



Analysis of public satisfaction with BMKG FL Tobing's information services on social media in terms of information quality and ease of access

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Article Info	ABSTRACT
Article history: Received Oct 1, 2026 Revised Oct 8, 2026 Accepted Oct 16, 2026 Keywords: Ease of Access; Information Quality; Information Services; Public Satisfaction; Social Media.	Social media has become one of the channels utilized by the FL. Tobing Meteorology Station (BMKG) to disseminate weather and climate information, as well as early warnings, to the public. The success of this information dissemination depends on the quality of the information provided and the ease with which the public can access it. This study aims to analyze the influence of information quality and ease of access on public satisfaction with the information services provided by the FL. Tobing Meteorology Station via social media. The novelty of this study lies in analyzing public satisfaction with the information services of the FL. Tobing Meteorology Station through social media by examining information quality and ease of access as factors influencing user satisfaction. A quantitative approach was employed, utilizing a survey method with 93 respondents selected through simple random sampling (a probability sampling technique). Data were analyzed using multiple linear regression with the aid of IBM SPSS Statistics 26. The results indicate that information quality has a positive and significant effect on public satisfaction, whereas ease of access does not have a significant effect. However, information quality and ease of access simultaneously exert a significant influence on public satisfaction, with a coefficient of determination (R^2) of 22.3%. Therefore, the FL. Tobing Meteorology Station is encouraged to continuously improve the quality of information shared via social media to better meet the public's information needs and increase satisfaction with the services provided. <i>This is an open access article under the CC BY-NC license.</i>



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1. INTRODUCTION

Advances in information and communication technology have transformed the way people access information. Today, social media has become one of the most widely used tools for obtaining information quickly and easily. These technological advancements have also driven the use of social media as a means of communication and information dissemination that can reach a broader audience and facilitate the rapid transmission of information (Dharma et al., 2022). Information is no longer obtained solely through television, radio, or newspapers, but also through digital platforms that can be accessed at any time. Under certain circumstances particularly those related to weather, disasters, and environmental conditions the need for accurate and timely information becomes

crucial for the public. Social media has become a vital tool in public information services due to its ability to disseminate information in real time. The success of information dissemination via social media is also influenced by the quality of the information received by users, as accurate, relevant, comprehensive, and timely information can enhance user satisfaction (Febrina et al., 2023).

Research shows that social media can enhance the effectiveness of public communication by providing users with quick and easy access to information (Maulvi et al., 2022). In the context of disasters, the speed of information is crucial because it can help the public take preventive or anticipatory measures against potential risks. In Indonesia, the government agency responsible for providing meteorological, climatological, and geophysical information is the Meteorology, Climatology, and Geophysics Agency (BMKG). The BMKG provides various types of information to the public, such as weather forecasts, early warnings of extreme weather, earthquake information, tsunami risks, and climate conditions. This information is disseminated through the official website, mobile apps, and social media platforms such as Instagram and Facebook to reach a wider audience more quickly (Mergel, 2021). In conveying information to the public, the BMKG actively utilizes social media as a means of public communication. In this study, the social media platforms under investigation are the official Instagram and Facebook accounts of the BMKG FL Tobing Meteorological Station, which are used to disseminate weather forecasts and early warnings to the public.

[Reviewer 2 – Empirical Gap] Despite the increasing use of social media by BMKG to disseminate weather information and early warnings, empirical evidence regarding public satisfaction with these services remains limited, particularly at the local level. It is important to understand whether the information provided by BMKG FL Tobing meets public expectations in terms of accuracy, relevance, clarity, and timeliness, as well as whether users can access the information easily through social media. Furthermore, the extent to which information quality and ease of access influence public satisfaction in the context of local weather information services requires further empirical examination. This study addresses this gap by examining the influence of information quality and ease of access on public satisfaction with weather information services provided through the official Instagram and Facebook accounts of BMKG FL Tobing.

