

The Influence of Perceived Quality and Product Knowledge on Customer Satisfaction on iPhone Users (Study on Student at State Polytechnic of Malang)

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ABSTRACT: The rapid development of communication technology has transformed usage. As Apple's flagship product, the iPhone is known for its quality and innovative features. This study aims to analyze the influence of perceived quality and product knowledge on customer satisfaction among iPhone users at State Polytechnic of Malang. This quantitative explanatory study involved 120 active students who had used an iPhone for at least one year, selected through purposive sampling. Data were collected through an online questionnaire and analyzed using multiple linear regression with SPSS version 26. The results showed that perceived quality and product knowledge partially a simultaneously had significant effect on customer satisfaction, with significance valued below 0.05. The coefficient of determination (R²) was 0.902, indicating that 90,2% of the variation in customer satisfaction was explained by these two variables. Therefore, perceived quality and product knowledge have positive and significant effects on customer satisfaction among iPhone users.

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1. INTRODUCTION

Globalization and modernization have brought significant changes to human life, particularly in the field of information and communication technology. The rapid development of technology has provided various conveniences and made information more accessible. One of the most significant developments is the emergence of smartphones, which have become an essential part of modern life.

Smartphones offer various conveniences, including innovative features, easy access to information and entertainment, and high mobility that allows users to communicate anytime and anywhere. Smartphones are therefore no longer used solely as communication tools but have also become part of people's lifestyles. People may choose smartphones not only based on their basic functions but also on the facilities and features they offer (Pujianto, 2022).

The increasing importance of smartphones has encouraged companies to compete in developing products that meet consumer's needs and preferences. One of the leading smartphone brands is Apple, which launched its first iPhone in 2007. Since then, Apple has continuously and attract consumers. These innovations have contributed to the iPhone's recognition as a high-quality and innovative smartphone.

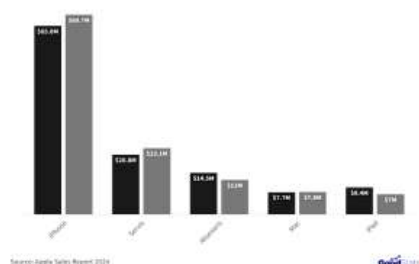


Figure 1. Apple Product Sales Last 2 Year

Source: <https://goodstats.id/>

Based on the Apple product sales graph, iPhone sales remained the highest, increasing from \$65.8 billion in 2022 to \$69.7 billion in 2023. Service revenue also increased from \$20.8 billion to \$23.1 billion, while accessories and iPad sales declined. Mac sales remained relatively stable, increasing slightly from \$7.7 billion to \$7.8 billion. Overall, Apple's product sales showed positive growth, particularly in iPhone sales.

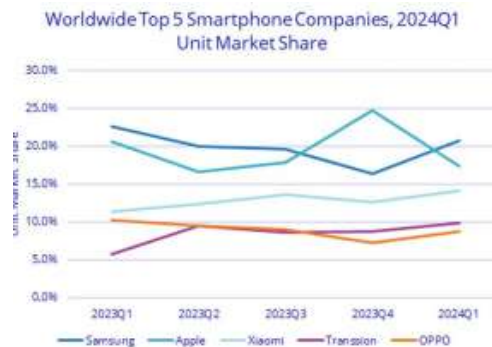


Figure 2. Worldwide Top 5 Smartphone Companies

Source: <https://tekno.kompas.com/>

According to the chart “Worldwide Top 5 Smartphone Companies, 2024Q1 Unit Market Share,” Apple is one of the world’s top five smartphone brands, competing closely with Samsung. Other brands include Xiaomi, Transsion, and Oppo. Apple remains a major player in the global smartphone industry and ranked second with a market share of 17.5% in 2024.

The high number of smartphone users in Indonesia reflects significant market potential and shows that consumers are increasingly selective in choosing products that meet their needs and preferences. Perceived quality plays an important role in purchasing decisions and customer satisfaction, as consumers evaluate products based on their usage experience and brand reputation. Product knowledge also affects how consumers evaluate product quality and benefits. Consumers with greater knowledge tend to have more realistic expectations, which can influence their satisfaction.

