INFLUENCE OF SERVICE QUALITY AND USER EXPERIENCE ON CUSTOMER SATISFACTION OF PLN MOBILE APPLICATION

PENGARUH KUALITAS LAYANAN DAN PENGALAMAN PENGGUNA TERHADAP KEPUASAN PELANGGAN APLIKASI MOBILE PLN

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Abstract: In today's digital era, mobile applications have become an essential platform for delivering public services, including electricity services provided through the PLN Mobile application. With increasing expectations from users, service quality and user experience play a crucial role in determining customer satisfaction. This research aims to analyze the influence of Service Quality and User Experience on Customer Satisfaction of PLN Mobile Application. The study employs a quantitative method with a sample of 100 respondents who are active users of PLN Mobile in Manado, selected through simple random sampling. Data were collected using questionnaires and analyzed using multiple linear regression, including validity, reliability, classical assumption, F-test, and t-test. The findings show that both Service Quality and User Experience significantly influence Customer Satisfaction, both partially and simultaneously. The results highlight that improvements in reliability, responsiveness, and ease of use of the application contribute to higher customer satisfaction. The implications of this study suggest that PLN should continuously enhance the quality of its mobile services and user interface design to ensure better user experience and greater satisfaction. Furthermore, this research contributes academically as a reference for future studies on digital service quality and user experience in public sector mobile applications.

Keywords: Service Quality, User Experience, Customer Satisfaction, PLN Mobile Application

Abstrak: *Di era digital saat ini, aplikasi mobile telah menjadi platform penting untuk memberikan layanan publik, termasuk layanan listrik yang disediakan melalui aplikasi PLN Mobile. Dengan meningkatnya harapan dari pengguna, kualitas layanan dan pengalaman pengguna memainkan peran penting dalam menentukan kepuasan pelanggan. Penelitian ini bertujuan untuk menganalisis pengaruh Kualitas Layanan dan Pengalaman Pengguna terhadap Kepuasan Pelanggan Aplikasi Mobile PLN. Penelitian ini menggunakan metode kuantitatif dengan sampel 100 responden yang merupakan pengguna aktif PLN Mobile di Manado, dipilih melalui simple random sampling. Data dikumpulkan menggunakan kuesioner dan dianalisis menggunakan regresi linier berganda, termasuk validitas, keandalan, asumsi klasik, uji-F, dan uji-t. Temuan menunjukkan bahwa Kualitas Layanan dan Pengalaman Pengguna secara signifikan mempengaruhi Kepuasan Pelanggan, baik sebagian maupun bersamaan. Hasilnya menyoroti bahwa peningkatan keandalan, daya tanggap, dan kemudahan penggunaan aplikasi berkontribusi pada kepuasan pelanggan yang lebih tinggi. Implikasi dari penelitian ini menunjukkan bahwa PLN harus terus meningkatkan kualitas layanan seluler dan desain antarmuka pengguna untuk memastikan pengalaman pengguna yang lebih baik dan kepuasan yang lebih besar. Selanjutnya, penelitian ini berkontribusi secara akademis sebagai acuan untuk studi masa depan tentang kualitas layanan digital dan pengalaman pengguna di aplikasi mobile sektor publik.*

Kata Kunci: *Kualitas Layanan, Pengalaman Pengguna, Kepuasan Pelanggan, Aplikasi Mobile PLN*

INTRODUCTION

Research Background

In recent years, Indonesia has experienced significant growth in mobile application usage, reflecting a deep digital transformation across various sectors of life. This indicates that mobile applications have become the primary medium for daily activities—ranging from communication and entertainment to business transactions. Applications

such as Instagram, Facebook, TikTok, and WhatsApp are among the most popular, reflecting strong demands for communication, entertainment, and social interaction.

In this context, mobile applications are no longer merely tools, but have become critical infrastructure within Indonesia's digital ecosystem. This development calls for increased attention to service quality and user experience, given the high public expectations for convenience, speed, and security in app usage. Therefore, it is crucial for developers and service providers to continuously innovate and enhance mobile app quality to meet the increasingly complex needs and expectations of users.