[Reviewer 1 – Urgency of Weather Information Quality] Improving the quality of weather information is particularly important because the public may use forecasts and early warnings to make decisions related to daily activities, travel, work, and preparedness for potentially hazardous weather conditions. Information that is unclear, incomplete, outdated, or difficult to understand may limit the public's ability to interpret weather conditions and respond appropriately. Therefore, weather information disseminated through BMKG's Instagram and Facebook accounts needs to be presented in a clear, understandable, accurate, and timely manner. Evaluating public satisfaction with these services is important because it helps identify whether the information provided meets users' needs and which aspects of information delivery require improvement. Such evaluation can support the improvement of public communication, although public satisfaction alone does not establish the technical accuracy of weather forecasts or the effectiveness of early warnings.

Based on information service data obtained from BMKG FL Tobing during the 7-day observation period in March, it was found that the information provided to the public covered several meteorological elements, namely air temperature, humidity, air pressure, wind direction and speed, and rainfall. These data indicate that BMKG provides fairly comprehensive information regarding weather conditions that the public can use as a reference for their daily activities.

However, based on observations of the BMKG FL Tobing Meteorological Station's Instagram and Facebook accounts, public engagement with the published information remains relatively low, as evidenced by the minimal number of comments and feedback on each post. On the other hand, the BMKG has provided a Public Satisfaction Index (IKM) link as a means for the public to submit criticism and suggestions regarding the information services provided. However, based on communication with the BMKG FL Tobing Meteorological Station, the feedback submitted through that link is inaccessible to the BMKG, so it is not yet possible to assess the level of public satisfaction

with the information services delivered via social media. This situation indicates that the effectiveness of digital information management cannot yet be directly evaluated; therefore, research is needed to analyze whether the quality of information and ease of access influence public satisfaction with the social media information services of the BMKG FL. Tobing Meteorological Station.

User satisfaction is one of the key indicators for assessing the success of an information service. (Metekohy et al., 2025) show that information quality influences user satisfaction with academic information systems. (Bawan et al., 2022) also show that ease of use influences user satisfaction with information systems. Furthermore, (Amarin and Wijaksana, 2021) found that information quality affects consumer satisfaction in e-commerce. However, these studies have primarily focused on academic information systems and e-commerce; consequently, research on the impact of information quality and ease of access on public satisfaction with public information services particularly those provided by the BMKG via social media remains limited.

[Reviewer 1 – Research Novelty] The novelty of this study lies in its focus on public satisfaction with government information services delivered through the official Instagram and Facebook accounts of the BMKG FL. Tobing Meteorological Station. Unlike previous studies that primarily examined user satisfaction in academic information systems and e-commerce, this study investigates the roles of information quality and ease of access in the context of public meteorological information services. By examining these two factors together, this study provides empirical evidence on how the quality and accessibility of weather-related information are associated with public satisfaction in a specific institutional and social media context. Therefore, the study extends the discussion of information service evaluation beyond commercial and academic platforms to government communication services.

Furthermore, previous studies have primarily examined information quality and ease of use among system users or consumers of digital applications. Meanwhile, relatively few studies have examined both of these variables simultaneously in relation to public satisfaction as users of public information services. Therefore, this study was conducted to analyze the influence of information quality and ease of access on public satisfaction with BMKG information services via social media (Criado et al., 2020).

To provide a theoretical foundation for this study, the DeLone and McLean Information System Success Model was developed by DeLone and McLean (2003). This theory explains that the success of an information system can be measured through several aspects, namely information quality, system quality, service quality, use, and user satisfaction. This model is widely used in information systems research because it explains the relationship between the quality of information services and the level of user satisfaction. In the model (DeLone and McLean, 2003), information quality relates to the ability of information to provide benefits to users, such as information that is accurate, relevant, easy to understand, complete, and timely. High-quality information makes it easier for users to obtain the information they need, thereby increasing user satisfaction with the information services they receive. In addition to information quality, system quality is also a crucial component in the success of an information service. System quality relates to ease of access, ease of use, access speed, and the system's ability to effectively deliver information to users (DeLone and McLean, 1992).

Based on current trends and the results of previous studies, this study aims to analyze the impact of information quality and ease of access on public satisfaction with the social media information services provided by the BMKG FL. Tobing Meteorological Station. The findings of this study are expected to serve as a basis for evaluation by the BMKG in improving the quality of its digital information services to the public.