Perceived quality refers to consumers’ perceptions of product quality that influence purchasing decisions and satisfaction. The iPhone is often perceived as having high quality in terms of technology, design, and user experience. According to Tjiptono (2015:145), positive perceived quality is achieved when experienced quality meets expected quality. Meanwhile, product knowledge refers to consumers’ understanding of product features, functions, and specifications. Greater product knowledge can help consumers appreciate product value and increase satisfaction.

Customer satisfaction is an important element of marketing strategy because high satisfaction can lead to customer loyalty, future purchases, and recommendations. Therefore, perceived quality and product knowledge are important factors that may influence iPhone user satisfaction. Based on this background, this study aims to examine the influence of perceived quality and product knowledge on customer satisfaction among iPhone users.

II. LITERATURE REVIEW

Marketing Management

Management is the art and science of planning, organizing, directing, and supervising human resources to achieve predetermined goals. According to the American Marketing Association (AMA) in Kotler and Keller (2016), marketing is an organizational function and a process of creating, communicating, and delivering value to customers while managing customer relationships for the benefit of the organization and its stakeholders. Marketing management focuses on attracting, retaining, and increasing consumers by creating and delivering good value and quality.

According to Indrasari (2020), marketing management is a series of processes involving the analysis, planning, implementation, supervision, and control of marketing activities to achieve company targets effectively and efficiently. It can also be understood as a tool for designing and controlling programs to create, build, and maintain exchanges that provide benefits and support the achievement of business objectives.

Marketing Mix

According to Assauri (2015) marketing mix is a strategy implemented by a company related to determining how the company presents products to a particular segment, which is its target market. According to Kotler and Keller (2016) marketing mix includes four elements that can be controlled by the company, namely product, price, place and promotion.

Perceived Quality

According to Aaker (2019), perceived quality is an important dimension of brand equity, referring to consumers’ perception of a product’s overall quality or superiority. Positive perceptions can increase customer loyalty, willingness to pay premium prices, and brand resilience against competitors. Perceived quality can be strengthened through high-quality products, excellent customer

service, consistent brand communication, and a positive brand reputation. Tjiptono (2019) states that quality reflects all dimensions of a product that provide benefits to customers.

Indicators of Perceived Quality

Perceived quality refers to a customer's overall perception of a product or service's excellence. According to Durianto (2022), its indicators include product quality, product reputation, product characteristics, and product performance.

Product Knowledge

Product knowledge refers to all information about a product that consumers use as a basis for making purchasing decisions. According to Herdianto (2016:88), it includes product categories, brands, terminology, attributes, features, prices, and beliefs about the product. Syaifullah and Agustino (2020:627) define product knowledge as all information about a product, including its functions and form.

According to Rathi (2019:62), product knowledge involves complete and thorough information about a product, including its origin, history, physical qualities, uses, performance, and services such as installation, maintenance, credit facilities, and spare parts. Thus, product knowledge covers information about a product from its conception to commercialization.

Indicator of Product Knowledge

According to Peter and Olson (2020), product knowledge consists of three indicators: product attribute knowledge, which refers to consumers' understanding of a product's characteristics and features; product benefit knowledge, which refers to consumers' understanding of the benefits or positive consequences obtained from using the product; and knowledge of satisfaction provided by the product, which refers to consumers' understanding of the satisfaction gained when the product is used or consumed properly.

Consumer Behaviour

According to Putri (2021), consumer behaviour refers to the study of how individuals, groups, and organizations make decisions regarding the purchase, use, and disposal of goods and services to satisfy their needs and wants. It encompasses various activities, actions, and psychological processes that occur before, during, and after the purchase and use of products or services.

Customer Satisfaction

Customer satisfaction is important for a company's sustainability and can encourage increased purchases in both the short and long term. According to Kotler and Keller (2016), customer satisfaction is a feeling of pleasure or disappointment that arises from comparing a product's perceived performance with customer expectations. Customers feel dissatisfied when performance is below expectations, satisfied when it meets expectations, and very satisfied when it exceeds expectations.

