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Effect of System, Information, and Service Quality and Green IT Attitude Towards User Satisfaction on Clientele ITSM Application Bank XYZ

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***Abstract*—The banking industry is increasingly shifting toward the advanced use of information technology (IT) to enhance customer service. It is important for the audience to be able to get satisfaction when using banking services. In this case, there are several factors that will impact user satisfaction when using the application. The study's objectives are to examine how system quality affects client satisfaction with the ITSM application at bank XYZ; how user satisfaction with the ITSM application for clients at bank XYZ is impacted by the quality of the information; how client satisfaction with the ITSM application at bank XYZ is impacted by service quality; and how client ITSM application at bank XYZ is impacted by a green IT attitude toward satisfaction. The research employs a quantitative approach, utilizing SEM PLS analysis. The result shows that the system quality has a positive and substantial impact on user satisfaction with a p-value of of 0.021 < 0.05; the information quality has a positive and significant impact on user satisfaction with a p-value of 0.000 < 0.05; the service quality has a negative and significant impact on user satisfaction with a p-value of 0.044 < 0.05; and green attitude has a positive impact on user satisfaction with a p-value of 0.000 < 0.05. The research results indicate that system quality, information quality, and green attitude positively influence user satisfaction, whereas service quality negatively influences it.**

***Index Terms*—System quality, information quality, service quality, green IT attitude, user satisfaction.**

I. INTRODUCTION

In the modern era, technology is a crucial aspect for organization. Through the use of technology, organization can obtain profit or non-profit. In 4.0 era, information and digitalization technology have been a trend in obtaining more automation of service processes, production, finance, marketing and human resources [1]. The use of IT has been a foundation for banking sector. In the banking sector, information technology has increase in efficient way for operational, transaction security, and quality of service to customers, where the utilization includes data management, customer service, risk analysis, and development of products and services innovation in businesses including banking industry.

The banking industry is increasingly shifting towards advanced use of information technology (IT) to enhance customer service [2]. Service quality in the banking context has been a significant research focus in recent years. IT service quality encompasses not only the technical reliability but also aspects such as responsiveness, security, and ease of use [3]. However, there are still limited impact on information technology according to users' perspective [4].

On the other hand, Bank XYZ has launched the Clientele ITSM (Information Technology Service Management) application as one of the solutions to provide more efficient and satisfying services for users [5]. This application aims to provide easy and fast access to various banking services, such as Service Desk, Service Request Management, Availability Management, data needs requests, and others in the form of tickets that enter through convenient digital platform. This research is important to conduct because of the need to see the level of user satisfaction.

With the implementation of the Clientele ITSM (Information Technology Service Management) application, the system will certainly not be immediately accepted and become a tool to help the data request process in the form of tickets. The reason for this is that users need to be flexible, as utilizing the Clientele application may not be well welcomed by users or staff in the banking IT environment. McLean & Delone assert that each user's adoption and utilization of the program determines the system's success. To measure the success of newly implemented information system, the success model of

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McLean & Delone can be used which functions as a theoretical framework to evaluate effect of system quality, information quality and service quality on the use of Clientele ITSM application. Bank XYZ has used the Clientele ITSM application for assessing quality of services, systems, information, and Green IT Attitude so that it can affect user satisfaction.

Basically, satisfaction in using the application is very important to maintain user interest in using the application. Factor that affect user satisfaction are system quality, information quality, service quality and Green IT Attitude. System quality is known to give impact for User Satisfaction [6]. This is because quality of system are measured by convenience, functionality, reliable, flexible, data quality, portable, and integration. Meanwhile, information quality is measured by the system's ability to provide appropriate information and can persuade users. According to [7], it is known that information quality can affect user satisfaction.

DeLone McLean's Success Model is updated with service quality. Williams et al. stated that service quality refers to the caliber of assistance that application users receive from the information systems division and IT support staff, including help desks, hotlines, and training. Reference [8] defined service quality by distinguishing between user expectations regarding the service and their assumptions about the performance provided by information system technical assistance. In this context, ITSM Clientele users may have difficulty accessing or using the system. Thus, Service Quality should be important indicators that ensure ITSM Clientele applications support application users who experience technical difficulties [7].