2. RESEARCH METHOD

This study employs a quantitative approach. According to Sugiyono (2022), the population is the domain of generalization consisting of objects or subjects that possess specific characteristics defined by the researcher for study, from which conclusions are subsequently drawn. The population in this

study consists of the followers of the BMKG FL. Tobing Meteorological Station Instagram account, totaling 1,332 accounts.

The sampling technique used is simple random sampling, which is a method that gives every member of the population an equal chance of being selected as a research sample (Sugiyono, 2022). This technique was chosen because all members of the population share relatively similar characteristics, namely as Instagram users who follow the BMKG FL Meteorological Station account. [Reviewer 1 – Rationale for Selecting Instagram Followers] Instagram followers were selected as the research population because they have a direct connection with the official Instagram account of the BMKG FL. Tobing Meteorological Station, making them relevant respondents for evaluating public satisfaction with its information services. Although this study also discusses the dissemination of information through Facebook, Instagram followers were used as the basis for population selection and respondent recruitment. Consequently, the findings primarily reflect the perceptions of the surveyed Instagram followers and should not automatically be generalized to all Facebook users.

The sample size in this study was determined using the Slovin formula with a margin of error of 10% (Syabudi et al., 2023). [Reviewer 2] A 10% margin of error was used in the Slovin formula to determine the sample size for this study. This margin of error was applied as the sampling precision criterion in calculating the required number of respondents from the population of 1,332 Instagram followers of the BMKG FL. Tobing Meteorological Station. Based on this calculation, the study obtained a sample of 93 respondents. The sample was determined using the Slovin formula, resulting in 93 respondents. The questionnaire was distributed to the 93 respondents via Instagram from June 17 to June 20.

Table 1. Research variables

No	Variable	Indicator	Source
1	Information quality (X ₁)	1. Accurate (Accuracy) 2. Relevant (Relevance) 3. Timely (Timeliness) 4. Complete (Completeness) 5. Easy to understand (Format/Ease of Understanding)	(H. DeLone & Ephraim R. McLean, 2003)
2	Ease of Access (X ₂)	1. Easy to Access 2. Easy to Use 3. Speed of Access to Information 4. Accessible Anytime 5. Ease of Obtaining Information	TAM – (Technology Acceptance Model Davis, 1989)
3	Public Satisfaction (Y)	1. Expectation fulfillment 2. Satisfaction with the service 3. Satisfaction with the information received 4. Willingness to use the service again 5. Trust in the information service	(Rochmah & Rosy, 2022); (Sulaiman et al., 2022)

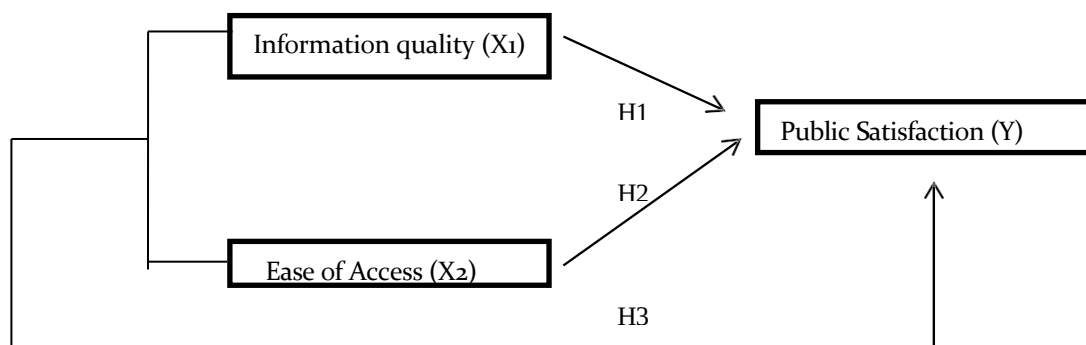


Figure 1: Conceptual framework
Source: Compiled by the Researcher (2026)

Figure 1 illustrates the conceptual framework of this study, which examines the effects of Information Quality (X₁) and Ease of Access (X₂) on Public Satisfaction (Y) with BMKG FL Tobing's information services on social media. Information Quality refers to the accuracy, relevance, completeness, understandability, and timeliness of the information provided. Ease of Access refers to the convenience of obtaining information through social media platforms. Both variables are hypothesized to influence Public Satisfaction, with H₁ and H₂ representing their individual effects and H₃ representing their simultaneous effect.