Customer satisfaction is a critical element in business success, particularly in the context of digital services like the PLN Mobile application. According to Oliver (2014), customer satisfaction is defined as the evaluation of a product or service's features in delivering a pleasurable level of fulfillment related to consumption—including instances of under or over-fulfillment. This definition emphasizes that customer satisfaction is an affective evaluation arising post-consumption, reflecting the extent to which a customer's expectations are met by the actual performance of the product or service.

In today's digital era, where customer-company interactions frequently occur through digital platforms, ensuring customer satisfaction has become increasingly vital. A study by Giese & Cote (2000) highlights that customer satisfaction is an affective response of varying intensity, emerging as a result of the consumption experience. This suggests that satisfaction depends not only on product or service quality but also on the overall experience perceived by the customer during the consumption process.

Nowadays service quality and user experience (UX) have become pivotal determinants of customer satisfaction, particularly for mobile applications like PLN Mobile. Service quality encompasses multiple dimensions—reliability, responsiveness, assurance, empathy, and tangibles—all of which collectively shape customer perceptions of the service provided. The SERVQUAL model, developed by Parasuraman, Zeithaml, & Berry (1985), serves as the primary framework for evaluating these dimensions. Meanwhile, user experience focuses on the overall interaction of the user with the application, covering aspects such as ease of navigation, interface design, response speed, and emotional satisfaction during usage. A positive user experience can enhance the perception of service quality and, ultimately, customer satisfaction.

The study by Putri (2022) on the Alfagift application shows that user experience has a positive and significant influence on electronic service quality (e-service quality), which in turn has a positive impact on customer satisfaction. This confirms that a good user experience can strengthen customers' perception of the service quality provided through digital applications. Another study by Nasution & Adiwijaya (2024) on mobile coffee shop applications in Indonesia found that user experience directly influences customer satisfaction, which then serves as a mediator in shaping customer loyalty. Although electronic service quality does not show a significant direct impact on customer loyalty, customer satisfaction remains a key factor in building that loyalty.

In digital service such as PLN Mobile, it is important for service providers to ensure that service quality and user experience go hand in hand in creating customer satisfaction. With the growing reliance of society on mobile applications for various needs, including electricity services, service providers must continuously innovate and improve both aspects to meet the increasingly high expectations of users. Threfore, this research is both relevant and important to conduct in order to evaluate the extent to which service quality and user experience within the PLN Mobile application influence customer satisfaction. The results of this study are expected to provide valuable input for the application developers and PLN itself in improving the performance of their digital services, with the goal of creating a better customer experience.

Research Problem

Based on the research background above, reserach problem can be formulated as:
1. Does Service Quality influence Customer Satisfaction of PLN Mobile Application?
2. Does User Experience influence Customer Satisfaction of PLN Mobile Application?
3. Do Service Quality and User Experience influence Customer Satisfaction of PLN Mobile Application?

LITERATURE REVIEW

Marketing

According to Evans & Berman (1992), marketing is the anticipation, management and satisfaction of demand through the exchange process. According to Kotler (2003), marketing is typically seen as task of crediting, promoting,

and delivering goods and services to customers and businesses. Obviously marketing is important in all areas of the organization, and customers are the reason why business exist.

Service Quality

Service quality can be known by comparing consumer perceptions of the real service they receive with the service they actually want on the service attributes of a company (Lubis & Andayani, 2017). Many dimensions can be used to measure service quality or service quality. Brady & Cronin (2001) measure service quality based on the Multi Model which includes three dimensions, namely the quality of interaction, the quality of the physical environment and the quality of the results. In addition, according to Tjiptono & Chandra (2016), there are five dominant factors or determinants of service quality, namely Tangible, Empathy, Responsiveness, Reliability and Assurance.