This study has one more variable namely Green IT Attitude factor to the DeLone McLean success model. According to [9], green IT attitude is a person's attitude towards environmental changes and their relationship to the use of information technology. This is needed because the increasing use of Information Technology (IT) through decades has given some contribution to add more power in consumption and potential use of scarce resources. For this reason, adding environmental awareness has obtain more interest in information technology users in Green IT Technology (GIT). According to [10], user attitude towards information systems influences technology adoption and user satisfaction of an application. Therefore, this study wants to see whether users of the Clientele ITSM application have a green IT attitude that influences satisfaction in using the Clientele ITSM application.

The novelty of this research is seen from the lack of several other variables in analyzing the latest research model. This study explains the influence of system quality, information, services and Green IT attitude in influencing user satisfaction. Green IT attitude is values, beliefs and behavior in environmental sustainability. Concern for the surrounding environment is an attraction that needs to be considered in the use of technology to give environmental comfort. Several previous studies only examined related to system quality, information quality, service quality on satisfaction. While this study adds the green IT attitude variable to analyze satisfaction. This study has never been done by other authors so, the objectives of this study are to analyze the influence of system quality on employee satisfaction of Clientele ITSM application users, the influence of information quality on employee satisfaction of Clientele ITSM application users, the influence of service quality on employee satisfaction of Clientele ITSM application users, the influence of green IT attitude on employee satisfaction of Clientele ITSM application users; and the influence of information quality, system, and service and green IT attitude on user satisfaction of Clientele ITSM application users. Using the Theory of Reasoned Action on ITSM Clientele applications, it is anticipated that this research will help evaluate the effect of information systems and green IT attitude.

II. Related Work

A study [11] showed that system quality, information quality and service quality have a significant positive effect on user satisfaction in e-learning system. Where from the results of this study when system quality provided by meets user requests such as the speed of platform access, where users do not need to spend a lot of time learning the system will provide positive results and state is a good quality system. In terms of information quality, the results of the study show that when someone gets the right and adequate information content, their perception of the application will also increase. And in terms of service quality, the outcomes state that personalized services for users of the application will have a positive impact on user satisfaction. Meanwhile, studies by [12] demonstrated that social media use is influenced by user happiness. To satisfy users in this situation, quality of system, information, service and trust must all be used. Reference [13] revealed that information quality provided by AI give less satisfaction to users. However, system and services quality provides significant satisfaction. Also, [14] conducted a study that showed there was an influence between green banking and user satisfaction.

III. Research Method

This study was conducted using quantitative where researchers use hypotheses to obtain answers. A quantitative approach is method rooted in the positivism paradigm [15]. The approach used in this research was explanatory to provide an explanation and description of the relationship between variables (Fig. 1). The research population was users of the Clientele ITSM application in Bintaro, South Tangerang and focused on private banks in Indonesia. Purposive sampling was used as the sampling technique with a total of 320 samples. From the formula proposed by [16], to determine samples, we multiply the number of question items by 10 where the ratio is 10:1. In collecting data, researchers used a questionnaire distributed via Google Form. Meanwhile, technique analysis used is SEM approach using Partial Least Square.

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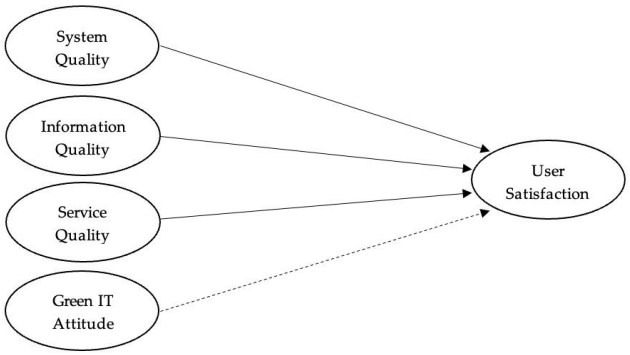

Fig. 1. Research model.