Data analysis was performed using multiple linear regression with the aid of SPSS software. Prior to hypothesis testing, validity and reliability tests were conducted to ensure the quality of the research instruments. Next, classical assumption tests were conducted, including tests for normality, multicollinearity, and heteroscedasticity, to ensure that the regression model met the statistical assumptions. Hypothesis testing was performed using the t-test to examine partial effects, the F-test to examine simultaneous effects, and the coefficient of determination (R²) to assess the model's ability to explain the dependent variable.

3. RESULTS AND DISCUSSIONS

To provide context for the information services examined in this study, Tables 2 and 3 present climatological data published by the BMKG FL Tobing Meteorological Station for March 1–7, 2026. These data illustrate the types of meteorological information that may be communicated to the public through BMKG's information channels. The presentation of these data provides contextual support for examining information quality, particularly in terms of accuracy, completeness, timeliness, and understandability. However, the climatological data are presented as supporting context.

Table 2. Regional office I
P.O. Box 1/Mdts-Medan

Latitude : 01.33.12 N			Climatological Data					Station: Sibolga Meteorological Station		
Longitude : 98.53.50 E			Month: March 2026							
Elevation Above Sea Level: 10 Meters.			Climatological Data							
Date		Temperature °C					Rainfall	Illuminati On Sun		Events Weather
							(MM)			
07.00		13,00	18,00	RATA²	MAX	MIN	Time- Controlled 07.00	08.00-16.00	Special	
								%		
1	2	3	4	5	6	7	8	9	10	
1	23,2	33,4	32,4	28,1	34,6	22,2	0,0	97%		Haze
2	24,4	32,0	29,8	27,7	33,0	21,8	3,5	66%		RA / Haze
3	23,6	33,0	30,4	27,7	33,8	22,3	0,0	42%		Haze
4	24,4	32,2	30,6	27,9	33,6	22,4	0,0	43%		Haze
5	24,0	33,2	30,8	28,0	33,8	22,4	3,2	72%		RA / Haze
6	23,8	30,2	29,4	26,8	33,8	21,2	0,0	0%		Haze
7	23,3	33,2	30,8	27,7	33,8	22,2	0,0	96%		Haze

Source: Data from the Meteorology, Climatology, and Geophysics Agency (BMKG), FL Tobing Station, 2026

Table 3. Summary of daily climatological data for march 2026

Date	Air Pressure in Mb	W I N D							
		07.00	13.00	18.00	On average	Average Speed	Most Common Direction	Maximum Speed	Largest Direction
	10	11	12	13	14	15	16	17	18
1	1007,3	96	63	70	81	6	220	7	230
2	1009,5	95	77	82	87	7	260	8	270
3	1009,9	95	68	79	84	8	300	9	320
4	1009,8	96	67	67	82	8	300	9	320
5	1008,3	93	66	75	82	8	300	9	310

Date	Air Pressure in Mb	WIND							
		07.00	13.00	18.00	On average	Average Speed	Most Common Direction	Maximum Speed	Largest Direction
6	1008,7	95	77	76	86	8	320	9	300
7	1008,8	94	55	70	78	8	290	9	300

Source: Data from the Meteorology, Climatology, and Geophysics Agency (BMKG), FL Tobing Station, 2026

Tables 2 and 3 present different but complementary aspects of meteorological information. Table 2 provides information on air temperature, precipitation, sunshine duration, and weather conditions, while Table 3 presents air pressure and wind characteristics. Together, these tables illustrate the range of meteorological data produced by the BMKG FL Tobing Meteorological Station.

[Reviewer 2] From the perspective of information quality, the variety of meteorological variables illustrates the importance of providing information that is accurate, complete, timely, and easy to understand. Such information can help the public understand weather conditions and consider relevant information in their daily activities. Nevertheless, the presentation of climatological data alone does not establish whether the information is perceived as high quality or whether the public is satisfied with BMKG's information services. These aspects are evaluated separately through the questionnaire responses and statistical analyses presented in the following sections.

