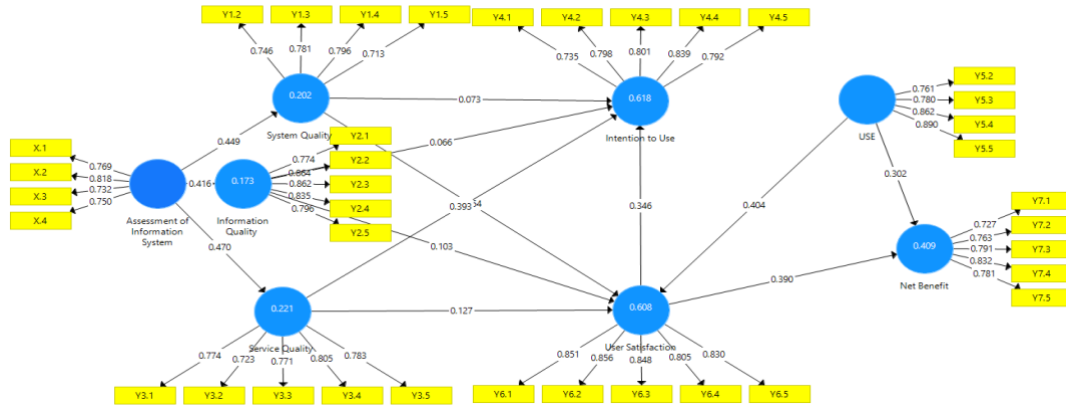


Fig 2. Evaluation of the Measurement Model (Outer Model)

Furthermore, the variable's status as a valid discriminant can be ascertained using the average variance extracted (AVE) value. For a build to be deemed genuine, its AVE value needs to be greater than 0.50 [23]. If the value of Average Variance Extracted (AVE) exceeds 0.50, as seen in Table 1, the instrument variables are a good discriminant test.

Table 1. The Results of the Evaluation of Measurement models

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Assessment of Information System	0.769	0.771	0.852	0.590
Information Quality	0.884	0.888	0.915	0.684
Intention to Use	0.853	0.855	0.895	0.630
Net Benefit	0.838	0.839	0.885	0.608
Service Quality	0.830	0.833	0.880	0.596
System Quality	0.756	0.760	0.845	0.577
USE	0.843	0.854	0.895	0.681
User Satisfaction	0.894	0.896	0.922	0.703

After testing the assumptions, convergent and discriminant validity analyses were carried out, Factor loadings, average variance extracted (AVE), and composite reliability (CR), were used to evaluate convergent validity [21],[16]. Regarding Table 1, every construct has an AVE > 0.50, which is the value suggested by Yi's recommendations [24]. Considering [25] suggestion, the CR The CR value for each construct is more than 0.60 if the value is important (> 0.60). According to guidelines, the load factor values, which are shown in Table 1, vary from 0.577 to 0.703, in accordance with suggestions [26],[19]. The load factor must be more than 0.50.

Each indication in a single construct has a positive association with other indicators in the same construct, which is known as convergent validity. The indicators of the reflecting models measure the same construct and differ significantly from one another. The validity of the construct being measured is thus guaranteed. In order to test convergent validity, two criteria

must be evaluated. The average variance extract, often known as the outer loading or indication reliability value (AVE). Every indication needs to have an outer loading value of 0.70 or above [27], [28]. If at least 50% of a construct can be explained by the variance between indicators, then the indicator dependability value (AVE value) is equal to or higher than 0.5 [27]. Therefore, should the AVE criterion be successfully reached, outside loading levels below 0.708 can be disregarded.

A factor analysis procedure that iteratively eliminated items with loading values less than 0.708 produced the AVE value. To ensure a thorough research process, the PLS algorithm was run again once an indicator was removed. To reach a minimal AVE value of 0.5, 40 elements from 8 distinct constructs were eliminated from this model. Table 1 lists the constructs and indicators in detail, along with the outer loading values that were obtained through the factor analysis process.

After factor analysis, all constructions had an AVE, value of at least 0,5. Table 2 indicates that the assessment constructs for information system application, information quality, intention to use, net benefit, service quality, system quality, USE, and user satisfaction have caused the final AVE value to rise above the AVE construct value, which is 0.5. The findings demonstrate the convergent validity of the items assessing every construct.