IV. RESULT

This study uses samples from IT division employees who use the Clientele ITSM application at bank XYZ in South Tangerang, Banten. The employees of this company are selected proportionally as previously determined. The respondents in this study was IT Division employees who use the Clientele ITSM application with 320 respondents. The characteristics of the study sample are listed in Table 1.

Table 1.
Respondent Criteria

Criteria	Total	Percentage (%)
Division		
IT Division of Bank XYZ South Tangerang	320	100
Total	320	100
Gender		
Man	198	61.9
Woman	122	38.1
Total	320	100
Age		
≤ 25 Years Old	52	16.3
26–30 Years Old	146	45.6
31–35 Years Old	81	25.3
36–40 Years Old	29	9.1
≥41 Years Old	12	3.8
Total	320	100
Education		
D3	49	15.3
S1	201	62.8
S2	70	21.9
Total	320	100
Years of Service		
1–10 Years	179	55.9
11–20 Years	91	28.4
21–30 Years	41	12.8
31–40 Years	9	2.8
Total	320	100

The characteristics of respondents in this study showed quite significant variations in various demographic aspects. Based on the data obtained, the total respondents participate was 320 people. In gender category, the majority of respondents are male with a frequency of 198 respondents (61.9%). Meanwhile, there are a total of 122 female respondents (38.1%). This shows that male respondent in this study was more dominant than female. In age category, respondents are divided into several age categories. The 26–30 age group was the largest, with a total of 146 respondents (45.6%). Followed by the 31–35 age group with 81 respondents (25.3%). Meanwhile, respondents under 25 years old are 52 respondents (16.3%), the 36–40 age group are 29 respondents (9.1%), and only 12 respondents (3.8%) are 41 years and over. This age distribution stated majority respondents are in productive age range. In education, most respondents have a Bachelor's degree (S1), with a total of 201 respondents (62.8%). Respondents who have a Diploma or D3 education are 49 respondents (15.3%), while those with a Master's degree (S2) are 70 respondents (21.9%). This data shows that respondents tend to have a good educational background, with the majority having higher education. Regarding length of service, the majority of peoples have work experience between 1 until 10 years, with a total of 179 respondents (55.9%). Respondents who have a work experience of 11–20 years are 91 respondents (28.4%), while those with 21–30 years of experience are 41 respondents (12.8%). Only 9 people (2.8%) have a work experience of 31–40 years.

Table 2.
Loading Factor Convergent Validity

Variable	Item	Convergent Validity	
		Loading Factor	Description
System Quality (X1)	X1.1	0.832	Valid
	X1.2	0.892	Valid
	X1.3	0.859	Valid
	X1.4	0.768	Valid
	X1.5	0.814	Valid
	X1.6	0.771	Valid
	X1.7	0.818	Valid
	X1.8	0.912	Valid
	X1.9	0.870	Valid
	X1.10	0.865	Valid
	X1.11	0.782	Valid
	X1.12	0.864	Valid
Information Quality (X2)	X2.1	0.942	Valid
	X2.2	0.932	Valid
	X2.3	0.946	Valid
	X2.4	0.962	Valid
	X2.5	0.905	Valid
	X2.6	0.844	Valid
	X2.7	0.803	Valid
	X2.8	0.830	Valid
Service Quality (X3)	X3.1	0.854	Valid
	X3.2	0.867	Valid
	X3.3	0.900	Valid
	X3.4	0.747	Valid
Green Attitude	X4.1	0.857	Valid
	X4.2	0.873	Valid

Variable	Item	Convergent Validity	
		Loading Factor	Description
(X4)	X4.3	0.900	Valid
User Satisfaction (Y1)	Y1.1	0.950	Valid
	Y1.2	0.957	Valid
	Y1.3	0.971	Valid
	Y1.4	0.973	Valid
	Y1.5	0.884	Valid

All items show loading factor values that meet convergent validity criteria with values >0.7 as seen in Table 2.

