

Optimizing Service and Website Support for Success: Key Factors from an Indonesian University Case Study

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ARTICLE INFO

ABSTRACT

Received: 07 Dec 2024

Revised: 22 Jan 2025

Accepted: 07 Feb 2025

Introduction: In the ever-evolving digital technology landscape, understanding the factors that contribute to the success of services and website support is essential for organizations looking to increase user engagement and achieve their goals. This study conducts a comprehensive analysis of the success factors that influence the effective use of services and website support. This study aims to see the extent of the benefits and sustainability of systems and services and website support in helping all stakeholders find solutions to the problems they face.

The methodology in this study uses a quantitative method by distributing questionnaires to stakeholders. This study also uses the Delone and McLean model which will see the extent of the benefits obtained by using existing services and website support. So this study uses variables such as System Quality, Information Quality, Service Quality, Use, User Satisfaction, and Net Benefits as variables to measure the extent of the benefits of the services and website support. From the results of the existing research, it can be concluded that of the 9 variables, 8 of them have an effect on Use, User Satisfaction, and Net Benefits. And there is 1 variable that has no effect, namely System Quality to User Satisfaction. This means that there is still a need for system improvements from services and website support so that it can continue to be used by stakeholders. From the results of the research conducted, it is highly expected to pay attention to factors that can improve services and website support..

Objectives: This study aims to analyze the influence of system quality, information quality, and service quality and usage on the use of services and website support by stakeholders at Indonesian University. In addition, identifying the benefits of the services and website support that can provide satisfaction to stakeholders who use them.

Methods: This study employs a mixed-method approach to analyze key factors influencing website optimization at an Indonesian university.

Results: From the results of the questionnaire distribution, it can be seen that there are indicators that are still not appropriate because there still needs to be changes in terms of the system in order to provide the best service. In addition, in order to improve relations with customers so that they feel satisfied with the services provided by the support website.

Conclusions: This study initially planned to find out the success of a support website to support the search for solutions to the problems faced. This study reveals several important factors that can influence the success of a support website. The hypothesis of this answer is around system quality, information quality, and service quality that

are significant to building customer satisfaction. This finding is consistent with previous research with the addition of benefits to be gained. Our contribution includes that system quality, information quality, and service quality have a direct impact on customer satisfaction in using a support website. This study also provides insight into areas that should be explored further by website owners in improving the application. Finally, this study is important to be continued with other studies that explore the benefits that can really strengthen relationships by increasing customer satisfaction.

Keywords: Websites Success, User Experience, User Satisfaction.

INTRODUCTION

The development of technology today cannot be denied. Because of the many technological developments and their rapid speed, every innovation issued in the context of technological development has advantages and benefits that facilitate and provide new ways of carrying out human activities (Simarmata et al., 2021). In every use of information technology, there are many ways to continue to develop a system that can support the use of digital technology. There are many things that we can use related to media for the development of digital technology. One of them is a website. Currently, websites are the most important thing for someone to find information. Nowadays, websites have become a bridge that provides all the convenience in spreading information (Desiani; A. Yahdin; S. Irmeilyana I.; Rodiah D., 2020). Website is an online information service (Fitriawan et al., 2019).

XYZ University as a leading higher education institution, continues to develop an application and service system as well as website support that can accommodate the needs of stakeholders in order to continue to provide excellent service and can provide customer satisfaction for the website that is intended to solve stakeholder problems. Starting from the walk-in service used by XYZ University when students need good service in any case to a website that can support solving problems faced by stakeholders.

To understand the success of implementing website support at XYZ University, it is necessary to conduct research to evaluate the usefulness of the academic information system at XYZ University. This research is very important to do because in essence every university or college requires changes and evaluations to provide better services. In addition, services and websites can improve customer relationship management to become a means of communication between students.

