

Analysis of User Satisfaction of myXL Mobile Application Using the DeLone and McLean Model

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ABSTRACT

The rapid development of information and communication technology has encouraged telecommunication companies to provide mobile applications as a self-service platform for their customers. PT XL Axiata Tbk, through its myXL application, aims to provide convenience for users in managing their telecommunication services. Despite being downloaded more than 50 million times on Google Play Store, the application still receives various complaints from users regarding system stability, access speed, and customer support quality. Therefore, an analysis is needed to determine the level of user satisfaction with the myXL application. This study aims to analyze the level of user satisfaction with the myXL mobile application in Surabaya using the DeLone and McLean Information Systems Success Model (2003). Five variables were used, including System Quality, Information Quality, Service Quality, User Satisfaction, and Net Benefits. This study employed a descriptive quantitative approach with a questionnaire instrument distributed online via Google Form to 100 active myXL users in Surabaya. Data were analyzed using descriptive statistics, specifically mean values and standard deviations, through SPSS version 25 software. Validity testing was conducted using Pearson Product Moment correlation, and reliability testing used Cronbach's Alpha. The results showed that all variables fell within the "Satisfied" category with an overall mean of 3.86. The Net Benefits variable obtained the highest score (4.11), with two indicators reaching the "Very Satisfied" category: ease of monitoring internet quota (4.28) and reduced need to visit XL outlets (4.27). The Information Quality variable scored 3.94, User Satisfaction 3.83, Service Quality 3.73, and System Quality 3.70. The only indicator in the "Fairly Satisfied" category was system stability (KS3) with a score of 3.17, indicating that users still experience errors and technical disruptions. Based on these findings, it can be concluded that the myXL application is a successful information system from the perspective of its users in Surabaya.

Keyword: User Satisfaction, Mobile Application, myXL, DeLone and McLean Model, Descriptive Statistics.

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1. INTRODUCTION

The development of information and communication technology in Indonesia has progressed rapidly, driving companies across various sectors to adapt by providing digital-based services, including the telecommunications sector. One form of this adaptation is the development of mobile applications that enable customers to access services independently

through their smartphones. According to data from the Indonesian Internet Service Providers Association (APJII), the number of internet users in Indonesia reached 235.3 million in 2026, equivalent to 81.72% of the national population [1]. The Central Bureau of Statistics (BPS) also reported that 72.78% of Indonesians had accessed the internet by 2024 [2]. These conditions have encouraged telecommunications companies to develop mobile application-based services to meet increasingly high user demands.

PT XL Axiata Tbk, one of the largest telecommunications operators in Indonesia, ranks third among mobile operators with a user share of 26.7% in 2026 [1]. The myXL application is the official self-service mobile application developed by PT XL Axiata Tbk as the primary digital service platform for its customers [3]. Through this application, customers can easily access product information, purchase data packages, check quotas in real-time, top up credit, use live chat with customer service, and manage up to ten XL numbers simultaneously. The high user interest is reflected in the monthly active users (MAU) of XL Axiata's digital channels, which reached 35.7 million users in early 2025 [4], and total myXL downloads exceeding 50 million on Google Play Store [5].

However, the high number of downloads does not always reflect user satisfaction. On Google Play Store, the myXL application received a rating of 4.1 out of 5.0, while on the App Store it received 4.4 out of 5.0 based on 272 thousand reviews [5][6]. Many users have expressed dissatisfaction through the review section, with complaints including login difficulties, unresponsive transactions, slow loading, and frequent application errors [5]. This condition indicates issues with user satisfaction levels that need further analysis.

To analyze user satisfaction, this study employs the Information Systems Success Model developed by DeLone and McLean [7][8]. This model was first introduced in 1992 and updated in 2003, adding Service Quality as a new variable and combining individual and organizational impacts into Net Benefits. The model has been widely validated across various contexts. Muharsyah and Ekawati [9] found that system quality and service quality significantly influenced user satisfaction of the Tokopedia application, while information quality did not have a significant effect. Kusuma Putra et al. [10] also identified system and information quality as key factors in mobile application user satisfaction. Nasuha and Hidayah [11] demonstrated that system quality, information quality, and service quality all affected user satisfaction of the Tangerang Live application. Yano et al. [12] found that system quality, social influence, and facilitating conditions positively influenced My Telkomsel user satisfaction. Atmoko [13] reported that information quality and system quality significantly influenced myIndihome user satisfaction, while service quality did not.