Table 3.
AVE Score

Variable	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	Description
System Quality (X1)	0.961	0.966	0.703	Reliable
Information Quality (X2)	0.965	0.971	0.805	Reliable
Service Quality (X3)	0.864	0.908	0.712	Reliable
Green Attitude (X4)	0.851	0.909	0.769	Reliable
User Satisfaction (Y1)	0.971	0.978	0.898	Reliable

It showed on Table 3 that data are valid and can be used in this study. All data obtained showed cross loading values and composite reliability > 0.7, AVE > 0.5, Cronbach's alpha > 0.6. Hence, it is concluded that the data is valid and reliable. Meanwhile, Table 4 shows the result of VIF test.

Table 4.
VIF Test

	VIF
X1.1	2.459
X1.2	3.656
X1.3	3.490
X1.4	1.274
X1.5	2.230
X1.6	2.281
X1.7	1.509
X1.8	1.776
X1.9	1.343
X1.10	1.257
X1.11	2.009
X1.12	1.893
X2.1	2.421
X2.2	2.801
X2.3	2.104
X2.4	4.877
X2.5	4.379
X2.6	3.196
X2.7	2.727
X2.8	3.249
X3.1	2.311
X3.2	2.474
X3.3	2.471
X3.4	1.572
X4.1	2.291
X4.2	2.477
X4.3	2.067
Y1.1	1.258
Y1.2	1.501
Y1.3	1.534
Y1.4	1.487
Y1.5	1.463

Table 5.
HTMT Value

	Green IT Attitude	User Satisfaction	Information Quality	Service Quality
Green IT Attitude				
User Satisfaction	0.824			
Information Quality	0.668	0.744		
Service Quality	0.864	0.839	0.852	
System Quality	0.136	0.411	0.296	0.112

The next step is to determine the Q-square (Q^2) value which refer to Table 5. The Q^2 value is a value that measures the stability of the model that describes the influence of exogenous variables on other endogenous variables and the Q^2 value is only found in endogenous variables. A model is said to be stable if the Q^2 value>0.35 and the medium stable model if the Q^2 value>0.15 and Q^2<0.35 but if Q^2<0.15 and Q2>0.02 then the model is said to be less stable, and the Q^2 value<0.02 the model is said to be unstable [16].

Table 6.
Construct Cross validated Redundancy

	SSO	SSE	Q^2 =1-SSE/SSO
Green IT Attitude	960,000	960,000	
User Satisfaction	1,600,000	416,422	0.740
Information Quality	2,560,000	2,560,000	
Service Quality	1280,000	1280,000	
System Quality	3840,000	3840,000	

In Table 6, Q^2 is only calculated for the user satisfaction variable because for the other variables, the SSE value is the same as SSO, which results in $Q^2 = 0$.

$Q^2=1-SSO/SSE$

$Q^2=1-416,422/1,600,000$

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$Q^2=1-0.260$
$Q^2=0.740$
Based on the calculation results, it is known that the Q^2 value has a value of 0.740, meaning that in this research model it shows a stable value (Q^2 value> 0.35). Therefore, the results of the predictive relevance calculation in this study can be said to have a fairly good goodness of fit value.

Table 7.
R-Square Determination Coefficient Results

Variable	R-Square
User Satisfaction (Y)	0.833

The value of R^2 of the endogenous variable, namely User Satisfaction (Y) is 0.833 (Table 7). This is the result of determination coefficient value influenced by system quality (X1), information quality (X2), service quality (X3) and green attitude (X4) for about 83.3%, while the remaining 17.7% is influence from variables which not part of study's model.

