SANTRI : Jurnal Ekonomi dan Keuangan Islam
Volume 4 Nomor 5 Oktober 2026
e-ISSN: 3025-7948; p-ISSN: 3025-5910, Hal. 431-451
DOI: https://doi.org/10.61132/santri.v4i5.2819
Tersedia: https://journal.areai.or.id/index.php/SANTRI

Digital Literacy Competence and Online Communication Responsiveness in Improving Public Service Effectiveness at Dasa'at Yudistira and Partners Public Appraisal Services Office

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Abstract. This study aims to analyze the effect of digital literacy competency and online communication responsiveness on the effectiveness of public services at the Public Appraisal Services Office (KJPP) Dasa'at, Yudistira and Rekan, both partially and simultaneously. This research employed a quantitative approach using a survey method. The study population consisted of 78 employees involved in public service activities and the use of digital communication media. Data were collected through questionnaires and analyzed using multiple linear regression, t-test, F-test, and coefficient of determination. The results showed that digital literacy competency had a regression coefficient of 0.093, with a t-value of 1.681 and a significance level of 0.097, indicating that it did not have a statistically significant partial effect on public service effectiveness. Meanwhile, online communication responsiveness had a regression coefficient of 0.810, with a t-value of 13.764 and a significance level of 0.000, indicating a positive and significant effect on public service effectiveness. Simultaneously, digital literacy competency and online communication responsiveness had a significant effect on public service effectiveness, as indicated by an F-value of 353.301 and a significance level of 0.000. The R Square value of 0.904 indicates that the two independent variables explained 90.4% of the variation in public service effectiveness, while the remaining 9.6% was explained by other factors outside the research model. Online communication responsiveness was found to be the more dominant variable in improving public service effectiveness.

Keywords: Digital Communication; Digital Literacy Competency; Online Communication Responsiveness; Public Service Effectiveness; Public Services.

1. INTRODUCTION

The Public Appraisal Services Office of Dasa'at, Yudistira and Partners, as part of the organizational structure of the central Dasa'at, Yudistira and Partners Public Appraisal Services Office, plays a highly strategic role in providing various public services related to property. In the context of the digital era, which is characterized by the rapid development of information and communication technology, the Public Appraisal Services Office of Dasa'at, Yudistira and Partners faces the challenge of continuously improving the quality and effectiveness of the public services it provides to the people of Medan City (Haryanto et al., 2026). This challenge involves not only the provision of technological infrastructure but, more importantly, the development of human resource capacity and competence to ensure that digital technology can be utilized optimally to provide more responsive and effective services to the public.

As a professional entity in the appraisal industry, KJPP Dasa'at, Yudistira and Partners faces tangible challenges in maintaining and improving service quality amid client expectations for speed, transparency, and convenient access to information. In practice, communication between appraisers and clients has shifted from conventional methods to digital platforms

Naskah Masuk: 30 Juli 2026; Revisi: 12 September 2026; Diterima: 26 Oktober 2026; Terbit: 30 Oktober 2026

(Nabila et al., 2026). However, this transition toward digital communication presents new challenges, particularly the need to ensure that all office employees and staff possess adequate digital literacy competencies.

The Public Appraisal Services Office of Dasa'at, Yudistira and Partners, located at Jl. Amal, Sei Sikambing B, Medan Sunggal District, Medan City, North Sumatra 20122, is a city-level operational unit responsible for providing various services in the fields of appraisal and consultancy. Problems arise when a gap exists between technological advancements and the ability of human resources to optimize the use of digital communication tools (Viviorini et al., 2026). Low levels of staff digital literacy may result in difficulties in processing data, utilizing integrated appraisal software, and managing communication through digital channels in accordance with appropriate ethical standards and professional practices.

In addition to digital literacy, responsiveness is a key factor in public service delivery. Responsiveness reflects the speed, accuracy, and willingness of KJPP to address clients' questions, complaints, and service requests through online communication channels (Kustarto et al., 2025). In many cases, service delivery problems within KJPP do not arise from the technical substance of appraisal activities but rather from ineffective online communication caused by insufficient responsiveness or the inability to identify and understand clients' needs through digital media.

Therefore, it is essential to examine the extent to which digital literacy competence and online communication responsiveness are implemented at KJPP Dasa'at, Yudistira and Partners. If these two aspects are not managed effectively, public service effectiveness may decline, potentially undermining public trust and damaging the office's professional reputation (Hasdinawati & Wahid, 2022). This study aims to analyze how the synergy between high levels of digital literacy and a responsive approach to online communication can serve as a key driver in improving public service effectiveness at KJPP Dasa'at, Yudistira and Partners.

Over the three-year period from 2021 to 2024, the Public Appraisal Services Office of Dasa'at, Yudistira and Partners has undergone a significant transformation in its adoption of digital technology. The data indicate a 45% increase in service requests submitted through digital channels during this period. Services that previously could only be accessed through face-to-face interactions are now available through various digital channels, including email, social media platforms such as Facebook and WhatsApp, online service portals, and developed mobile applications. Nevertheless, the increased adoption of digital technology has not been accompanied by a proportional improvement in service user satisfaction. Periodic employee satisfaction surveys conducted by the Public Appraisal Services Office of Dasa'at, Yudistira

and Partners indicate that overall public satisfaction with the services provided remains at 62%, substantially below the minimum public service satisfaction target of 85%.