Therefore, this research problem that arises is that there is still a need to evaluate services and website support to continue to provide excellent service to stakeholders at xyz university. In addition, it is also necessary to develop a service system and website support that is in accordance with the current situation and conditions at xyz university. Over time, services and website support also need to be improved in terms of place and digitalization in online form. Because there are so many stakeholders who continue to want to get fast response services and get solutions to the problems they face.

This study (Saleem Haddad, 2018) aims to explore the relationship between the proposed factors and student satisfaction and measure the results of LMS. By using the Delone and Mclean IS Success Model and Perceived Usefulness, the results obtained are that system quality, information quality, service quality, and perceived usefulness affect user satisfaction. User satisfaction affects net benefit.

Research (Pringgandani et al., 2018) through the updated Delone and Mclean IS Success Model (2003) will measure the success of the e-learning system implemented in universities. Through the Delone and Mclean IS Success Model (2003), the results obtained are that user satisfaction affects the intention to use and company's image. And there are results that are not obtained are information quality, system quality, and service quality have no effect on intention to use, besides that information quality, system quality, and service quality have no effect on user satisfaction.

The study (Yakubu & Dasuki, 2018) aims to identify the acceptance of an e-learning system called Canvas by Nigerian University students based on the modified Delone and Mclean IS Success Model. By using the Delone and Mclean IS Success Model, the results show that information quality and system quality have an influence on behavioral

intention. In addition, service quality has an influence on user satisfaction. And user satisfaction and behavioral intention have an influence on actual use.

In several previous studies, many have discussed services and website support where the variables are interrelated. This study uses the Delone and McLean model which will be used to evaluate the performance of existing services and website support from the perspective of stakeholders who use them. The goal is to assess the success and usefulness of the services and website support. In addition, it also identifies variables that can affect the success of services and website support.

OBJECTIVES

1. Customer Relationship Management

According to (Shaon & Rahman, 2015) Customer Relationship Management or CRM is not just a system / technology or even a product / service, but CRM is a company strategy to manage and build relationships with its customers. It can be explained that CRM is an approach that combines the use of an efficient management system (technology) and a customer-oriented approach (customer-focused process) to help companies develop long-term relationships with customers and increase the company's business profits (Kampani & Jhamb, 2020). The implementation of Customer Relationship Management (CRM) includes customer-focused marketing activities, namely by collecting and managing customer information so that data companies serve current and potential customers (customer prospects) better. CRM works with the aim of predicting, understanding, and managing client demand. CRM includes the formation, growth, maintenance, and optimization of mutually beneficial long-term relationships (Shaon & Rahman, 2015). With CRM, companies can identify, verify, acquire, develop, and maintain long-term profitability and customer loyalty by offering accurate and timely products and services.

2. System Evaluation

Evaluation is the activity of collecting information about how something works, and the information is used to determine the right decision choices. The main function of evaluation in this case is to provide information to decision makers that will help them determine what actions to take based on the evaluation carried out. Evaluation is the activity of collecting information about how something works and using that information to determine the right decision choices. Therefore, it can be said that system evaluation is a process or effort made to a system to obtain funding in order to obtain valuable value from a program that can later be used as a basis for decision making.

3. Information Systems Success Model Delone and Mclean

Delone and Mclean's original information systems success model first appeared in 1992 (Delone & Mclean, 2003). Delone and Mclean's 1992 model identified six factors: System quality and information quality are factors that influence user usage and satisfaction. User usage and satisfaction interact. User usage and satisfaction influence personal impact, and personal impact influences organizational impact (Yakubu & Dasuki, 2018). Ten years later, Delone and McLean released their revised model. This revision was made in response to other researchers who identified strengths and weaknesses in the Delone and McLean model (Delone & Mclean, 2003).

4. Previous Research

This study (Saleem Haddad, 2018) aims to explore the relationship between the proposed factors and student satisfaction and measure the results of LMS. By using the Delone and Mclean IS Success Model and Perceived Usefulness, the results obtained are that system quality, information quality, service quality, and perceived usefulness affect user satisfaction. User satisfaction affects net benefit. Research (Pringgandani et al., 2018), through the updated Delone and Mclean IS Success Model (2003) will measure the success of the e-learning system implemented in universities. Through the Delone and Mclean IS Success Model (2003), the results obtained are user satisfaction affects the intention to use and company's image. And there are results that are not obtained are information quality, system quality, and service quality do not have an effect on the intention to use, besides that information quality, system quality, and service quality do not have an effect on user satisfaction.