Table 8.
Results of Direct Effect Hypothesis Test

	Hypothesis	Original Sample	T Statistic	P-Value	Description
H1	System Quality (X1) → User Satisfaction (Y)	0.092	2.324	0.021	Significant
H2	Information Quality (X2) → User Satisfaction (Y)	0.480	3.605	0.000	Significant
H3	Service Quality (X3) → User Satisfaction (Y)	-0.315	2.021	0.044	Significant
H4	Green Attitude (X4) → User Satisfaction (Y)	0.727	8.682	0.000	Significant

Table 8 explained that the path coefficient values for each variable influence are as follows:

1) *Hypothesis 1 (H1): System Quality towards User Satisfaction (Y)*
   The original sample is 0.092 which indicates that system quality has a positive effect on user satisfaction. This value shows that there are a small effect towards another. This result is significant with T-Statistic = 2.324 (> 1.96) and P-Value = 0.021 (< 0.05). Therefore, H1 is accepted, which means that system quality has a significant direct effect on user satisfaction.
2) *Hypothesis 2 (H2): Information Quality towards User Satisfaction (Y)*
   The value of original sample is 0.480 which shows information quality has a strong positive influence on user satisfaction. The T-Statistic value = 3.605 (> 1.96) and P-Value = 0.000 indicate that this influence is significant. Therefore H2 is accepted, which means that information quality significantly increases user satisfaction.
3) *Hypothesis 3 (H3): Service Quality towards User Satisfaction (Y)*
   The original sample value is -0.315 indicates that service quality has a negative influence on user satisfaction. This influence is significant with a T-Statistic = 2.021 (> 1.96) and P-Value = 0.044 (< 0.05). Therefore, H3 is accepted, which means that Service Quality has a significant and negative influence on User Satisfaction. This demonstrates that raising Service Quality does not necessarily correspond with the increase of User Satisfaction.
4) *Hypothesis 4 (H4): Green Attitude towards User Satisfaction Y*
   The value of Original Sample is 0.727 which shows that green attitude has a very strong positive influence on user satisfaction. This result is very significant with T-Statistic = 8.682 (>1.96) and P-Value = 0.000 (< 0.05). Therefore, H4 is accepted, which means that green attitude significantly affects user satisfaction, with the greatest influence compared to other variables.

V. DISCUSSION

A. *Influence of System Quality (X1) towards Customer Satisfaction (Y)*

The outcomes indicate that system quality (X1) has a positive and significant effect on user satisfaction (Y). This finding indicates that an increase in quality of IT Service Management (ITSM) application system tends to be followed by an increase in satisfaction from users. The characteristics of information system can successfully meet user expectations and have a direct impact on their satisfaction in using ITSM applications. Previous literature support strengthens these results. From [17] stated that system quality shown to have a positive influence towards user satisfaction in Starbucks application in Taiwan. Likewise, [18] and [19] found similar effects on user satisfaction of cloud ERP and cloud computing services. Thus, this findings of indicate that aspects of system quality, such as reliability, responsiveness, and ease of use, are important elements underlying user experience, so that they feel satisfied when the application is reliable and works well according to their needs.

This outcome in line with [19] study which states that as long as individuals using the system, they will feel satisfied if the application are reliable, comfortable, easy to use, easy to learn, and enjoyable. Thus, high ITSM system quality means that this application is able to provide stability, security, and easy access for users. With these characteristics, users feel helped in completing their tasks more effectively and efficiently, which ultimately increases their positive perception of the ITSM application. This finding indicates that users not only see system quality as a means to complete their tasks, but

also as an added value that creates a satisfying experience during the process of using the ITSM application.

Good system quality can increase user satisfaction because they feel satisfied in using it. An application with a quality system makes users more comfortable to use the application for a long time. Not only that, users will also feel comfortable with the quality of the system that meets expectations. This study is inline with Expectation-Confirmation Theory which stated that customer behaviour dependent on their expectation. Customer have their own expectation to be fulfil. Every expectation will lead to satisfied attitude [20]. Therefore, it is necessary for applications to be able to consider good system quality in order to increase user satisfaction.