Despite the extensive application of the DeLone and McLean model, no study has specifically analyzed user satisfaction of the myXL application using this framework. This research gap, combined with myXL's substantial user base and documented user complaints, provides strong justification for this study. This study utilizes five variables from the DeLone and McLean model: System Quality, Information Quality, Service Quality, User Satisfaction, and Net Benefits. The Use variable was excluded because all respondents were active myXL users, making the measurement of usage intensity irrelevant. The study was conducted in Surabaya, the second-largest city in Indonesia with 2,940,265 inhabitants [14], where XL Axiata's network coverage includes extensive 4G and available 5G services [3], ensuring that user assessments genuinely reflect application quality rather than network limitations.

2. METHODS

This study employed a quantitative descriptive research design. According to Sugiyono [15], descriptive research aims to describe collected data as it is, without making generalizations. This approach was selected because the research objective was to describe the level of user satisfaction with the myXL application rather than to test hypotheses or prove causal relationships between variables.

The study was conducted in Surabaya, East Java, Indonesia, during June 2026. The population comprised all active myXL application users in Surabaya, categorized as an unknown population since no official data publishes the specific number of myXL users at the city level. The sample size was determined using the Cochran formula for unknown populations [15]:

$$n = Z^2 \cdot p \cdot q / e^2$$

With a 95% confidence level ($Z = 1.96$), maximum proportion assumption ($p = 0.5$, $q = 0.5$), and a 10% margin of error ($e = 0.10$), the calculation yielded $n = 96.04$, which was rounded up to 100 respondents to minimize data errors and improve sample representativeness. This aligns with Roscoe's recommendation in Sugiyono [15] that appropriate sample sizes range from 30 to 500 respondents. The sampling technique used was accidental sampling.

The research variables were based on the DeLone and McLean Information Systems Success Model [8], comprising five variables: System Quality (ease of use, access speed, system stability, interface clarity, availability), Information Quality (accuracy, timeliness, comprehensibility, completeness, relevance), Service Quality (response speed, accessibility, solution accuracy, consistency, service appropriateness), User Satisfaction (feature satisfaction, performance satisfaction, needs fulfillment, comfort, overall satisfaction), and Net Benefits (monitoring ease, time efficiency, transaction ease, usefulness, reduced need for physical visits). The Use variable was excluded as all respondents were active users.

The research instrument was a questionnaire consisting of 25 statements distributed across the five variables (5 items each), measured using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Data were collected through an online questionnaire created using Google Forms, distributed via social media to active myXL users in Surabaya.

Data analysis was performed using SPSS version 25 in three stages. First, validity testing was conducted using Pearson Product Moment correlation, with $r\text{-table} = 0.196$ ($n = 100$, $\alpha = 0.05$, $df = 98$). Second, reliability testing was performed using Cronbach's Alpha, with a minimum threshold of 0.60 [15]. Third, descriptive statistical analysis was conducted by calculating mean and standard deviation values. The mean scores were interpreted using a satisfaction category scale calculated through class interval: $\text{Interval} = (5 - 1) / 5 = 0.80$, resulting in five categories: Very Dissatisfied (1.00–1.80), Dissatisfied (1.81–2.60), Moderately Satisfied (2.61–3.40), Satisfied (3.41–4.20), and Very Satisfied (4.21–5.00).

3. RESULTS AND DISCUSSION

3.1 Respondent Characteristics

A total of 100 valid responses were collected from active myXL users in Surabaya. The majority of respondents were female (64%), while male respondents comprised 36%. In terms of age distribution, the 18–25 age group dominated with 72% of respondents, followed by those above 25 years (17%) and below 18 years (11%). Regarding the device platform, 87% of

respondents used Android devices, while 13% used iOS devices. The dominance of respondents in the 18–25 age range indicates that active myXL users in Surabaya are predominantly young adults who tend to be more active in using digital services and mobile applications.

3.2 Instrument Validity and Reliability

Validity testing was conducted using Pearson Product Moment correlation computed through SPSS version 25. The results showed that all 25 questionnaire items had r-calculated values greater than the r-table value of 0.196, confirming that all items are valid. The r-calculated values ranged from 0.600 (KS3) to 0.820 (MB1). Table 1 presents the validity test results for each variable.

Table 1. Summary of Validity Test Results

Variable	Item	r-calc Range	r-table	Status
System Quality (SQ)	SQ1–SQ5	0.600–0.757	0.196	Valid
Information Quality (IQ)	IQ1–IQ5	0.705–0.797	0.196	Valid
Service Quality (SvQ)	SvQ1–SvQ5	0.723–0.768	0.196	Valid
User Satisfaction (US)	US1–US5	0.693–0.812	0.196	Valid
Net Benefits (NB)	NB1–NB5	0.695–0.820	0.196	Valid

Reliability testing was performed using Cronbach's Alpha. As presented in Table 2, all five variables achieved Cronbach's Alpha values exceeding the 0.60 threshold, indicating that the instrument is reliable and consistent.