User Experience

According to the approach proposed by Sudrajat, Sardi, & Puspitasari (2025), designing applications using the User-Centered Design (UCD) method has been proven to enhance the quality of user experience, as it directly focuses on the needs and behaviors of real users. By integrating user feedback throughout the application development process, UX can be improved through the refinement of features, interfaces, and interaction flows. The end result of this process is an application that is more accessible and user-friendly, while also enhancing users' emotional comfort in completing digital tasks.
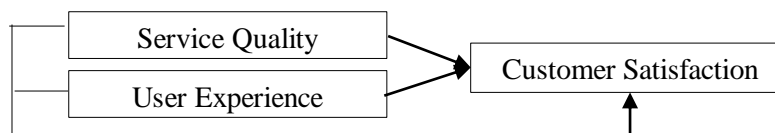
Customer Satisfaction

Kotler & Keller (2006) define satisfaction as a person's feeling of pleasure or disappointment which resulted from comparing a product's perceived performance or outcome against his/ her expectations. Customer satisfaction is a function of perceived performance and expectations. Perceived performance is the customer's belief about the product or service experience. Buyer's expectations, on the other hand, are influenced by: Performance of the product in the recent past, Word of mouth, Recommendations or Testimonials, Reviews, What competitiors say about the product or service, What its own marketers promise. According to this definition, the satisfaction goals are established by the customers themselves before set out to make a purchase. This is also why customer start looking for more information at this point – review, comparisons, alternatives, etc.

Previous Research

Nasution & Adiwijaya (2024) examined the influence of user experience and e-service quality on customer loyalty with customer satisfaction as a mediator in mobile coffee shop applications in Indonesia. This research is a quantitative research which uses a survey methodology with SEM-PLS analysis. This study involved 270 respondents who are active users of various mobile coffee shop applications. The results indicated that user experience significantly affects e-service quality and directly impacts customer satisfaction. Although e-service quality did not show a positive effect on customer loyalty, the study found no significant evidence that e-service quality directly impacts customer satisfaction. However, customer satisfaction significantly mediates the relationship between user experience and customer loyalty. Additionally, age serves as a moderating variable in the relationship between customer satisfaction and customer loyalty.

Panjaitan, Tarigan, & Siregar (2024) determined the influence of Service Quality and User Experience on Customer Satisfaction at Givency One Housing. The population was 797 Givency One Housing Customers and the sample was 89 Givency One Housing Customers. Referring to the results of the partial test, indicating a significantly positive effect of Service Quality (X1) on customer satisfaction (Y) at Givency One Housing, and User Experience (X2) also has a significantly positive effect on customer satisfaction (Y) at Givency One Housing. Referring to F-test, indicating that Service Quality and User Experience simultaneously have a significant effect on customer satisfaction.

Alriansyah (2024) analyzed the relationship between the variables of Service Quality and User Experience with Customer Satisfaction. The research also aims to assess how these two variables contribute to the observed decline in Maxim's ratings and service usage intensity. This study employs a quantitative method with an associative approach. Data were collected by distributing questionnaires to 96 Maxim users using probability sampling techniques, supported by secondary data such as books and previous studies. The research findings indicate that Service Quality and User Experience significantly influence Customer Satisfaction, with correlation and influence levels of 84.6% and 70.9%, respectively.

Conceptual Framework

Figure 1. Conceptual Framework
Source: Literature Review

Research Hypothesis
H1: Service Quality influence Customer Satisfaction of PLN Mobile Application.
H2: User Experience influence Customer Satisfaction of PLN Mobile Applciation.
H3: Service Quality and User Experience influence Customer Satisfaction of PLN Mobile Application.

RESEARCH METHOD

Research Approach
          This research using Quantitative which involves the collection of data so that information can be quantified and subjected to statistical treatment in order to support or refute "alternate knowledge claims" (Creswell, 2003).. Quantitative research also involves data collection that is typically numeric and the researcher tends to use mathematical models as the methodology of data analysis.

Population, Sample Size and Sampling Technique
          According to Sekaran & Bougie (2009), population refers to the entire group of people, event, or things of interest that the researcher wishes to investigate. The population in this research is PT PLN (Persero) customers in Manado who have experience using New PLN Mobile Application. The sample being used in this research are 100 respondents that have experience using the New PLN Mobile Application. This research is conducted by distributing questionnaires to 100 respondents which proves that sample size used in this research is more than the minimum or required respondents. This study uses a probability sampling technique with the simple random sampling method. This technique provides equal opportunities for each member of the population to be selected as a sample, without being influenced by specific characteristics.