B. Influence of Information Quality (X2) towards Customer Satisfaction (Y)

The outcome indicate that information quality (X2) has significant effect on user satisfaction (Y). This finding indicates that information quality (X2) of the ITSM application is important in increasing user satisfaction (Y). Accurate, relevant, and complete information is considered to be able to meet user needs, so that they feel more supported in making decisions and carrying out their tasks. This outcome is in line with [17] which stated that information quality and user satisfaction have impact for customer. Furthermore, these results are also supported by research done by [11], [19] and [7] which showed a positive and significant relationship between information quality and user satisfaction in the context of cloud-based systems and ERP. These studies emphasize that complete and relevant information plays an important role in creating some satisfying user experience, as they feel more comfortable, directed, and assisted in using the system.

In the context of ITSM applications, the quality of information produced is considered very relevant and helps users in carrying out daily tasks. The information provided by the application not only supports smooth work, but also improves operational efficiency which ultimately has an impact on user satisfaction. For example, users feel that reports generated by ITSM system have high accuracy and relevance, thus providing added value in the decision-making process. The outcome confirm that information quality (X2) is key factors in increasing user satisfaction (Y). This implies that system managers need to improve quality of information produced by application, including accuracy, relevance, and ease of access. This need to be implement in order to maintain and improve overall user experience. Furthermore, these results strengthen the role of information quality as important elements in information system success model by McLean & Delone, which emphasizes that superior information quality can have a direct impact on user satisfaction [21].

Every information provided in an application becomes a reference for some users to know how to use the application. Basically, users need clear information in order to provide proper use of application. This study is in line with Expectation-Confirmation Theory which shows that information quality is an aspect that is considered by users when forming expectations. When users obtain appropriate information, expectations will be created that need to be met. This is done to provide a sense of satisfaction to users [22].

C. Influence of Service Quality (X3) Towards Customer Satisfaction (Y)

The outcomes indicate that service quality (X3) has a negative but significant effect on user satisfaction Y. This indicates that aspects of service provided by the IT team of Bank XYZ, such as technical support, responsiveness, and concern in handling user needs, can contribute negatively to user satisfaction in using the ITSM application. In other words, higher quality service perceived by users, it will make their satisfaction become low. This finding is in line to [17] which shows that service quality positively influences user satisfaction. There are also [23] and [19] stated service quality and user satisfaction have positive impact in context of intelligent business systems and cloud computing technology. However, the outcomes explained that high user expectations of services, where it is considered good have not been able to meet these expectations, which cause dissatisfaction. In this case, Service Quality is sometimes cant be the reason for user satisfaction. If service quality increases, user satisfaction may decrease due to negative influences.

In the context of the ITSM Clientele application at Bank XYZ, users may have very high expectations regarding service quality, for example regarding responsiveness or the accuracy of the solutions provided. When the service provided is unable to fully meet these expectations, users tend to feel frustrated or disappointed, even though the service provided is objectively good enough. This can create a negative perception of the application and system as a whole. Furthermore, high dependence on the IT team's technical support can be an additional cause of this negative influence. If users feel that they have to rely too often on the IT team's help to solve problems, this can reduce their confidence in the ITSM application and create dissatisfaction. Thus, high service quality alone does not always guarantee user satisfaction, especially if user needs and expectations are not well managed. Overall, these results indicate that high service quality is not always positively correlated with user satisfaction, especially in situations where unrealistic user expectations or excessive dependence on service support can be the main factors causing dissatisfaction. Therefore, the management of Bank XYZ needs to not only improve the quality of service but also ensure that user expectations of the service are well managed to create a better balance between service quality and user satisfaction levels.

D. Influence of Green Attitude (X4) Towards Customer Satisfaction (Y)

The outcomes indicate that green attitude (X4) has effect on user satisfaction (Y). This finding shows that the stronger Green Attitude held by users, the higher their level of

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satisfaction with ITSM application in the context of Bank XYZ. At the same time, this finding strengthens the theory put forward by [24], which states that green IT attitude towards information technology reflects the positive or negative views of users towards the environmental impact of using the technology. Technology can have an impact on the environment at all stages from production, use, to disposal, it will imply that awareness of the ecological impact of information technology is important for users. A positive attitude towards green IT can increase satisfaction, especially if users feel that the technology they use, such as Clientele ITSM. This is in line with sustainability principles and does not worsen environmental problems.