Table 2. Loading Factors (Measurement Model)

	Early Models	Modification
X 1 <- Assessment of Information System (X)	0.717	0.769
X 2 <- Assessment of Information System (X)	0.784	0.818
X 3 <- Assessment of Information System (X)	0.727	0.732
X 4 <- Assessment of Information System (X)	0.731	0.750
Y1.2 <- System Quality (Y1)	0.752	0.746
Y1.3<- System Quality (Y1)	0.761	0.781
Y1.4 <- System Quality (Y1)	0.764	0.796
Y1.5 <- System Quality (Y1)	0.704	0.713
Y2.1 <- Information Quality (Y2)	0.774	0.774
Y2.2 <- Information Quality (Y2)	0.864	0.864
Y2.3 <- Information Quality (Y2)	0.861	0.862
Y2.4 <- Information Quality (Y2)	0.836	0.835
Y2.5 <- Information Quality (Y2)	0.795	0.796
Y3.1 <- Service Quality (Y3)	0.774	0.774
Y3.2<- Service Quality (Y3)	0.723	0.723
Y3.3 <- Service Quality (Y3)	0.772	0.771
Y3.4 <- Service Quality (Y ₃)	0.805	0.805
Y3.5 <- Service Quality (Y3)	0.782	0.783
Y4.1 <- Intention to Use (Y4)	0.735	0.735
Y4.2 <- Intention to Use (Y4)	0.798	0.798
Y4.3 <- Intention to Use (Y2)	0.801	0.801

	Early Models	Modification
Y4.4<- Intention to Use (Y4)	0.839	0.839
Y4.5<- Intention to Use (Y4)	0.792	0.792
Y5.2<- USE (Y5)	0.784	0.761
Y5.3<- USE (Y5)	0.771	0.780
Y5.4<- USE (Y5)	0.833	0.862
Y5.5<- USE (Y5)	0.861	0.890
Y6.1<- User Satisfaction (Y6)	0.851	0.851
Y6.2<- User Satisfaction (Y6)	0.856	0.856
Y6.3<- User Satisfaction (Y6)	0.849	0.848
Y6.4<- User Satisfaction (Y6)	0.805	0.805
Y6.5<- User Satisfaction (Y6)	0.830	0.830
Y7.1<- Net Benefit (Y7)	0.726	0.727
Y7.2<- Net Benefit (Y7)	0.765	0.763
Y7.3<- Net Benefit (Y7)	0.790	0.791
Y7.4<- Net Benefit (Y7)	0.830	0.832
Y7.5<- Net Benefit (Y7)	0.783	0.781

The SmartPLS processing results are shown in Table 2. Value outer models or correlations between constructs and variables did not initially meet the convergent validity criteria because indicators had a loading factor value below 0.70. By eliminating the indications with a value loading factor value less than 0.70, the model is modified. Every loading factor has a value greater than 0.70, according to the updated model and the table.

Divergent validity, another kind of constructs validity, is discriminant validity. It evaluates the extent to which a measurement instrument or test does not correlate with other presumably unrelated metrics. It assesses whether concepts or measurements that are meant to be unrelated are, in fact, unrelated. Discriminant validity is the degree to which indicators within a concept differ from indicators of other conceptions as determined by correlation in a model [19]. The cross loading on each indication, as shown in Table 3, is one of three criteria that can be used to assess this test.

Table 3. Cross Loading

	Assessment of Information System	Information Quality	Intention to Use	Net Benefit	Service Quality	System Quality	USE	User Satisfaction
X.1	0.769	0.213	0.289	0.234	0.305	0.274	0.295	0.324
X.2	0.818	0.305	0.459	0.411	0.412	0.331	0.443	0.450
X.3	0.732	0.377	0.282	0.332	0.343	0.350	0.354	0.288
X.4	0.750	0.352	0.318	0.305	0.368	0.400	0.389	0.385
Y1.2	0.316	0.519	0.431	0.423	0.553	0.746	0.360	0.422
Y1.3	0.360	0.622	0.554	0.464	0.550	0.781	0.476	0.518
Y1.4	0.372	0.598	0.475	0.461	0.529	0.796	0.502	0.577
Y1.5	0.311	0.564	0.480	0.341	0.600	0.713	0.438	0.486