The study (Shim & Jo, 2020) aims to examine how health information site information quality, system quality, and service quality lead to user satisfaction and perceived benefits using the updated Delone and Mclean model. By using the Delone and Mclean IS Success Model, the results show that information quality and service quality significantly affect user satisfactions of the National Health Information Portal NHIP system. Furthermore, information quality and service quality significantly affect the intention to reuse of the National Health Information Portal NHIP system.

And user satisfaction significantly affects the intention to reuse of the National Health Information Portal NHIP system.

METHODS

This study uses a quantitative method where the data obtained will distribute questionnaires to stakeholders who use services and support websites at a university in Indonesia with a population of 44,520 and to determine the number of samples, the researcher uses the Taro Yamane calculation formula where after calculating with the formula, the number of samples obtained is 396 stakeholders. In processing data from questionnaires distributed to stakeholders using Partial Least Square (PLS) with the software that will be used SMART PLS 4.0.

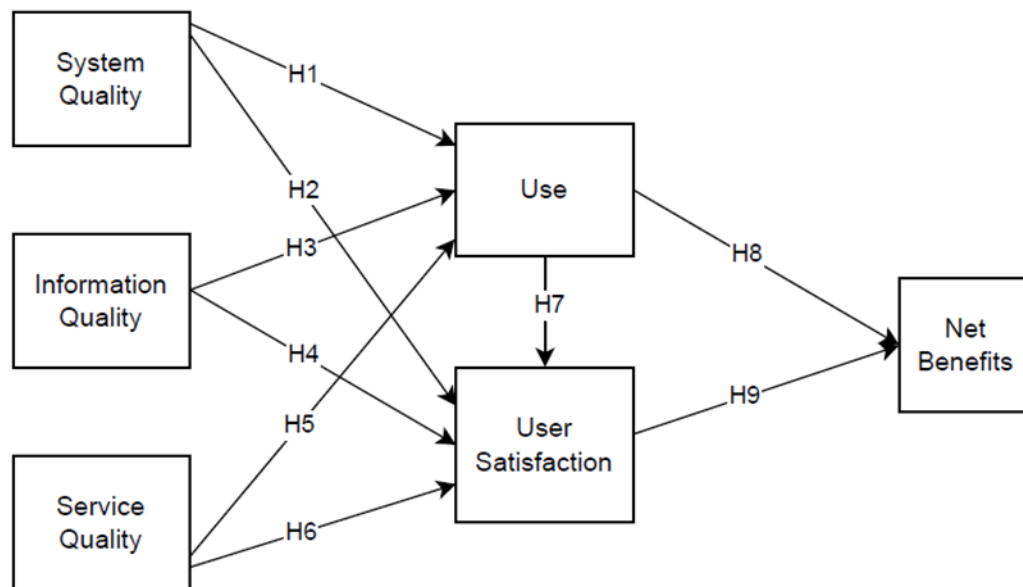


Figure 1.1 Research Model

The research hypothesis consists of:

H1 : System quality has an impact on use

H2 : System quality has an impact on user satisfaction

H3 : Information quality has an impact on use

H4 : Information quality has an impact on user satisfaction

H5 : Service quality has an impact on use

H6 : Service quality has an impact on user satisfaction

H7 : Use has an impact on user satisfaction

H8 : Use has an impact on net benefits

H9 : uUser satisfaction has an impact on net benefits

RESULTS

1. Model

The analysis of this research model uses Partial Least Square (PLS) with the software that will be used SMART PLS 4.0.