Data Collection Method
          This research is conducted with a source of data which is primary data that are needed in order to define the solution of this research problem.

Operational Definition and Indicator of Research Variables
Table 1. Operational Definition and Indicator of Research Variables

Variable	Operational Definition	Indicator
Service Quality	User perception of how well the PLN Mobile Application providers services.	1. Reliability 2. Responsiveness 3. Assurance 4. Empathy (Attention)
User Experience	The overall perceptions and responses of users that arise as a result of their use and interaction with PLN Mobile application.	1. Usability (Ease of use) 2. Usefulness 3. Accessibility 4. Efficiency
Customer Satisfaction	The level of happiness or satisfaction felt by customers after using the PLN Mobile application.	1. Expectetion Fulfillment 2. Overall Satisfaction 3. Reuse Intention 4. Recommendation Intention

Testing of Research Instrument
Validity and Reliability Tests

Validity is extent to which a construct measures what it is supposed to measure. An easy measure of validity would be to compare observed measurement with the true measurement (Hair et al., 2010).

According to Anastasi & Urbina (2002), reliability refers to consistency of scores obtained by the same persons when they are reexamined with the same test on different occasions, or with different sets of equivalent items, or under other variable examining conditions.

Data Analysis Method
Classical Assumption Tests
Normality Test

The normality test is used to determine whether the distribution of residual data follows a normal distribution. A normally distributed residual is a crucial requirement in classical linear regression, as it affects the inferential validity of the regression coefficients. According to Ghozali (2018), residual normality can be tested using statistical methods such as the Kolmogorov-Smirnov (K-S) test or the Shapiro-Wilk test, as well as visually through graphs like the P-P Plot or histogram. If the significance value is greater than 0.05, the residuals are considered to be normally distributed.

Multicollinearity Test

Multicollinearity occurs when there is a high correlation between independent variables in a regression model, which can lead to unstable coefficient estimates and make the interpretation of results unreliable. According to Nachrowi & Usman (2006), multicollinearity can be identified through the Variance Inflation Factor (VIF) and Tolerance values. If the VIF is less than 10 and Tolerance is greater than 0.10, it can be concluded that there is no multicollinearity present in the model.

Heteroscedasticity

Heteroscedasticity is a condition in which the variance of the residuals is not constant across all levels of the independent variables. This can lead to inefficient estimates. According to Ghozali (2018), heteroscedasticity can be tested using the Glejser test or the Spearman Rank test, as well as visualized through a scatterplot between residuals and predicted values. If there is no clear pattern in the plot or the significance value is greater than 0.05, it can be concluded that heteroscedasticity is not present.

Multiple Linear Reggresion Analysis

According to Gujarati and Porter (2009), multiple linear regression is used to estimate the value of the dependent variable based on a combination of several independent variables, and to examine the strength of the relationships among those variables. The formula for multiple linear regression that used in this research is as follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

Where:

Y = Customer Satisfaction
X_1 = Service Quality
X_2 = User Experience
β_0 = Constant (intercept) refers to the value of Y when X_1 and X_2 are equal to zero.
β_1 = The regression coefficient of variable X_1 indicates the change in Y resulting from a one-unit change in X_1.
β_2 = The regression coefficient of variable X_2 indicates the change in Y resulting from a one-unit change in X_2.
ε = Error term

Coefficient of Determination (R^2)

The Coefficient of Determination indicates how much of the variation in the dependent variable (Y) can be explained by the independent variables (X) through the regression model (Newbold, Carlson, & Thorne, 2003).. Meanwhile, the Multiple Correlation Coefficient is used to assess the overall strength of the linear relationship between one dependent variable and a set of independent variables (Newbold, Carlson, & Thorne, 2003).