Indicators of Customer Satisfaction

According to Indrasari (2020), customer satisfaction can be measured through six indicators: product quality, service quality, price, customer experience, emotional satisfaction, and recommendation. These indicators cover the quality of products and services, the suitability of price with the value received, customers' experiences and emotions, and their willingness to recommend the product or service to others.

Conceptual Research

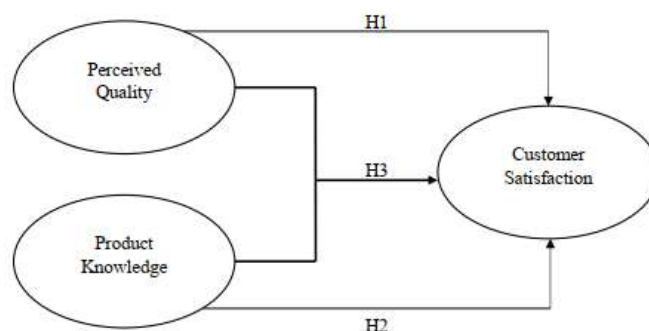


Figure 3. Conceptual Research

Source: Data Processed (2025)

H1: It is suspected that Perceived Quality partially has a positive and significant effect on Customer Satisfaction of iPhone users.

H2: It is suspected that Product Knowledge partially has a positive and significant effect on iPhone users' Customer Satisfaction.

H3: It is suspected that Perceived Quality and Product Knowledge simultaneously have a positive and significant effect on iPhone users' Customer Satisfaction.

III. RESEARCH METHODS

Research Type

This study uses a quantitative approach, which according to Sugiyono (2023), is conducted in a planned, systematic, and structured manner. The study aims to examine the influence of perceived quality and product knowledge on customer satisfaction among iPhone users. The research type is explanatory research, which according to Gumanti (2016), aims to explain why a phenomenon occurs and test the relationships between variables through data arranged within a theoretical framework.

Population and Sample

The population in this study consists of iPhone users among students of State Polytechnic of Malang, totalling 12,207 students. To determine the sample size, the Slovin formula was used. The sampling procedure employed a non-probability sampling method with a purposive sampling technique. According to Sugiyono (2019:133), purposive sampling is a technique for determining samples based on specific considerations. Based on the Slovin formula, the minimum sample size required for this study was 123.07 respondents, which was rounded to 120 respondents.

Data Collection Method

According to Sugiyono (2020), primary data are obtained directly by researchers from data sources, while secondary data are obtained indirectly through other sources. In this study, primary data were collected through questionnaires distributed via Google Forms to students of State Polytechnic of Malang, while secondary data were obtained from relevant literature, including books, journals, and internet sources related to customer satisfaction.

IV. RESULTS

Validity Test

According to Ghozali (2018), the validity test is used to determine whether a questionnaire accurately measures the intended variables. Validity is assessed by comparing the calculated correlation value (r-count) with the r-table value. A statement is considered valid if $r\text{-count} > r\text{-table}$ and $\text{Sig.} < 0.05$, while it is invalid if $r\text{-count} < r\text{-table}$ or $\text{Sig.} > 0.05$. The validity test in this study was conducted using SPSS 26 for Windows.