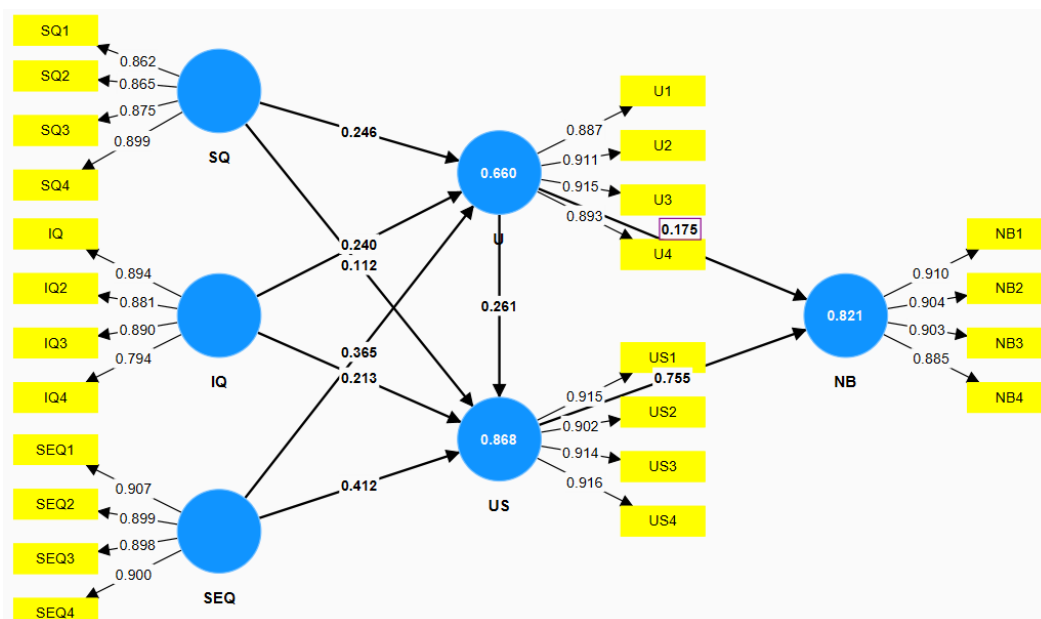


Figure 1.2 SMART PLS Working Paper

This data analysis uses outer and inner model measurements where there are 419 data samples taken from the results of questionnaire answers distributed to stakeholders at Indonesia University.

2. Outer model test results.

In testing this measurement model, there are three tests, namely Convergent Validity which can be seen from the loading factor value > 0.7 , Discriminant Validity which can be seen from the Cross loading value > 0.7 and Composite Reliability which can be seen from the Cronbach Alpha value (Yusuf, 2022).

- Convergent validity testing aims to ensure that the indicators used in the study actually measure the same aspects of the latent variables. If the indicators correlate well with each other and produce significant stress factor values and appropriate AVE, then the measured construct can be considered valid and reliable in further analysis. Based on the results above, all variables have $AVE > 0.5$, so it can be said that this indicator is valid and has a significant influence on the measured variables.

Table 2.1 Validity Table

Variable	Average Variance Extracted (AVE)	Loading Factor	Valid
System Quality	0,766		Valid
SQ1		0.862	
SQ2		0.865	
SQ3		0.875	
SQ4		0.899	
Information Quality	0.750		Valid
IQ1		0.894	
IQ2		0.881	

IQ3		0.890	
IQ4		0.794	
Service Quality	0.812		<i>Valid</i>
SEQ1		0.907	
SEQ2		0.899	
SEQ3		0.898	
SEQ4		0.900	
Use	0.813		<i>Valid</i>
U1		0.887	
U2		0.911	
U3		0.915	
U4		0.893	
User Satisfaction	0.831		<i>Valid</i>
US1		0.915	
US2		0.902	
US3		0.914	
US4		0.916	
Net Benefits	0.811		<i>Valid</i>
NB1		0.910	
NB2		0.904	
NB3		0.903	
NB4		0.885	

- b. Discriminant validity aims to measure the extent to which indicators can be distinguished from each other when measuring a construct. Discriminant validity testing can be done through cross-loading testing. Discriminant validity testing can be done using the fornell larcker criteria and cross loading.