Following the presentation of climatological data, the analysis proceeds to the questionnaire results to evaluate respondents' perceptions of information quality, ease of access, and public satisfaction. The subsequent statistical tests are used to examine the validity and reliability of the research instrument and to determine the effects of information quality and ease of access on public satisfaction.

Validity Test

According to Sugiyono (2022), validity indicates the degree of accuracy between the data obtained and the actual data observed in the research subject. The validity test is conducted by comparing the calculated r value with the table r value at a 5% significance level ($\alpha = 0.05$). The table r value is determined based on the degrees of freedom ($df = n - 2$). In this study, the sample size was 93 respondents, resulting in $df = 91$ and a table r value of 0.2039. A statement item is considered valid if the calculated r value is greater than the table r value (calculated $r >$ table r). The results of the validity test are presented in the following table.

Table 4. Results of the validity test for the information quality variable (x_1)

Variable	Indicator	Calculated R	table R	Notes
Quality of Information	X1.1	0,806	0,2039	Valid
	X2.2	0,776	0,2039	Valid
	X3.3	0,667	0,2039	
	X4.4	0,735	0,2039	
	X5.5	0,649	0,2039	

Source: Author's Analysis (2026)

Based on the validity test results in Table 1, it can be seen that all statement items in the information quality variable (X_1) have calculated r values greater than the table r value of 0.2039. This indicates that all statement items are valid and can be used as research instruments to measure the information quality variable.

Table 5. Results of the validity test for the ease of access variable (x_2)

Variable	Indicator	Calculated R	table R	Notes
Ease of Access	X2.1	0,714	0,2039	Valid
	X2.2	0,772	0,2039	Valid
	X2.3	0,575	0,2039	Valid
	X2.4	0,808	0,2039	Valid

Variable	Indicator	Calculated R	table R	Notes
	X2.5	0,794	0,2039	Valid

Source: SPSS-processed data (2026)

Based on the validity test results in Table 2, it can be seen that all statement items in the Ease of Access variable (X2) have a calculated r-value greater than the table r-value of 0.2039. This indicates that all statement items are valid and can be used as a research instrument to measure the information quality variable.

Table 6. Results of the validity test for the public satisfaction variable (y)

Variabel	Indicator	Calculated R	Table R	Notes
Public Satisfaction	Y.1	0,880	0,2039	Valid
	Y.2	0,904	0,2039	Valid
	Y.3	0,825	0,2039	Valid
	Y.4	0,781	0,2039	Valid
	Y.5	0,847	0,2039	Valid

Source: Author's Analysis (2026)

Based on the validity test results in Table 3, it can be seen that all statement items in the Public Satisfaction (Y) variable have a calculated r value greater than the table r value of 0.1966. This indicates that all statement items are valid and can be used as research instruments to measure the information quality variable.

Reliability Test

A reliability test is used to measure the consistency of a research instrument. Reliability is measured by examining the Cronbach's Alpha value; a construct is considered reliable if it has a Cronbach's Alpha value greater than 0.60. The results of the reliability test are shown in the following table:

Table 7. Reliability test

Variable	Cronch's Alpha	Koefisien Cronch's Alpha	Notes
Information Quality (X1)	0,60	0,772	Reliable
Ease of Access (X2)	0,60	0,787	Reliable
Public Satisfaction (Y)	0,60	0,901	Reliable

Source: Author's own analysis (2026)

Based on the reliability test results presented in Table 4, it is evident that the variables Information Quality (X1), Ease of Access (X2), and Public Satisfaction (Y) each have Cronbach's Alpha values greater than 0.60. Thus, all variables in this study are deemed reliable, and the research instrument can be used for further testing.

Normality Test

The test was conducted using the One-Sample Kolmogorov-Smirnov Test. Data are considered normally distributed if the significance value (Asymp. Sig. (2-tailed)) is greater than 0.05. Conversely, if the significance value is less than 0.05, the data are not normally distributed.

Table 8. Results of the normality test
one-sample kolmogorov-smirnov test

N		Unstandaried Residual g3
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviaton	.18666579
Most Extreme Differences	Absolute	.110
	Positive	.098
	Negative	-.110
Test Statistic Asymp.sig(2-tailed)		.110
		.095

Source: Author's calculations (2026)

Based on the results of the Kolmogorov-Smirnov normality test, the Asymp. Sig. (2-tailed) value is 0.095, which is greater than 0.05; therefore, the residuals are considered to be normally distributed. Thus, it can be concluded that the regression model satisfies the normality assumption.