	Assessment of Information System	Information Quality	Intention to Use	Net Benefit	Service Quality	System Quality	USE	User Satisfaction
Y2.1	0.311	0.774	0.524	0.453	0.566	0.586	0.468	0.469
Y2.2	0.366	0.864	0.592	0.522	0.680	0.690	0.575	0.622
Y2.3	0.372	0.862	0.527	0.493	0.609	0.658	0.575	0.581
Y2.4	0.292	0.835	0.524	0.472	0.595	0.620	0.509	0.518
Y2.5	0.372	0.796	0.517	0.514	0.686	0.585	0.627	0.536
Y3.1	0.411	0.689	0.604	0.478	0.774	0.653	0.600	0.599
Y3.2	0.291	0.488	0.493	0.435	0.723	0.417	0.476	0.495
Y3.3	0.333	0.594	0.553	0.390	0.771	0.582	0.495	0.476
Y3.4	0.387	0.648	0.568	0.494	0.805	0.611	0.511	0.486
Y3.5	0.379	0.495	0.576	0.396	0.783	0.541	0.514	0.498
Y4.1	0.304	0.454	0.735	0.387	0.593	0.460	0.557	0.521
Y4.2	0.310	0.481	0.798	0.462	0.501	0.467	0.455	0.478
Y4.3	0.347	0.545	0.801	0.489	0.574	0.517	0.508	0.538
Y4.4	0.404	0.508	0.839	0.519	0.591	0.511	0.594	0.591
Y4.5	0.380	0.580	0.792	0.544	0.613	0.576	0.612	0.629
Y5.2	0.389	0.471	0.500	0.457	0.525	0.418	0.761	0.486
Y5.3	0.326	0.439	0.535	0.453	0.456	0.413	0.780	0.529
Y5.4	0.435	0.611	0.593	0.500	0.592	0.507	0.862	0.627
Y5.5	0.456	0.658	0.646	0.497	0.645	0.589	0.890	0.677
Y6.1	0.434	0.516	0.652	0.492	0.546	0.551	0.596	0.851
Y6.2	0.433	0.581	0.605	0.560	0.582	0.577	0.632	0.856
Y6.3	0.418	0.516	0.590	0.471	0.521	0.531	0.585	0.848
Y6.4	0.306	0.547	0.536	0.452	0.519	0.493	0.536	0.805
Y6.5	0.393	0.617	0.548	0.546	0.614	0.624	0.616	0.830
Y7.1	0.328	0.473	0.483	0.727	0.454	0.403	0.424	0.472
Y7.2	0.371	0.497	0.470	0.763	0.447	0.434	0.483	0.484
Y7.3	0.316	0.388	0.424	0.791	0.388	0.408	0.416	0.438
Y7.4	0.262	0.488	0.503	0.832	0.474	0.471	0.463	0.496
Y7.5	0.378	0.463	0.486	0.781	0.452	0.454	0.460	0.456

B. Evaluation of the Structural Model (Inner Model)

Structural model evaluation describes and predicts causality relationships between latent variables. A causality relationship is established through bootstrapping. The initial stage of structural model analysis is to examine the values of the R-square adjusted value, Predictive Relevance (Q²), and Goodness of Fit (GoF) value.

Goodness of Fit Model Examination (GoF)

An examination of the model can be seen in the R-square value. The meaning model can explain variations in the Analysis of Information Systems. The Structure, Process and relation can define

academic Acceptance and Success Models in Higher Education. In contrast, the structural models in this study are as follows:

1. R-Square

The R-Square value can indicate the strength of the model; in this case, the Square An R2 value of > 0.7 is categorized as vital, the value of 0.67 indicates a substantial model, the R-Square value of 0.33 indicates a moderate model, and the R-Square value of 0.19 suggests the model is weak. The following is a R-square value is as in Table 4.

Table 4. R-Square Results

	R Square	Adjusted R Square
Information Quality	0,173	0,170
Intention to Use	0,618	0,612
Net Benefit	0,409	0,405
Service Quality	0,221	0,218
System Quality	0,202	0,198
User Satisfaction	0,608	0,601

2. F-Square

The F-square test is conducted to determine the change in the R-square value of the endogenous variable, which shows the influence of the exogenous variable on the endogenous variable and the substantive existence of its influence. The F-square value consists of 3 categories: the small category of 0.02, the medium category of 0.15 and the large category of 0.35 . The F-square value is as in Table 5.