Table 1. Validity Test Results

Variable	Items	r count	r table	Sig.	Information
Perceived Quality (X1)	X1.1.1	0,8756	0,1966	0,0000	VALID
	X1.1.2	0,7452	0,1966	0,0000	VALID
	X1.2.1	0,8578	0,1966	0,0000	VALID
	X1.2.2	0,7635	0,1966	0,0000	VALID
	X1.3.1	0,8855	0,1966	0,0000	VALID
	X1.3.2	0,8347	0,1966	0,0000	VALID
	X1.4.1	0,8173	0,1966	0,0000	VALID
	X1.4.2	0,8455	0,1966	0,0000	VALID
Product Knowledge (X2)	X2.1.1	0,8375	0,1966	0,0000	VALID
	X2.1.2	0,7583	0,1966	0,0000	VALID
	X2.2.1	0,7891	0,1966	0,0000	VALID
	X2.2.2	0,8676	0,1966	0,0000	VALID
	X2.3.1	0,8923	0,1966	0,0000	VALID
	X2.3.2	0,7932	0,1966	0,0000	VALID
Customer Satisfaction (Y)	Y1.1.1	0,8017	0,1966	0,0000	VALID
	Y1.1.2	0,8675	0,1966	0,0000	VALID
	Y1.2.1	0,8424	0,1966	0,0000	VALID
	Y1.2.2	0,7713	0,1966	0,0000	VALID
	Y1.3.1.	0,7657	0,1966	0,0000	VALID
	Y1.3.2	0,8193	0,1966	0,0000	VALID
	Y1.4.1	0,7909	0,1966	0,0000	VALID
	Y1.4.2	0,8195	0,1966	0,0000	VALID
	Y1.5.1	0,8371	0,1966	0,0000	VALID
	Y1.5.2	0,7521	0,1966	0,0000	VALID
	Y1.6.1	0,8347	0,1966	0,0000	VALID
	Y1.6.2	0,8709	0,1966	0,0000	VALID

Source: Data Processed (2025)

The validity test results indicate that all questionnaire items measuring Perceived Quality (X1), Product Knowledge (X2), and Customer Satisfaction (Y) are valid, as their calculated correlation coefficients (r-count) exceed the critical value (r-table) of 0.196, with significance values below 0.05. These results confirm that all questionnaire items are valid measures of the respective variables and are suitable for further analysis.

Reliability Test

According to Ghozali (2018), the reliability test measures the consistency of a questionnaire as an indicator of a variable. A questionnaire is considered reliable if the responses are consistent over time. Reliability is measured using Cronbach's Alpha, where a variable is considered reliable if the value is greater than 0.60.

Table 2. Reliability Test Results

Variable	Cronbach Alpha	Standard	Information
Perceived Quality (X1)	0,792	0,6	Reliable
Product Knowledge (X2)	0,8	0,6	Reliable
Customer Satisfaction (Y)	0,778	0,6	Reliable

Source: Data Processed (2025)

The reliability test results presented in the table indicate that all research variables, namely Perceived Quality (X1), Product Knowledge (X2), and Customer Satisfaction (Y), have Cronbach's alpha values exceeding the threshold of 0.60. These findings indicate that the questionnaire items demonstrate an acceptable level of internal consistency. Therefore, the research instrument is considered reliable and suitable for use in subsequent statistical analyses.

Normality Test

Ghozali (2018) stated that the normality test aims to determine whether the confounding variables or residuals in a regression model are normally distributed. The normality test is important because the t-test and F-test assume that the residuals follow a normal distribution. If this assumption is violated, the statistical test may become invalid, particularly for small sample sizes.

The normality test can be assessed through graphical analysis using a histogram and a Normal Probability Plot (P-P Plot). The histogram is used to observe whether the distribution of the data forms a normal pattern, while the P-P Plot is used to examine whether the data points follow the diagonal line.

If the data are distributed around the diagonal line and follow its direction, or if the histogram shows a normal distribution pattern, the regression model meets the normality assumption. Conversely, if the data are widely dispersed from the diagonal line and do not follow its direction, or if the histogram does not show a normal distribution pattern, the regression model does not meet the normality assumption.

The results of the normality test in this study can be seen in the following image:

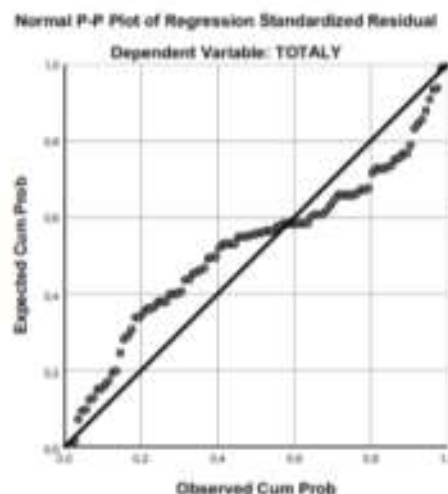


Figure 4. Normality Test Results

Source: Data Processed (2025)

The normality test results, assessed using the Normal Probability Plot (P-P Plot) and histogram, indicate that the regression residuals are approximately normally distributed. The data points follow the diagonal line in the P-P Plot, while the histogram exhibits a distribution that approximates a normal curve. These findings suggest that the normality assumption is satisfied, supporting the suitability of the data for subsequent regression analysis.