Multicollinearity Test

The multicollinearity test is conducted by examining the Tolerance and Variance Inflation Factor (VIF) values. A regression model is considered free of multicollinearity if it has a Tolerance value > 0.10 and a VIF < 10 . The test results are shown in the following table

Table 9. Results of the multicollinearity test

Model	Collinearity Statistic	
	Tolerance	VIF
1		
	(Constant)	
	X ₁	.864 1.157
	X ₂	.864 1.157

Source: Author's own analysis (2026)

Based on the multicollinearity test results presented in Table 6, it is evident that the Tolerance values for each independent variable are $0.864 > 0.10$, with a VIF value of $1.157 < 10$. These results indicate that there is no strong relationship or correlation among the independent variables. Thus, the regression model in this study is deemed free of multicollinearity and is therefore suitable for multiple linear regression analysis.

Heteroscedasticity Test

In this study, the heteroscedasticity test was conducted using the Glejser method by examining the significance values (Sig.) of each independent variable. The regression model is deemed free of heteroscedasticity if the significance value is greater than 0.05. Conversely, if the significance value is less than 0.05, the regression model is deemed to exhibit heteroscedasticity. The results of the heteroscedasticity test are presented in the following table:

Table 10. Results of the glejser test

Model	Coefficients ^a				
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
1.(Constant)	2,394	1,420	-,106	,1994	,049
X ₁	-,066	,091	,026	-,717	,475
X ₂	,016	,094		,174	,862

a. Dependent Variabel: ABS_ RES

Source: Author's Analysis 2026

Based on the results of the heteroscedasticity test using the Glejser method, significant values were obtained for the Information Quality variable (X₁) at 0.475 and the Ease of Access variable (X₂) at 0.862, both with significance levels > 0.05 . It can be concluded that there is no heteroscedasticity in the regression model. Thus, it can be concluded that the assumption of non-heteroscedasticity has been met.

Model Test (R-Square)

The Model Test (R²) is used to determine the extent to which the independent variables can explain the variation in the dependent variable in the regression model.

Table 11. Results of the Model Test (R-Square)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,472 ^a	,223	,206	2,58354

a. Predictors: (Constant), X₂, X₁

Source: Author's own calculations (2026)

This regression model exhibits a moderate relationship between the independent and dependent variables, as indicated by an R value of 0.472. The R-Square value of 0.223 indicates that 22.3% of the variation in Public Satisfaction can be explained by the variables Information Quality and Ease of Access, while the remaining 77.7% is influenced by other factors outside the research model. Meanwhile, the Adjusted R-Square value of 0.206 indicates that, after adjusting for the number of independent variables and sample size, the model is still capable of explaining 20.6% of the variation in Public Satisfaction. This suggests that the regression model is reasonably sound and does not suffer from overfitting.

T-Test (Partial)

The results of the t-test are determined based on the significance level, where a variable is considered significant if the significance level is > 0.05 . Based on the partial tests conducted, the following results were obtained:

Table 12. T-test results

Model	Unstandardized Coefficients		Standardized Coefficients ^a		T	Sig
	B	Error Std.	Beta			
1.(Constant)	8,843	2,823			3,132	,002
Quality of Information	,630	,181	,461		3,472	,001
Ease of Access	,020	,181	,015		,111	,912

a. Dependent Variabel:: Y

Source: Author's own calculations, 2026

Formula for calculating the t-table value:

$$\alpha : n - k - 1$$

Notes:

α = Significance level (0.05)

n = Sample size (93)

k = Number of independent variables

Based on the results of the t-test, the following model can be established:

$$Y = a + b_1X_1 + b_2X_2 + e$$

$$Y = 8.843 + 0.630 \text{ Information Quality} + 0.020 \text{ Ease of Access} + e$$

The interpretation of the results is as follows:

1. Constant (a) = 8.843

The constant of 8.843 indicates that if the scores for Information Quality (X_1) and Ease of Access (X_2) are zero, then the level of Public Satisfaction (Y) is predicted to be 8.843.