Table 5. F-Square Results

	Assessment of Information System	Information Quality	Intention to Use	Net Benefit	Service Quality	System Quality	USE	User Satisfaction
Assessment of Information System		0,209			0,284	0,253		
Information Quality			0,004					0,008
Intention to Use								
Net Benefit								
Service Quality			0,140					0,014
System Quality			0,005					0,060
USE				0,077				
User Satisfaction			0,148	0,128				

3. Standardized Root Mean Square Residual (SRMR)

The Standardized Root Mean Square Residual (SMRM) value indicates how well the PLS model data. If the PLS model's SRMR value is less than 0.10, it is considered to have satisfied the goodness of fit model criterion; if it is less than 0.08, it is deemed a perfect fit, as shown in Table 6.

Table 6. Standardized Root Mean Square Residual Result

	Saturated Model	Estimated Model
SRMR	0.063	0.206

C. Hypotesis Testing

Hypotesis testing in this study was indicated by the significance value (T-Statistic) above the T-Table value with ($\alpha = 0.05$; t-table 1.96). The results of the significance value can be seen in Table 7.

Table 7. Results of direct influence hypotesis test

	Original Sampe l Mean (O)	Sampe l Mean (M)	Standard Deviation (STDEV)	T Statistics (I O/STDEV I)	P Values
Assessment of Information System -> Information Quality	0,416	0,420	0,061	6,807	0,000
Assessment of Information System -> Service Quality	0,470	0,475	0,066	7,122	0,000
Assessment of Information System -> System Quality	0,449	0,452	0,059	7,626	0,000
Information Quality -> Intention to Use	0,066	0,067	0,079	0,836	0,403
Information Quality -> User Satisfaction	0,103	0,098	0,076	1,356	0,176
Service Quality -> Intention to Use	0,393	0,392	0,084	4,670	0,000
Service Quality -> User Satisfaction	0,127	0,128	0,067	1,904	0,058
System Quality -> Intention to Use	0,073	0,079	0,070	1,053	0,293
System Quality -> User Satisfaction	0,254	0,256	0,064	3,961	0,000
USE -> Net Benefit	0,302	0,309	0,079	3,818	0,000
USE -> User Satisfaction	0,404	0,410	0,074	5,464	0,000
User Satisfaction -> Intention to Use	0,346	0,344	0,063	5,519	0,000
User Satisfaction -> Net Benefit	0,390	0,384	0,074	5,237	0,000

Table 8. Summary of Hypotheses Test

Hypotheses	Relationship	Accepted or Rejected
Hypothesis 1	Assessment of Information System has significant influence on the System Quality.	Accepted
Hypothesis 2	Assessment of information System has significant influence on the Information Quality	Accepted
Hypothesis 3	Assessment of Information System has significant influence on the Service Quality.	Accepted
Hypothesis 4	The System Quality has no significant influence on the Intention to Use.	Rejected
Hypothesis 5	The System Quality has significant influence on User Satisfaction.	Accepted
Hypothesis 6	The Information Quality has no significant influence on Intention to Use.	Rejected
Hypothesis 7	The Information Quality has no significant influence on User Satisfaction	Rejected
Hypothesis 8	The Service Quality has significant influence on Intention to Use.	Accepted
Hypothesis 9	The Service Quality has no significant influence on User Satisfaction.	Rejected
Hypothesis 10	User Satisfaction has significant influence on Intention to Use.	Accepted
Hypothesis 11	USE has significant influence on User Satisfaction.	Accepted
Hypothesis 12	USE has significant influence on Net Benefit.	Accepted
Hypothesis 13	User Satisfaction has significant influence on Net Benefit.	Accepted

The discussion that follows is based on Table 8 findings:

1. The Influences of Assessment of Information System on System Quality

Determining the quality and efficacy of information systems is largely dependent on their assessment. The findings of this investigation are consistent with studies carried by [29];[30]. The results indicate that the system. According to the results, perceived benefits and intention to use are highly influenced by system quality and perceived benefits have a strong impact on both intention to use and actual usage of the information system, with intention to use having a significant impact on both. Information systems must be evaluated in order to improve their quality and make sure all stakeholders' needs are met. Frequent assessments can result in ongoing enhancements to user happiness, material delivery, system functionality, and overall learning efficacy. Educational institutions and developers can establish successful e-learning environments by concentrating on these crucial areas.