Multicollinearity Test

According to Ghozali (2016), the multicollinearity test aims to determine whether there is a correlation between independent variables in the regression model. A good regression model should have no correlation between independent variables. Multicollinearity can be detected through tolerance and Variance Inflation Factor (VIF) values, with tolerance < 0.10 or VIF > 10 indicating multicollinearity.

The results of the multicollinearity test in this study can be seen in the following table:

Table 3. Multicollinearity Test Results

Model	Collinearity		Information
	Tolerance	VIF	
Perceived Quality (X1)	0,136	7,362	Multicollinearity Occurs
Product Knowledge (X2)	0,136	7,362	Multicollinearity Occurs

Source: Data Processed (2025)

Based on the multicollinearity test, the tolerance value for X1 and X2 is 0.136, while the VIF value is 7.362 (>5). Therefore, multicollinearity is present between the independent variables (X1 and X2), indicating a high correlation that may affect the stability of the regression model estimates and requires further consideration in the analysis.

The results show that both independent variables have tolerance values of 0.136 and VIF values of 7.362. Although the tolerance values exceed the commonly used minimum threshold of 0.10 and the VIF values remain below 10, the VIF values are relatively elevated and warrant further consideration. O'Brien (2007) cautioned against interpreting VIF thresholds as rigid rules, emphasizing that the implications of multicollinearity should be evaluated in the context of the regression model and its effects on coefficient estimates.

In this study, perceived quality and product knowledge were retained as independent variables because they represent theoretically relevant factors in explaining customer satisfaction and correspond to the research objectives. However, the elevated VIF values indicate that potential multicollinearity should be acknowledged when interpreting the individual regression coefficients. Therefore, the findings are interpreted with caution, particularly regarding the distinct contribution of each independent variable to customer satisfaction.

Heteroscedasticity Test

According to Ghozali (2018), the heteroscedasticity test aims to determine whether there is inequality of residual variance between observations in the regression model. A good regression model should be homoscedastic, meaning there is no heteroscedasticity. Heteroscedasticity can be detected through a scatterplot by observing the presence or absence of certain patterns. If the points form a regular pattern, such as waves, widening, or narrowing, heteroscedasticity is indicated. Conversely, if there is no clear pattern and the points are scattered above and below zero on the Y-axis, there is no heteroscedasticity.

The results of the heteroscedasticity test in this study can be seen in the following image:

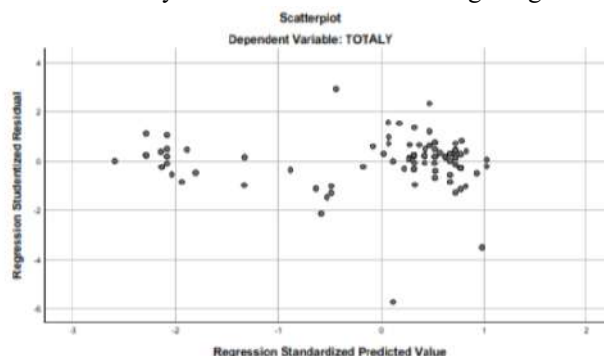


Figure 5. Heteroscedasticity Test

Source: Data Processed (2025)

The heteroscedasticity test results indicate that the residuals are randomly distributed above and below the zero line in the scatterplot, with no discernible pattern. Furthermore, the significance values for all independent variables exceed 0.05. These findings suggest that the regression model does not exhibit heteroscedasticity and satisfies the homoscedasticity assumption, supporting its suitability for further regression analysis.

Multiple Linear Regression Analysis

According to Sugiyono (2019:65) multiple linear regression analysis is used to estimate the condition (rise and fall) of the dependent variable, if two or more dependent variables as predictor factors are manipulated (increased or decreased in value). Multiple linear regression analysis will look at the influence of each X variable (X1, X2, and so on) on the Y variable.

The following are the results of data processing with IBM SPSS Statistics 26.