Furthermore, previous research emphasized that user attitudes toward information systems affect technology adoption and user satisfaction [25]. In this context, the environmental attitude of ITSM users shows that they value technology that can minimize environmental impacts. Thus, the ITSM Clientele application is not only viewed as a work tool, but also as a system that can be adopted more enthusiastically by users. Through this, they will feel that the application does not add significant ecological burden. Referring to the Theory of Reasoned Action (TRA), individual attitudes affect their intentions and behaviors in accepting and using technology [25]. The outcomes indicate that a positive green attitude can be a driving factor for user satisfaction in receiving and implementing jobdesk in the form of tickets in the Clientele ITSM application. Users with a positive green IT attitude feel more comfortable and satisfied using the application, because they believe that the technology used does not damage the environment, and may even help reduce the company's ecological footprint.

VI. CONCLUSION

It can be said that user satisfaction with ITSM applications at Bank XYZ is positively and significantly impacted by system quality, information quality, and green IT attitude, while service quality has a negative effect. With the observation that service quality falls short of user expectations may lead to dissatisfaction, this finding further supports the notion of DeLone & McLean that system and service quality are the primary factors in the information system success model. Furthermore, green IT attitude aspect adds a new dimension to this model by showing positive sustainability attitudes from users contribute to increased satisfaction, thus enriching the perspective of DeLone & McLean's theory with a sustainability context that is in accordance with the development of modern technological needs. Furthermore, information quality has a significant influence in ITSM context indicates that in technical service-based applications, information factors remain one of the main priorities for user satisfaction. In terms of practical contributions, this study offers several recommendations for system designers and organizations to improve the effectiveness of ITSM applications. Improvements in system quality, including stability, reliability, and ease of use, remain a priority in maximizing user satisfaction. In addition, organizations are advised to pay greater attention to managing user expectations of technical services in order to minimize the potential negative impact of service quality. Sustainability aspects in system development also need to be integrated to increase the value of applications in the eyes of users who have a green IT attitude. Meanwhile, the provision of relevant information remains an important element to support application performance in meeting user operational needs. The study's findings not only validate previous studies but also offer helpful recommendations for creating IT systems that are more efficient, long-lasting, and in line with user demands in the contemporary day.

The theoretical contribution of this study is closely related to the information system success model of DeLone & McLean, which identifies the dimensions of success of an Information System. The findings of this study support the DeLone & McLean model by identifying that system quality, service quality, and green IT attitude have a significant effect on user satisfaction of ITSM applications. Stable, reliable, and easy-to-use system quality directly increases user satisfaction, as also confirmed by the studies of [19], which show that quality systems create positive experiences for users. Furthermore, service quality has also been shown to play an important role in supporting user satisfaction, with responsive and friendly IT team services creating higher satisfaction, especially in ITSM applications that have high technical support needs.

Based on the findings of this study, the practical implication for IT system designers and organizations are as follows. First, it is important for system designers to focus on improving system quality, especially in terms of stability, reliability, and ease of use, because these aspects have been proven to have a direct impact on user satisfaction. ITSM users in the workplace expect a reliable system that supports their work smoothly, so continuous improvement in technical aspects and user-friendly interface design can significantly improve user satisfaction. Second, organizations and system developers should pay more attention to service quality by providing a responsive, friendly, and proactive IT support team in handling user technical needs. Fast and effective technical service has been proven to increase satisfaction, especially in environments that require intensive support such as ITSM applications. For IT professionals and sustainability policymakers, it is suggested to strengthened the improvement in system, information, service quality and green IT attitude in implementation. IT Professionals need to consider impact in environment.

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