Hypothesis Testing
F-Test (Simultaneously) and T-Test (Partially)

The F-test is used to examine whether all independent variables, taken together, have a significant influence on the dependent variable. According to Gujarati and Porter (2009), the F-test is useful for testing the overall validity of the regression model. The hypotheses used are as follows:

The t-test is used to determine the extent to which each individual independent variable influences the dependent variable. According to Hair et al. (1998), the t-test measures the significance of each regression coefficient, assuming that the effects of the other variables are held constant.

RESULTS AND DISCUSSION

Result
Validity and Reliability Tests
Table 2. Validity Results

Variable	Indicator	Corrected Item-Total Correlation	Description
Service Quality (X1)	1	.845	Valid
	2	.847	Valid
	3	.880	Valid
	4	.830	Valid
User Experience (X2)	1	.769	Valid
	2	.783	Valid
	3	.742	Valid
	4	.789	Valid
Customer Experience (Y)	1	.801	Valid
	2	.785	Valid
	3	.806	Valid
	4	.776	Valid

Source: Data Processed (2025)

Based on the Pearson Product Moment correlation results, all questionnaire items are valid. Each indicator shows a strong and positive relationship with its total score (r > 0.30, Sig. < 0.05). Therefore, the research instrument is considered to have good validity.

Table 3. Reliability Result

Variable	Cronbach's Alpha
Service Quality	.868
User Experience	.772
Customer Satisfaction	.801

Source: Data Processed (2025)

The output of SPSS shows that the value of Cronbach's Alpha of the variables used in this research are Service Quality 0.868, User Experience 0.772 and Customer Satisfaction 0.801. The data is considered as reliable since the value of Cronbach's Alpha is above the minimum value which is 0.6.

Classical Assumption
Multicollinearity
Table 4. Multicollinearity Result

Model	Collinearity Statistics	
	Tolerance	VIF
1 (Constant)		
Service Quality	0,764	1,309
User Experience	0,764	1,309

a. Dependent Variable: Customer Satisfaction
Source: Data Processed (2025)

N.A.S. Lolok., D.P.E. Saerang., M.H. Rogi

Table 4 shows that the Tolerance values of Service Quality is 0.764 and User Experience 0.764 meaning that the tolerance value of each variable is more than 0.1. The VIF value of Service Quality is 1.309 and User Experience is 1.309 meaning that the VIF value of each variable is less than 10. Since all the tolerance values are more than 0.1 and VIF value of each independent variable is less than 10, this research is free from multicollinearity.
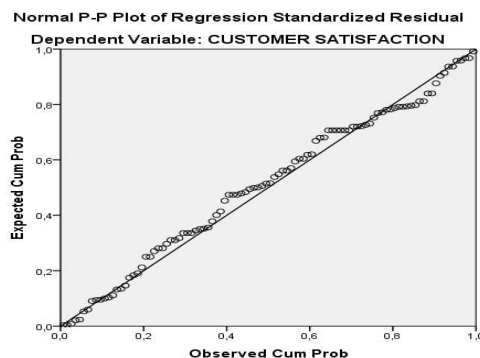
Normality Test

Figure 2. Normality Result
Source: Data Processed (2025)

Based on the figure 2 shows the results of the Normal P-P Plot, it can be concluded that the residuals in the regression model are normally distributed. Therefore, the normality test is accepted which means the data of this research is normally distributed.
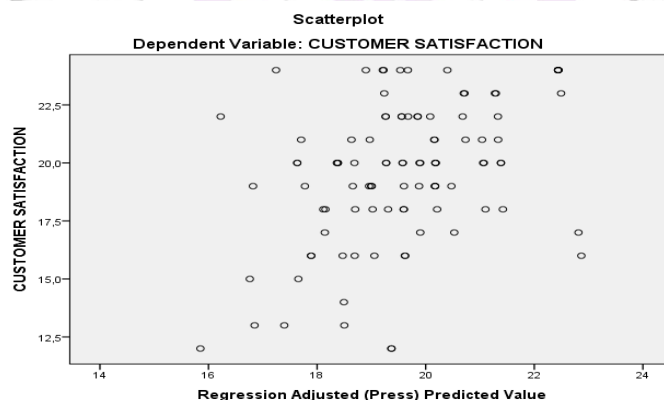
Heteroscedasticity

Figure 3. Heteroscedasticity Result
Source: Data Processed (2025)

Based on the scatterplot, it can be concluded that there are no signs of heteroscedasticity in this regression model. Therefore, the regression model meets the assumption of homoscedasticity, meaning that the residual variance is constant.