2. Coefficient of X_1 (Information Quality) = 0.630

The regression coefficient for Information Quality (X_1) of 0.630 indicates that a one-unit increase in the Information Quality score will increase Public Satisfaction by 0.630 units, assuming the Ease of Access (X_2) variable remains constant. The calculated t-value is 3.472, which is greater than the critical t-value of 1.987, and the significance level is 0.001, which is less than 0.05. Therefore, the hypothesis that Information Quality has a positive and significant effect on Public Satisfaction is accepted. Thus, H_1 is accepted.

3. Coefficient X_2 (Ease of Access) = 0.020

The regression coefficient for Ease of Access (X_2) of 0.020 indicates that a one-unit increase in the Ease of Access score will increase Public Satisfaction by 0.020 units, assuming the Information Quality variable (X_1) remains constant. The calculated t-value is 0.111; this value is greater than the critical t-value of 1.987, and the significance level is 0.001, which is less than 0.05. Thus, the

hypothesis that Information Quality has a positive and significant effect on Public Satisfaction is supported. Therefore, H_2 is rejected.

F-Test (Simultaneous)

Simultaneous analysis (the F-test) is used to determine whether all independent variables collectively influence the dependent variable. According to Triyanto et al. (2024), the simultaneous test is conducted to examine the combined effect of several independent variables on the dependent variable, thereby determining whether the regression model used is suitable for explaining the relationships among the variables. If the calculated F-value is less than $\alpha = 0.05$, it indicates that the independent variables influence the dependent variable and can be considered suitable for predicting the dependent variable.

Table 13. Of simultaneous results (f-test)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	172,182	2	86,091	12,898	,000 ^b
	Residual	600,721	90	6,675		
	Total	772,903	92			
a. Dependent Variabel: Y						
b. Predictors: (constant), X1, X2						

Source: Author's Analysis (2026)

The calculated F-value of 12.898 is greater than the critical F-value of 3.10, and the significance value of 0.000 is less than α (0.05); therefore, H_3 is accepted. This means there is strong statistical evidence that a regression model comprising Information Quality and Ease of Access collectively has a significant effect on Public Satisfaction.

The Effect of Information Quality on Public Satisfaction

The results of the partial tests indicate that information quality has a positive and significant effect on public satisfaction; therefore, the first hypothesis (H_1) is accepted. This means that the better the quality of information disseminated through the social media accounts of the BMKG FL Tobing Meteorological Station, the higher the public's satisfaction with the information services provided. These results indicate that the public prioritizes information that is accurate, relevant, comprehensive, easy to understand, and delivered in a timely manner, as such information serves as the basis for making decisions regarding daily activities and preparing for weather conditions. The findings of this study align with those of (Apriansy et al., 2023), who stated that information quality has a positive and significant effect on user satisfaction. Accurate, complete, relevant, and easy-to-understand information will increase user satisfaction with the services they receive. These research results are also supported by (Sherina et al., 2022), who explain that high-quality information can increase user satisfaction because it meets user needs. Furthermore, a Standardized Beta value of 0.461 indicates that information quality is the most dominant variable influencing public satisfaction. Therefore, the BMKG FL Tobing Meteorological Station must continue to maintain the quality of the information it publishes particularly in terms of accuracy, completeness, clarity, and timeliness to further increase public satisfaction with its public information services (Parasuraman et al., 2021).

[Reviewer 1 – Practical Implications] These findings suggest that BMKG should improve the accuracy, completeness, clarity, and timeliness of weather information shared through social media. Information should be accurate, provide relevant details, use clear and simple language, and be updated promptly when weather conditions change. These improvements may enhance public understanding and satisfaction. However, this study evaluates respondents' perceptions rather than independently verifying the technical accuracy of BMKG's information.