Table 4. Multiple Linear Regression Analysis Result

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,357	1,641		-,218	,828
	TOTALX1	1,089	,129	,719	8,417	,000
	TOTALX2	,522	,183	,244	2,858	,005

Source: Data Processed (2025)

Based on data processed, the equation obtained is:

$$Y = a + b_1 X_1 + b_2 X_2 + e$$

$$Y = -0,357 + 1,089X_1 + 0,522X_2$$

Perceived Quality (X₁) has a regression coefficient of 1.089, indicating that a one-unit increase in Perceived Quality is associated with a 1.089-unit increase in Customer Satisfaction, holding other variables constant. Its effect is positive and statistically significant (t = 8.417; p < 0.001). Similarly, Product Knowledge (X₂) has a regression coefficient of 0.522, indicating that a one-unit increase in Product Knowledge is associated with a 0.522-unit increase in Customer Satisfaction, holding other variables constant. Its effect is also positive and statistically significant (t = 2.858; p = 0.005), although its regression coefficient is smaller than that of Perceived Quality.

Determinant Analysis (coefficient of determination)

According to Ghazali (2018), the coefficient of determination (R²) measures how well independent variables explain the variation in the dependent variable. Its value ranges from 0 to 1, where a lower value indicates limited explanatory ability, while a value close to 1 indicates that the independent variables provide most of the information needed to predict the dependent variable.

Table 5. Determination Coefficient Analysis Result

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,951 ^a	,904	,902	3,53524

a. Predictors: (Constant), TOTALX2, TOTALX1

b. Dependent Variable: TOTALY

Source: Data Processed (2025)

The multiple linear regression results show an R value of 0.951, indicating a very strong relationship between Perceived Quality (X₁), Product Knowledge (X₂), and Customer Satisfaction (Y). The R Square value of 0.904 indicates that 90.4% of the variation in Customer Satisfaction can be explained by Perceived Quality and Product Knowledge, while the remaining 9.6% is attributable to other factors not included in the model. Furthermore, the Adjusted R Square value of 0.902 indicates that the model explains 90.2% of the variation in Customer Satisfaction after adjusting for the number of independent variables, suggesting a strong model fit.

Partial Test (T Test)

According to Ghazali (2018), the t-test determines the effect of each independent variable on the dependent variable while assuming other variables remain constant. The test involves formulating H₀ (no significant effect) and H₁ (significant effect), calculating the t-value using SPSS 26, comparing it with the t-table value at α/2; n(k+1), and making a decision: if t-count > t-table and Sig. < 0.05, H₀ is rejected and H₁ is accepted; if t-count < t-table or Sig. > 0.05, H₀ is accepted and H₁ is rejected.

Table 6. Partial Test Result

Variable	t count	t table	Significance	Significance Level (α)	Information
Perceived Quality (X1)	8,417	1,980	0,000	0,05	Significance
Product Knowledge (X2)	2,858	1,980	0,000	0,05	Significance

Source: Data Processed (2025)

The t-test results indicate that Perceived Quality (X_1) has a statistically significant partial effect on Customer Satisfaction (Y), with a t-value of 8.417 and a significance level of $p < 0.001$. Similarly, Product Knowledge (X_2) demonstrates a statistically significant partial effect on Customer Satisfaction, with a t-value of 2.858 and a significance level of $p = 0.005$. Since both significance values are below the 0.05 threshold, the null hypotheses are rejected, indicating that Perceived Quality and Product Knowledge each have a statistically significant partial effect on Customer Satisfaction.

Simultaneous Test (F Test)

According to Ghozali (2016), the F test is used to determine whether the independent variables have a significant simultaneous effect on the dependent variable. The procedure involves formulating the null hypothesis (H_0 : no significant simultaneous effect) and alternative hypothesis (H_a : a significant simultaneous effect), calculating the F-value using SPSS 26, and comparing F-count with F-table at a significance level of 0.05. The decision criteria are: if $F\text{-count} > F\text{-table}$ and $\text{Sig.} < 0.05$, H_0 is rejected and H_a is accepted, indicating that the regression model is significant; if $F\text{-count} < F\text{-table}$ or $\text{Sig.} > 0.05$, H_0 is accepted and H_a is rejected.