Table 2. Reliability Test Results

Variable	Cronbach's Alpha	N of Items	Status
System Quality	0.726	5	Reliable
Information Quality	0.809	5	Reliable
Service Quality	0.801	5	Reliable
User Satisfaction	0.794	5	Reliable
Net Benefits	0.801	5	Reliable

3.3 Descriptive Statistical Analysis

The descriptive analysis results for each variable are presented in Tables 3 through 7, followed by a comprehensive summary in Table 8. The mean scores were interpreted using the satisfaction category scale: Very Dissatisfied (1.00–1.80), Dissatisfied (1.81–2.60), Moderately Satisfied (2.61–3.40), Satisfied (3.41–4.20), and Very Satisfied (4.21–5.00).

Table 3. Descriptive Analysis of System Quality

No	Statement	Mean	SD	Category
SQ1	The myXL application is easy to use	4.06	0.814	Satisfied
SQ2	The myXL application can be accessed quickly	3.77	0.930	Satisfied
SQ3	The myXL application rarely experiences errors	3.17	0.985	Moderately Satisfied
SQ4	The myXL application interface is easy to understand	3.89	0.803	Satisfied
SQ5	The myXL application is always available when needed	3.63	0.837	Satisfied
System Quality Average		3.70		Satisfied

Table 4. Descriptive Analysis of Information Quality

No	Statement	Mean	SD	Category
IQ1	Information displayed in the myXL application is accurate	3.93	0.782	Satisfied
IQ2	Information in the myXL application is always updated	3.88	0.868	Satisfied
IQ3	Information in the myXL application is easy to understand	4.12	0.856	Satisfied
IQ4	Information presented in the myXL application is complete	3.89	1.004	Satisfied
IQ5	Information in the myXL application is relevant to user needs	3.90	0.823	Satisfied
Information Quality Average		3.94		Satisfied

Table 5. Descriptive Analysis of Service Quality

No	Statement	Mean	SD	Category
SvQ1	The myXL application provides quick responses to user complaints	3.61	1.024	Satisfied
SvQ2	Customer support in the myXL application is easily accessible	3.76	0.933	Satisfied
SvQ3	The myXL application provides accurate solutions to user problems	3.54	0.846	Satisfied
SvQ4	Services in the myXL application are consistent and reliable	3.89	0.803	Satisfied
SvQ5	The myXL application delivers services as promised	3.86	0.829	Satisfied
Service Quality Average		3.73		Satisfied

Table 6. Descriptive Analysis of User Satisfaction

No	Statement	Mean	SD	Category
US1	I am satisfied with the features available in the myXL application	3.94	0.897	Satisfied
US2	I am satisfied with the overall performance of the myXL application	3.71	0.891	Satisfied
US3	The myXL application meets my needs as an XL user	3.74	0.881	Satisfied
US4	I feel comfortable using the myXL application	3.78	0.871	Satisfied
US5	Overall, I am satisfied with the myXL application	3.97	0.758	Satisfied
User Satisfaction Average		3.83		Satisfied

Table 7. Descriptive Analysis of Net Benefits

No	Statement	Mean	SD	Category
NB1	The myXL application makes it easy for me to monitor internet quota	4.28	0.866	Very Satisfied
NB2	The myXL application saves my time in managing XL services	3.97	0.858	Satisfied
NB3	The myXL application helps me purchase internet packages easily	4.13	0.895	Satisfied
NB4	The myXL application provides tangible benefits in daily life	3.90	0.810	Satisfied
NB5	The myXL application reduces my need to visit XL outlets	4.27	0.851	Very Satisfied
Net Benefits Average		4.11		Satisfied

Table 8. Overall Descriptive Analysis Results

No	Variable	Mean	Category
1	System Quality (SQ)	3.70	Satisfied
2	Information Quality (IQ)	3.94	Satisfied
3	Service Quality (SvQ)	3.73	Satisfied
4	User Satisfaction (US)	3.83	Satisfied
5	Net Benefits (NB)	4.11	Satisfied
Overall Average		3.86	Satisfied

3.4 Discussion

The System Quality variable obtained a mean score of 3.70, falling within the "Satisfied" category. This result indicates that, overall, myXL users in Surabaya consider the technical performance of the application to be adequate. According to DeLone and McLean [8], system quality refers to the technical characteristics of an information system, including ease of use, access speed, reliability, and system availability. Among the five indicators, SQ1 (ease of use) achieved the highest mean of 4.06, suggesting that users find the myXL interface

intuitive and easy to operate. This aligns with PT XL Axiata Tbk's efforts to design the application with a simple layout and user-friendly navigation [3].