Multiple Linear Regression Analysis
Table 5. Multiple Linear Regression Analysis

	Model	Unstandardized Coefficients		Standardized Coefficients
		B	**Std. Error**	**Beta**
1	(Constant)	8,468	2,076	
	Service Quality	0,287	0,107	0,272
	User Experience	0,299	0,104	0,291

a. Dependent Variable: Customer Satisfaction
Source: Data Processed (2025)

From the result in the table 5, the model define as:

$$Y = (8.468) + 0.287 X1 + 0.299 X2 + e$$

Where:

Y   = Customer Satisfaction
X1   = Service Quality
X2   = User Experience
e   = Error

The multiple linear regression equation can be interpreted as follows:
1. Constant (8.468): This means that if Service Quality (X_1) and User Experience (X_2) are assumed to be absent (value = 0), the predicted value of Customer Satisfaction is 8.468.
2. Coefficient of Service Quality (X_1 = 0.287): This indicates that every 1-unit increase in Service Quality will increase Customer Satisfaction by 0.287 points, assuming the other variable (User Experience) remains constant.
3. Coefficient of User Experience (X_2 = 0.299): This suggests that every 1-unit increase in User Experience actually decreases Customer Satisfaction by 0.299 points, assuming Service Quality remains constant.

Coefficient of Correlation and Coefficient of determination (R^2)
Table 6. R and R^2

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,485[a]	,236	,220	2,724

a. Predictors: (Constant), User Experience, Service Quality
b. Dependent Variable: Customer Satisfaction

The R Square value is 0.236, meaning that 23.6% of the variation in Customer Satisfaction can be explained by Service Quality and User Experience. The rest (76.4%) is influenced by other factors not included in this model.

Hypotesis Test
F-Test
Table 7. F-Test Result

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	221,788	2	110,894	14,950	,000[b]
	Residual	719,522	97	7,418		
	Total	941,310	99			

a. Dependent Variable: Customer Satisfaction
b. Predictors: (Constant), User Experience, Service Quality
Source: Data Processed (2025)

Table 7 shows that Service Quality and User Experience simultaneously have a significant influence on the dependent variable, Customer Satisfaction.

T-Test (Partially)
     Table 5 shows that:
1. Service Quality (X_1): The t-value is 2.679 with a significance value (Sig.) = 0.009, which is less than 0.05. This means that Service Quality has a statistically significant partial effect on Customer Satisfaction. In other words, when User Experience is held constant, an increase in Service Quality will significantly increase Customer Satisfaction.
2. User Experience (X_2): The t-value is 2.866 with a significance value (Sig.) = 0.005, which is also less than 0.05. This indicates that User Experience has a statistically significant partial effect on Customer Satisfaction. When Service Quality is held constant, improvements in User Experience significantly contribute to higher Customer Satisfaction.

Discussion

The Influence of Service Quality on Customer Satisfaction

The t-test results indicate that Service Quality has a significant partial effect on Customer Satisfaction. This finding supports the SERVQUAL model by Parasuraman, Zeithaml, & Berry (1988), which emphasizes that dimensions such as reliability, responsiveness, assurance, empathy, and tangibles play essential roles in forming customer satisfaction. This result is also in line with Customer Satisfaction Theory, which explains that satisfaction is formed when perceived service quality meets or exceeds prior expectations. When users perceive PLN Mobile as responsive, reliable, and helpful, it aligns with their expectations, resulting in higher satisfaction. In comparison with previous studies, Rahman (2019) found that service quality significantly affects customer satisfaction at PT PLN (Persero) Manado Area. Similarly, Afriyadi & Anggreyany (2021) concluded that high expectations on service performance significantly influence satisfaction levels. Therefore, the present finding confirms and strengthens the consensus from prior literature, particularly in the PLN service context. Thus, improvements in the digital delivery of service such as clear information, responsive support, or smooth interaction can have a meaningful impact on user satisfaction. This result confirms the importance of maintaining and enhancing service quality even in digital service platforms.