Tabel 2.2 Hasil Fornell Larcker

	IQ	NB	SEQ	SQ	U	US
IQ	0.866					
NB	0.858	0.901				
SEQ	0.878	0.896	0.901			
SQ	0.825	0.825	0.869	0.875		
U	0.764	0.805	0.790	0.762	0.902	
US	0.867	0.901	0.902	0.844	0.834	0.912

Based on the table, it can be seen that all square roots of the AVE values between the same latent variables are greater than the correlation values with other latent variables. Therefore, the discriminant validity requirements have been met according to the data obtained.

- c. Reliability test is done by using composite reliability value and cronbach's alpha. Based on SMART PLS 4.0 all variables are considered reliable if the value of composite reliability and cronbach's alpha produced is greater than 0.7. And from the data presented all variables are reliable so that the existing data can be analyzed further.

Tabel 2.3 Composite Reliability and Cronbach's Alpha results

<i>Variabel</i>	<i>Cronbach's Alpha</i>	<i>Composite Realibility</i>	<i>Result</i>
<i>System Quality</i>	0.898	0.901	Reliabel
<i>Information Quality</i>	0.888	0.894	Reliabel
<i>Service Quality</i>	0.923	0.923	Reliabel
<i>Use</i>	0.923	0.924	Reliabel
<i>User Satisfaction</i>	0.932	0.932	Reliabel
<i>Net Benefits</i>	0.922	0.923	Reliabel

3. Inner model test results.

Testing is conducted to describe the relationship between latent variables and to test hypotheses between constructs in the conceptual model (Hair et al., 2011). The testing steps start from measuring R-Square, f-Square and hypothesis testing (Sarstedt et al., 2021).

a. R-Square

R-square aims to measure the level of variation in the influence between independent variables and dependent variables. The provisions for the R-square value are that if the R-square value is 0.25 it is considered weak, 0.50 is considered moderate and 0.75 is considered high.

Tabel 2.4 Hasil Nilai R-Square

	R-square
<i>Net Benefits</i>	0.821
<i>Use</i>	0.660
<i>User Satisfaction</i>	0.868

Based on the results of the R-Square value, the Net Benefits variable produces an R-Square value of 0.821 and the Use variable produces an R-Square value of 0.660. While the User Satisfaction variable produces an R-Square value of 0.868.

b. f-square

If the f-Square value has a value between 0.020 and 0.150, it indicates that the exogenous construct has a small influence, a value between 0.150 and 0.350 has a moderate influence and a value of more than 0.350 has a large influence on the endogenous construct (Hair et al., 2011).

Tabel 2.5 Hasil Nilai f-square

	<i>Net Benefits</i>	<i>Information</i>
<i>Use</i>	0.052	Little influence

<i>User Satisfaction</i>	0.968	Big influence
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The use variable has a small effect on net benefits. While the user satisfaction variable has a large effect on net benefits.

c. Hypothesis Testing

The criteria in this significance test include:

- If the Probability value is > 0.05 or < 1.96 , then there is no influence between the independent variable and the dependent or H_0 is accepted and H_a is rejected.
- If the Probability value is < 0.05 or > 1.96 , then there is an influence between the independent variable and the dependent or H_0 is rejected and H_a is accepted.