2. The Influences of Assessment of Information System on Information Quality.

The quality of information offered on these platforms is greatly impacted by the evaluation of information systems. In information system environments, assessments are essential to preserving and improving the quality of the information [31]. Educators and developers may guarantee that the knowledge offered is beneficial and efficient for students by emphasizing accuracy, relevance, clarity, and engagement. High-quality material must be continuously assessed and adjusted in response to feedback in dynamic learning environments.

3. The Influences of Assessment of Information System on Service Quality

The assessment of information system can considerably influence the perceived service quality of educational programs. An important factor in evaluating the service quality of educational programs is the IS assessment. Effective assessment techniques that emphasize technology, accessibility, feedback, and relevance can be used by information system providers to improve learning outcomes and customer satisfaction. [32],[33]. A more favorable reputation for the educational institution and improved learning results could ensue.

4. The Influences of System Quality on Intention to Use

The study's findings suggest that intention to use is not much impacted by system quality. The results of this investigation corroborate those of [34] and [35]; they show that the intention to use is unaffected by an application system that offers the required features and functionalities, flexibility, and dependability. This is because each person's experience with information technology is different, making user happiness a subjective concept. Some people may find using a college information system more convenient than others at the same level.

In contrast to the findings of studies carried out by [36], [37] it asserts that interest in utilizing information systems is greatly influenced by their quality in order to provide consumers with reliable information. The better the system quality, it will affect higher levels of user satisfaction and use intention.

5. The Influences of System Quality on User Satisfaction

The study's findings suggest that user satisfaction is significantly impacted by system quality. This study is consistent with that carried out by [38], [39], [40], [41]. If a technological system is beneficial and easy to use, consumers are more likely to employ it. Convenience and system quality have a big impact on consumers' perceptions of information systems, which in turn affects user satisfaction. The result clarifies why users of higher education information systems think the current system is reliable and capable of fulfilling their needs. Current information systems are well-known, reliable, pertinent, comprehensive, and simple to comprehend. The fact that the information is chargeable indicates that it is proper, relevant, useful, and legitimate.

6. The Influences of Information Quality on Intention to Use

The results of the study indicate that the quality of the information has little bearing on intention to use. This study is consistent with that carried out by [42], [43], and [44] which demonstrates that the two information system organizations' user satisfaction and information quality metrics did not significantly correlate. This study differs from that one was done by [45], that user satisfaction and intention to utilize the information system are positively impacted by the quality of the information [46] assert that the utilization of information systems and the perception of its usefulness will both rise with the highest quality of information. The accuracy, timeliness, and dependability of the data produced by the used method will further boost consumers' faith in the system. Undoubtedly, users of information systems expect the system to give them the information they need. It's possible that input from one information system will have different qualities than data produced by another. User satisfaction will be impacted by an information system's ability to offer information in a timely, accurate, relevant, and needed manner while also meeting other requirements and metrics of information quality. This demonstrates that information system users will be more content and happy to work if they believe that using the system is simple and doesn't involve a lot of time or effort. The end user of the information system is more satisfied when the quality of the information used is higher.

7. The Influences of Information Quality on User Satisfaction

The results of the study indicate that user satisfaction is not significantly influenced by the informations's quality. This study is consistent with previous research [47]; User satisfaction is unaffected by the quality of the information. But this contradicts the findings of the study [48], [49], [50]. This finding can be explained by the fact that, if the data generated is comprehensive, user satisfaction is positively impacted by the quality of the information, timely, precise, pertinent, and well-presented. The application output quality utilized in its impact on user satisfaction is measured by the information quality factor. When making decisions, interested parties will benefit from high-quality information. Users of information systems will be happy if the outcomes of the system meet or surpass their expectations.