The Influence of User Experience on Customer Satisfaction

User Experience also shows a significant partial effect on Customer Satisfaction. This supports the WebQual 4.0 framework (Barnes & Vidgen, 2002) and the EUCS model (Doll & Torkzadeh, 1988), which identify usability, information quality, and interaction quality as crucial components in forming positive user experiences that drive satisfaction. Aligned with Oliver's theory, user experience contributes to satisfaction through the emotional and cognitive evaluation of the app, especially when the design and performance of the app exceed user expectations. This finding is consistent with prior research such as Putri (2022) who confirmed that UX improves e-service quality and satisfaction in the Alfagift app. Nasution & Adiwijaya (2024) who found a direct effect of UX on satisfaction and loyalty in mobile coffee shop apps. Saputra et al. (2024) also confirmed UX dimensions like usability and system quality significantly influence user satisfaction in the PLN Mobile application. These comparisons affirm the significance of UX in creating satisfaction, especially in digital public services. These findings demonstrate that the regression model has good predictive value, as both independent variables significantly influence the dependent variable. However, future research may also consider including additional variables such as pricing, payment features, or service speed to further explain variations in customer satisfaction with the PLN Mobile application.

The Influence of Service Quality and User Experience on Customer Satisfaction

The F-test results indicate that Service Quality and User Experience simultaneously affect Customer Satisfaction significantly. This confirms the theoretical framework built upon Oliver's Satisfaction Theory, where satisfaction is the result of the combined perceived performance from both service and system interaction, relative to user expectations. The result strengthens the idea that in the digital era, service quality and user experience are not separate constructs, but are complementary in shaping satisfaction. In PLN Mobile, both aspects contribute jointly for instance, good service (e.g., accurate billing) and excellent UX (e.g., fast, intuitive interface) create a holistic and satisfying customer experience. Thus, PLN must consider improvements in both service delivery and user interface simultaneously to maximize user satisfaction. In conclusion, both service quality and user experience play essential roles in shaping customer satisfaction with the PLN Mobile application. PLN is recommended to continuously improve its digital services and maintain high standards of service quality to meet customer expectations in an increasingly digitalized environment.

CONCLUSION AND RECOMMENDATION

Conclusion

1. Service Quality does influence Customer Satisfaction of PLN Mobile Application users partially. This indicates that when considered individually, improvements in service quality significantly contribute to increased user satisfaction.
2. User Experience does influence Customer Satisfaction of PLN Mobile Application users partially. This implies that a better user experience in terms of usability, usefulness, accessibility and effciency contributes significantly to user satisfaction.

3. Service Quality and User Experience do influence Customer Satisfaction of PLN Mobile Application users simultaneously. This means that both variables together play a significant role in determining how satisfied the users are with the application.

Recommendation

1. PLN is important to continuously improve the user experience of the PLN Mobile Application. Developers should focus on enhancing the interface design, simplifying navigation, ensuring faster loading times, and regularly updating the app based on user feedback. A better digital experience will lead to higher satisfaction and long-term user engagement.
2. PLN should consistently provide responsive and reliable service to its users. Management is advised to hold regular evaluations, training, and seminars for customer service staff to improve their ability to respond quickly, accurately, and empathetically. PLN could also implement a feedback system where users can assess the service quality they receive. These efforts will help strengthen users' trust and satisfaction with the service.
3. Future researchers expand the study to larger areas with different demographics to obtain more comprehensive results. Additionally, other variables such as perceived value, loyalty, or digital trust may be added to further explore factors that affect customer satisfaction in mobile-based utility applications.

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N.A.S. Lolok., D.P.E. Saerang., M.H. Rogi

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