Tabel 2.6 Hypothesis Test Results

Code	Hypothesis	Original Sample	Sample Mean	T Statistics (O/STDEV)	P values	Result
H1	System Quality -> Use	0.246	0.246	3.370	0.001	Accepted
H2	System Quality -> User Satisfaction	0.112	0.119	1.860	0.063	Rejected
H3	Information Quality -> Use	0.240	0.241	3.005	0.003	Accepted
H4	Information Quality -> User Satisfaction	0.213	0.217	3.480	0.001	Accepted
H5	Service Quality -> Use	0.365	0.365	4.282	0.000	Accepted
H6	Service Quality -> User Satisfaction	0.412	0.411	6.420	0.000	Accepted
H7	Use -> User Satisfaction	0.261	0.261	4.438	0.000	Accepted
H8	Use -> Net Benefits	0.175	0.178	3.571	0.000	Accepted
H9	User Satisfaction -> Net Benefits	0.755	0.752	15.936	0.000	Accepted

From the analysis of Table 2.6, it can be concluded that out of 9 existing hypotheses, 1 is rejected. This illustrates that the existing services and website support can actually help stakeholders in dealing with the problems they face. However, improvements are still needed to the existing system so that it can provide satisfaction to stakeholders who use it. In addition, it can also improve the relationship between stakeholders and service owners and website support to continue to provide benefits and utility for those who use it.

DISCUSSION

From this study, observations can be made based on the hypothesis that has been processed as follows:

1. Hypothesis 1 : System Quality has a significant effect on Use

The results of this study are in accordance with previous research conducted by Mkinga (Mkinga & Mandari, 2020), Alduaij (Alduaij et al., 2024), and Çelik (Çelik & Ayaz, 2022). However, from several studies, there are also those who say that System Quality does not have a significant influence on Use as stated by Ibrahim (Alfaki, 2021), Seong (Yoon & Kim, 2023), Tutut (Widyaningrum et al., 2024). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the quality of the system owned can affect its use, so that this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

2. Hypothesis 2 : System Quality does not have a significant effect on User Satisfaction

The results of this study are in accordance with previous research conducted by Zahid (Khand & Kalhor, 2020), Abdulrazaq (Abdulkareem & Ramli, 2021), and Haninda (Faris et al., 2024). However, from several studies, there are also those who say that System Quality does not have a significant effect on User Satisfaction as stated by Azadeh (Bashiri et al., 2023), Ahmed (Al-Azawei & Al-Azawi, 2021), and Yongama (Kendle & Chipangura, 2024). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the quality of the system owned does not affect user satisfaction, so this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a negative impact on stakeholders who will use services and website support at Indonesia University. This is because there is still a need for system quality development in order to provide the information desired by stakeholders.

3. Hypothesis 3 : Information Quality has a significant effect on Use

The results of this study are in accordance with previous research conducted by Manal (Alduaij et al., 2024), Kamil (Çelik & Ayaz, 2022), and Azadeh (Bashiri et al., 2023). However, from several studies, there are also those who say that Information Quality does not have a significant effect on Use as stated by Ibrahim (Alfaki, 2021), Ahmed (Al-Azawei & Al-Azawi, 2021), and Zahid (Khand & Kalhor, 2020). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the quality of information owned can affect its use, so that this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

4. Hypothesis 4 : Information Quality has a significant effect on User Satisfaction

The results of this study are in accordance with previous research conducted by Yongama (Kendle & Chipangura, 2024), Abdulrazaq (Abdulkareem & Ramli, 2021), and Uche (Ikenyei & Haggerty, 2024). However, from several studies, there are also those who say that Information Quality does not have a significant effect on User Satisfaction as stated by Kamil (Çelik & Ayaz, 2022), Ibrahim (Alfaki, 2021), and Seong (Yoon & Kim, 2023). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the quality of information owned can affect customer satisfaction, so that this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

5. Hypothesis 5 : Service Quality has a significant effect on Use

The results of this study are in accordance with previous research conducted by Kamil (Çelik & Ayaz, 2022), Azadeh (Bashiri et al., 2023), and Ibrahim (Alfaki, 2021). However, from several studies, there are also those who say that Service Quality does not have a significant effect on Use as stated by Manal (Alduaij et al., 2024), Ahmed (Al-Azawei & Al-Azawi, 2021), and Seong (Yoon & Kim, 2023). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the quality of service owned can affect the use, so that this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