The Effect of Ease of Access on Public Satisfaction

The results of the partial tests indicate that Ease of Access has a positive relationship, but does not yet show a significant effect on Public Satisfaction; thus, the second hypothesis (H_2) cannot yet be supported. This is likely because the majority of respondents rated all Ease of Access

indicators as “agree” or “strongly agree,” resulting in a relatively uniform perception among respondents regarding the ease of accessing BMKG information services via social media. Consequently, Ease of Access has not yet become a distinguishing factor in levels of Public Satisfaction. Furthermore, social media platforms such as Instagram and Facebook have become widely used by the public, leading people to focus their evaluations more on the quality of the information received such as accuracy, relevance, completeness, and timeliness of information delivery. These findings differ from those of a study (Wijaya et al., 2023), which stated that the perception of ease has a positive and significant effect on the satisfaction of users of online food delivery services. This discrepancy in findings is likely due to differences in the characteristics of the research subjects. In a study (Wijaya et al., 2023), the ease of use of an application was identified as one of the main factors influencing user satisfaction. Meanwhile, in this study, the BMKG’s social media platforms are already widely used by the public, so ease of access is not yet a primary factor in increasing public satisfaction with information services. These findings indicate that the BMKG FL. Tobing Meteorological Station needs to continue ensuring easy access to information services via social media, while also continuously improving the quality of information an aspect that is a more decisive factor in determining public satisfaction levels (Wilantika & Wibisono, 2021).

The Effect of Information Quality and Ease of Access on Public Satisfaction

The results of the simultaneous test indicate that Information Quality and Ease of Access together have a significant effect on Public Satisfaction; therefore, the third hypothesis (H₃) is accepted. These findings suggest that public satisfaction with BMKG’s information services is not influenced by a single factor but rather by a combination of information quality and ease of access. Although ease of access did not have a significant effect when analyzed in isolation, it still contributed to public satisfaction when analyzed simultaneously with information quality. Therefore, the BMKG needs to implement social media management that not only focuses on delivering accurate and timely information but also ensures that the public can continue to access that information easily so that the quality of public information services can be continuously improved.

4. CONCLUSION

Based on the results of the study, it can be concluded that information quality has a positive and significant effect on public satisfaction with the information services provided by the BMKG FL. Tobing Meteorological Station via social media. This finding indicates that the better the quality of the information provided, the higher the level of public satisfaction with the information services offered. Among all the indicators of Information Quality, the “ease of understanding” (understandability) indicator received the highest average score of 4.11, making it the most dominant factor influencing public satisfaction. This indicates that the public not only needs information that is accurate, relevant, complete, and timely, but also wants information presented in clear, simple, and easy-to-understand language so that it can be effectively utilized to support daily activities and as a basis for decision-making regarding weather conditions.

Meanwhile, the “Ease of Access” variable showed a positive relationship with public satisfaction, but this effect was not statistically significant. This finding indicates that ease of access has not yet become a major factor determining the level of public satisfaction. This is likely because the social media platforms used by BMKG namely Instagram and Facebook are already widely used by the public, so most respondents have a relatively uniform perception regarding the ease of accessing these information services. As a result, the public tends to focus their assessment more on the quality of the information received rather than on the aspect of ease of access. The results of the simultaneous test also show that Information Quality and Ease of Access together have a positive and significant effect on Public Satisfaction.

[Reviewer 1 – Main Contribution of the Study] The main contribution of this study is to provide empirical evidence that can support the evaluation of public information services provided by the BMKG FL. Tobing Meteorological Station through social media. The findings offer a basis for

the agency to identify information quality as an important aspect to prioritize in improving public satisfaction, while continuing to maintain accessible information channels. Thus, this study contributes to the practical evaluation of government information services by identifying aspects associated with public satisfaction based on respondents' perceptions.

However, these two variables account for only 22.3% of the variation in public satisfaction, while the remaining 77.7% is influenced by other factors outside the research model. Therefore, future research is recommended to include additional variables that may influence Public Satisfaction, such as trust in information, the quality of digital services, user experience, the quality of public communication, and the speed of information updates, thereby providing a more comprehensive understanding of the factors affecting public satisfaction with BMKG's information services.

[Reviewer 2 – Directions For Future Research] Future research is recommended to evaluate public satisfaction with government information services across various social media platforms, such as Instagram, Facebook, X, and TikTok, and across different geographical regions. Comparative studies involving urban and rural communities may provide a broader understanding of differences in public satisfaction based on information quality, ease of access, and user characteristics. Future research may also examine additional factors, such as public trust, user engagement, and responsiveness to public feedback, to develop a more comprehensive understanding of public satisfaction with digital information services.

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