8. The Influences of Service Quality on Intention to Use

Findings from the study indicate that service quality has a big impact. This study is consistent with the work done by [51], this finding can be explained by the fact that their intention to use information systems is vital and can be used to forecast with accuracy how they will use those services. Customer satisfaction has a good impact on repurchase intention, and service quality has a direct and positive impact on repurchase intention [31]. This conclusion is explained by the fact that a person's interest can be influenced by the quality of the services they receive. Reasonable perceptions can arise from higher education information systems with higher service quality, which may pique someone's interest in using it again. Service quality is a reflection of how well the services are performed.

9. The Influences of Service Qaulity on User Satisfaction

The results of the study indicate that service quality has little effect on user satisfaction. This research is consistent with that which was [52] and not consistent with earlier studies [53], this comes to the conclusion that information system user happiness is positively correlated with service quality, therefore an information system that produces higher service quality will also result in higher customer satisfaction. For institutions of higher learning to continue to thrive and win over customers, they must provide high-quality service, which is defined as the level of assisstance that system users receive from the company. The quality of services can be assessed by comparing thae opinions of consumers regarding the services they have gotten or obtained with the expectations or desires of the institution.

10. The Influences of User Satisfaction on Intention to Use

According to the study's findings, intention to use is significantly influenced by user satisfaction. This study aligns with the work carried by [54], [55], [56], [57], [58], [59], [60]

demonstrates that information system aim is strongly positively impacted by user satisfaction. User satisfaction is one of the elements that is essential to a business's success, which explains this finding. If system users feel satisfied utilizing the information system application will foster user loyalty and encourage recurring use of the college information system.

11. The Influences of USE on User Satisfaction

The study's findings suggest that use significantly affects user satisfaction. This study aligns with the work carried by [61], [62] which assert that the performance of the business and the individual in question will be enhanced by the employment of suitable information system technology, which is then enhanced by users who are proficient in its use. To put it another way, information technology will improve performance and job happiness. This result can be explained by the fact that the users attitude toward the information system is a subjective criterion that indicates how much the user enjoys the approach. User satisfaction with an information system is indicated by the feedback and remarks a user leaves after using it. User satisfaction with information system is the difference between what is needed and what is obtained.

12. The Influences of USE on Net Benefit

The study's findings suggest that consumption significantly affects net benefits. This study is consistent with that carried out by [63], [64], [65], according to this study, user satisfaction which is a significant or negative emotion of system users as demonstrated by an individual's preferences for or distaste for the information system has a very big impact on net benefits. The term usage describes how frequently users access the information system. It is crucial to determine if its use is choice or an unavoidable necessity. A crucial metric for evaluating the effectiveness of an information system is the net benefit, which illustrates the favorable effects that people or organizations experience. The net benefit is the effect of information systems effectiveness and use on user performance, both separately and collectively, within the company. This encompasses effectiveness, knowledge growth, and a decrease in the duration of information dissemination.

13. The influences of User Satisfaction on Net benefit

The study's findings suggest that net benefits are significantly impacted by user happiness. This research is in linewith that conducted by [66], not the case with this study's findings [67] which claims that net benefits are negatively and negligibly impacted by user satisfaction, This finding is explained by the idea that grater benefits will result from user contentment with the

different items acquired. The presence of these advantages enhances users capacity to integrate information systems in higher education.

IV. CONCLUSION

Overall, this study shows that user attitudes, institutional support, and technical features all affect how well information system applications are accepted in higher education. This study demonstrates how teacher's and students' adoption and use of information system applications are greatly influenced by their opinions about their utility and usability. Increasing acceptance and comfort in using information system applications requires institutional support, including technical resources and training. Organizations can boost user comfort and acceptability by offering continuing technical support services and training. Applications for information systems that are well-received can enhance student learning outcomes by offering quicker feedback and more flexible evaluation options. Assessing students with IS applications might enhance their learning outcomes, particularly in terms of conceptual knowledge and practical abilities. Another factor that influences the acceptability of IS applications is a generally positive attitude toward technology. Users are more inclined to embrace IS applications if they feel at ease with technology. For IS systems to remain current and useful in fulfilling user needs, regular evaluation and update are crucial. User feedback should be used to guide development and identify areas that require new features or improvements. Information system application can successfully enhance the process of learning and assessment with the appropriate approach. Further research can expand the scope of respondents, including students, lecturers, and administrative staff from various institutions with different levels of technological maturity, to obtain more generalizable and in-depth results. This approach will help design a more adaptive and sustainable academic information system implementation strategy.

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