However, SQ3 (system stability) received the lowest mean score of 3.17, categorized as "Moderately Satisfied." This finding indicates that application crashes, errors, and other technical disruptions remain a concern for some users. The relatively high standard deviation of 0.985 suggests considerable variation in user experiences regarding system stability. This aspect requires priority attention from PT XL Axiata Tbk, as DeLone and McLean [8] emphasize that system stability is a critical factor influencing overall user satisfaction.

The Information Quality variable achieved a mean score of 3.94, categorized as "Satisfied." This indicates that users perceive the information presented by the myXL application including quota data, data packages, transaction history, and promotions as meeting their expectations. DeLone and McLean [8] define information quality as the characteristics of system output, encompassing accuracy, timeliness, completeness, relevance, and comprehensibility. IQ3 (comprehensibility) obtained the highest mean of 4.12, demonstrating that information presentation in the myXL application is clear and easily understood. The highest standard deviation was found in IQ4 (completeness) at 1.004, indicating diverse perceptions among respondents regarding information completeness.

Service Quality achieved a mean score of 3.73, falling within the "Satisfied" category. This suggests that the support services available in the myXL application, including the help feature, live chat, and Maya chatbot, are generally rated favorably by users. DeLone and McLean [8] added this variable in the 2003 model update, recognizing the increasing importance of service support in internet-based information systems. SvQ4 (service consistency) obtained the highest mean of 3.89, while SvQ3 (solution accuracy) received the lowest at 3.54, indicating that the chatbot Maya does not always provide accurate solutions. The highest standard deviation across all 25 items was found in SvQ1 (response speed) at 1.024, revealing highly variable experiences with customer support responsiveness.

The User Satisfaction variable obtained a mean score of 3.83, categorized as "Satisfied." According to DeLone and McLean [8], user satisfaction is a primary indicator of information system success, reflecting users' overall evaluation of their experience. US5 (overall satisfaction) achieved the highest mean of 3.97 with the lowest standard deviation of 0.758, indicating consistent and positive assessments of overall satisfaction. US2 (performance satisfaction) received the lowest mean of 3.71, likely related to the system stability issues identified in the System Quality analysis, where errors and crashes can diminish perceived application performance.

Net Benefits achieved the highest mean score among all five variables at 4.11, categorized as "Satisfied." DeLone and McLean [8] describe net benefits as the positive impacts users experience from utilizing an information system. Notably, NB1 (quota monitoring ease) scored 4.28 and NB5 (reduced need for physical outlet visits) scored 4.27, both falling within the "Very Satisfied" category. These findings demonstrate that users strongly appreciate the tangible benefits of the myXL application, particularly the convenience of real-time quota monitoring and the elimination of physical store visits. NB3 (transaction ease) also scored highly at 4.13, confirming that digital data package purchases through the application are well received. These results collectively indicate that the myXL application successfully delivers significant added value to its users in managing daily telecommunications needs, consistent with the original purpose of the model's net benefits construct as outlined by DeLone and McLean [7][8].

CONCLUSION

This study analyzed user satisfaction of the myXL mobile application using the DeLone and McLean Information Systems Success Model with a quantitative descriptive approach involving 100 active users in Surabaya. The findings reveal that all five variables System Quality (3.70), Information Quality (3.94), Service Quality (3.73), User Satisfaction (3.83), and Net Benefits (4.11) fall within the "Satisfied" category, with an overall mean of 3.86. Net Benefits achieved the highest score, with two indicators reaching the "Very Satisfied" category: quota monitoring ease (4.28) and reduced need for outlet visits (4.27). Conversely, system stability was the only indicator rated as "Moderately Satisfied" (3.17), representing the most critical area requiring improvement.

Based on these findings, PT XL Axiata Tbk should prioritize improving system stability to minimize errors, crashes, and technical disruptions. Additionally, the accuracy and responsiveness of customer support features, particularly the Maya chatbot and live chat functionality, should be enhanced. Features that received positive evaluations, such as quota monitoring and data package purchasing, should be maintained and further developed. For future research, it is recommended to employ causal analysis methods such as regression or Structural Equation Modeling (SEM) to examine the relationships between variables, expand the geographic scope beyond Surabaya, increase sample sizes, and conduct comparative studies with competing applications such as MyTelkomsel, myIM3, or BimaTri.

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