Table 7. F test Result

F count	F table	Significance	Significance Level (α)	Information
455,584	3,07	0,00	0,05	Significance

Source: Data Processed (2025)

The F-test results indicate that the calculated F-value of 455.584 exceeds the critical F-value of 3.07, with a significance level of $p < 0.001$. Since the significance level is below the 0.05 threshold, the null hypothesis is rejected. These findings demonstrate that Perceived Quality (X_1) and Product Knowledge (X_2) have a statistically significant simultaneous effect on Customer Satisfaction (Y). Therefore, the regression model is statistically significant and appropriate for examining the relationship between the independent variables and Customer Satisfaction.

V. DISSCUSSION

The Influence of Perceived Quality on iPhone User Satisfaction

The results show that Perceived Quality (X_1) has a positive and significant effect on Customer Satisfaction (Y), indicating that higher perceived quality leads to higher satisfaction among iPhone users at State Polytechnic of Malang. The Product Characteristic indicator had the highest mean of 4.13, particularly in terms of product features and design, while Product Reputation had the lowest mean of 3.97. This indicates that respondents place greater importance on their direct experience with the iPhone's performance, features, and design than on its reputation alone. These findings support the theory that perceived quality reflects consumers' overall evaluation of a product based on experience, information, and expectations, and are consistent with Khan et al. (2016), who emphasize the role of product characteristics in shaping perceived quality and customer satisfaction. Therefore, maintaining consistent product quality, innovative features, reliable performance, and appealing design is important for sustaining customer satisfaction.

The Influence of Product Knowledge on iPhone User Satisfaction

The results show that Product Knowledge (X_2) has a positive and significant effect on Customer Satisfaction (Y), indicating that greater knowledge of iPhone features and benefits leads to higher satisfaction among students at State Polytechnic of Malang. Product Attribute Knowledge had the highest mean of 4.07, while Knowledge of Satisfaction had the lowest mean of 4.015, showing that respondents were more familiar with product features and specifications than with the satisfaction derived from their use. These findings support consumer knowledge theory, which suggests that greater product knowledge helps consumers form realistic expectations, make appropriate decisions, and achieve higher satisfaction. Therefore, providing informative education through digital media, applications, and customer service can help users better understand and maximize the benefits of iPhone products.

The Influence of Perceived Quality and Product Knowledge on iPhone User Satisfaction

The results show that Perceived Quality (X_1) and Product Knowledge (X_2) simultaneously have a significant effect on Customer Satisfaction (Y), with an Adjusted R^2 of 0.902, indicating that 90.2% of the variation in Customer Satisfaction is explained by both variables, while 9.8% is influenced by other factors outside the model. The F-test significance value of < 0.05 further confirms the simultaneous effect and the suitability of the regression model. Perceived Quality, particularly product features and design, shapes positive user perceptions, while Product Knowledge helps users understand product specifications, benefits, and usage. These variables complement each other, as positive quality perceptions and adequate product knowledge help users form realistic expectations and optimize their iPhone experience. Therefore, companies should maintain product quality while providing clear and accessible product information to enhance customer satisfaction.

VI. CONCLUSION

Perceived Quality partially has a positive effect on Customer Satisfaction, influenced by product quality, reputation, characteristics, and performance. Product Knowledge also partially has a positive effect on Customer Satisfaction, influenced by product attribute

knowledge, product benefit knowledge, and knowledge of satisfaction. Simultaneously, Perceived Quality and Product Knowledge have a positive effect on Customer Satisfaction, which is reflected in product quality, service quality, price, customer experience, emotional satisfaction, and recommendations.

VII. SUGGESTIONS

Future research is recommended to expand the respondent population beyond students of State Polytechnic of Malang to improve the generalizability of the findings. Researchers may also include other variables such as price perception, after-sales service, brand image, and user experience, and apply qualitative or mixed-method approaches to explore consumers' subjective experiences more deeply. In addition, comparing the iPhone with other smartphone brands could provide broader insights into the factors influencing customer satisfaction in the communication technology industry.

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