6. Hypothesis 6 : Service Quality has a significant influence on User Satisfaction

The results of this study are in accordance with previous research conducted by Azadeh (Bashiri et al., 2023), Ibrahim (Alfaki, 2021), and Ahmed (Al-Azawei & Al-Azawi, 2021). However, from several studies, there are also those who say that Service Quality does not have a significant effect on User Satisfaction as stated by Manal (Alduaij et al., 2024), Kamil (Çelik & Ayaz, 2022), and Fathur (Rokhman et al., 2022). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the quality of service owned can affect user satisfaction, so that this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

7. Hypothesis 7 : Use has a significant effect on User Satisfaction

The results of this study are in accordance with previous research conducted by Ugljesa (Marjanovic et al., 2024), Haninda (Faris et al., 2024), and Julita (Amanda et al., 2023). However, from several studies, there are also those who say that Use does not have a significant effect on User Satisfaction as stated by Zahid (Khand & Kalhor, 2020) and Kamil (Çelik & Ayaz, 2022). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the use that is owned can affect user satisfaction, so that this hypothesis is appropriate and in line with the conditions that exist at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

8. Hypothesis 8 : Use has a significant effect on Net Benefits

The results of this study are in accordance with previous research conducted by Sayyidatul (Melgis et al., 2024), Haninda (Faris et al., 2024), and Reni (Haerani et al., 2024). However, from several studies, there are also those who say that Use does not have a significant effect on Net Benefits as stated by Kamil (Çelik & Ayaz, 2022), Fathur (Rokhman et al., 2022), and Pradita (Putri et al., 2023). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the use that is owned can affect the benefits obtained by stakeholders, so that this hypothesis is appropriate and in line with the conditions that exist at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

9. Hypothesis 9 : User Satisfaction has a significant effect on Net Benefits

The results of this study are in accordance with previous research conducted by Ahmed (Al-Azawei & Al-Azawi, 2021), Ibrahim (Alfaki, 2021), and Azadeh (Bashiri et al., 2023). However, from several studies, there are also those who say that User Satisfaction does not have a significant effect on Net Benefits as stated by Manal (Alduaij et al., 2024) and Kamil (Çelik & Ayaz, 2022). So the justification of the research results above can be concluded that with the existence of services and website support at Indonesia University with the satisfaction of use that can affect the benefits obtained by stakeholders, so that this hypothesis is appropriate and in line with the conditions at Indonesia University. In addition, it also has a good impact on stakeholders who will use services and website support at Indonesia University.

Conclusion this research aims to explain what are the factors that affect the net benefit of an information system. To this end, the Information System Success Model developed by DeLone and McLean (2003) was tested. When the literature is examined, it has been determined that there is a lack of studies that test the IS success model proposed by DeLone and McLean to evaluate the success of SIS. Therefore, this study is of great importance to fill the gap in the existing literature.

If the results obtained are viewed again in general, it can be seen that the results were obtained because the use of services and website support became a bridge for stakeholders in their needs to find solutions to the problems faced. The results of the study showed that users of services and website support were not satisfied with the existing system and the benefits felt because the system still had several shortcomings. Therefore, the level of stakeholder satisfaction felt by users must be immediately improved by continuing to develop the system in accordance with the times.

Services and website support must continue to make stakeholders happy in using this system and feel that the system provides more benefits. For this reason, the system must be faster, the services provided must be more inclusive, make the user's work easier, and the net benefits felt by users must be higher. In this context, the opinions of all stakeholders who use the system, especially system administrators and university officials, must be taken, and steps must be taken to improve the level of user satisfaction and the benefits they get from using the system.

The limitations of this study, which is a contribution to the literature, are the data collection at one time and the fact that it is not known for certain to what extent respondents answered the questions objectively, consciously, and sincerely. Participants were stakeholders at an Indonesian University who used the services and support website. Therefore, since this study only covered one university in Indonesia, the model can be tested at other universities in Indonesia and universities in various countries. In conclusion, this study is based on subjective assessments of participants on the quality factors of a single stakeholder information system. Therefore, future research findings are important so that the research findings can be generalized.

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