Further analysis of the satisfaction data indicates that the online communication responsiveness dimension received the lowest satisfaction score, at only 54%. This finding suggests that members of the public continue to experience difficulties communicating with the office through digital channels and obtaining satisfactory responses to their questions or service requests. Online response data show that the average time required for office employees to provide an initial response to inquiries received through email or social media is 48 hours, whereas the response time standard established under public service regulations is a maximum of 24 hours. Furthermore, 30% of incoming inquiries receive no response whatsoever within two weeks, resulting in frustration and declining public trust in Dasa'at, Yudistira and Partners Public Appraisal Services.

Digital literacy refers to an individual's ability to access, understand, evaluate, and use digital information effectively and safely. A digital literacy competency audit conducted among 78 employees at the Public Appraisal Services Office of Dasa'at, Yudistira and Partners revealed that 53 employees (67.95%, rounded to 68%) had completed basic digital literacy training provided by the office. Of these, 39 employees, representing 50% of the total population of 78 employees, demonstrated full proficiency in using the integrated digital service management application. Consequently, 25 employees (32.05%) had not completed basic digital literacy training, while 39 employees (50%) had not demonstrated full proficiency in using the integrated digital service management application. These conditions indicate that, although the digital transformation process is underway, a gap in employee digital literacy competencies remains. This gap may affect the effectiveness of technology utilization and the quality of services provided to the public.

Based on the conceptual framework outlined above, this study aims to empirically examine the relationships among three main variables: Digital Literacy Competence, Online Communication Responsiveness, and Public Service Effectiveness. The first is the digital literacy competence of service employees at the Public Appraisal Services Office of Dasa'at, Yudistira and Partners. The second is online communication responsiveness in the context of the public services provided. The third is public service effectiveness, which represents the ultimate outcome of the preceding factors. This study is important because its empirical findings are expected to provide a strong foundation for decision-makers and the management of Dasa'at, Yudistira and Partners Public Appraisal Services in formulating more effective and

efficient strategies to improve digital literacy competence and online communication responsiveness, thereby ultimately enhancing overall public service effectiveness.

2. RESEARCH METHOD

This study employed a quantitative explanatory research design to examine the statistical relationships between Digital Literacy Competence and Online Communication Responsiveness as independent variables and Public Service Effectiveness as the dependent variable at Dasa'at, Yudistira and Partners Public Appraisal Services Office.

Explanatory research is a type of research aimed at explaining relationships among research variables through the testing of previously formulated hypotheses. This type of research does not merely describe a phenomenon but also seeks to explain why the phenomenon occurs and how relationships among variables may influence certain conditions.

In this study, the researcher seeks to explain how employees' digital literacy competence and the level of online communication responsiveness demonstrated by the Public Appraisal Services Office of Dasa'at, Yudistira and Partners may influence the effectiveness of public services provided to the community. Accordingly, this study aims to empirically examine whether significant effects exist among these variables within the context of public service delivery at the Public Appraisal Services Office of Dasa'at, Yudistira and Partners.

Through an explanatory research approach, the researcher can gain a deeper understanding of the relationship patterns between digital literacy competence and online communication responsiveness in improving public service effectiveness. The findings of this study are expected to provide a scientific explanation of the factors influencing public service quality in the digital era.

This research was conducted between February and May 2026, encompassing research preparation, data collection, data analysis, and report preparation. The time allocation for each stage of the research was systematically planned as follows. In February 2026, the preparation stage was carried out, including the development of the research proposal, consultations with the academic supervisor, preparation of research instruments (questionnaires and interview guides), and initial coordination with the Public Appraisal Services Office of Dasa'at, Yudistira and Partners. In February 2026, the field data collection stage was conducted, involving the distribution of questionnaires to respondents and in-depth interviews with key informants. In February 2026, data processing and analysis were undertaken, along with the preparation of the results and discussion chapters. In April 2026, the research report was finalized,

conclusions and recommendations were formulated, and preparations were made for the thesis proposal examination.

The research was conducted at the Public Appraisal Services Office of Dasa'at, Yudistira and Partners, located at Jl. Amal, Sei Sikambing B, Medan Sunggal District, Medan City, North Sumatra 20122, Indonesia. This office is a city-level branch of the Public Appraisal Services Office of Dasa'at, Yudistira and Partners, providing various appraisal and consultancy services to the people of Medan City.

Population

In scientific research, the population is one of the most important methodological elements because it serves as the primary source of the data to be investigated. A population refers to the entire set of research objects or subjects that possess specific characteristics established by the researcher for examination and subsequent conclusion drawing.

Conceptually, a population can be defined as the entire group of individuals, groups, objects, or phenomena that constitute the focus of a study and possess characteristics relevant to the research objectives. A population is not necessarily limited to human subjects but may also include organizations, events, documents, and other units of analysis relevant to the research problem. In social research methodology, a population is often defined as the entire set of elements sharing certain characteristics that constitute the focus of observation in a study. These elements may consist of individuals, groups, or institutions that are directly related to the variables being investigated.

Thus, a population comprises all units of analysis that have the potential to provide the information required to address the research questions. Therefore, the population must be clearly and systematically defined to ensure that the research findings accurately represent the actual conditions under investigation. In the context of this study, entitled *Digital Literacy Competence and Online Communication Responsiveness in Improving Public Service Effectiveness*, the research population comprises all employees working at the Public Appraisal Services Office of Dasa'at, Yudistira and Partners who are involved in public service activities and the use of digital communication media in performing their duties.

Based on data obtained from the Public Appraisal Services Office of Dasa'at, Yudistira and Partners, the total population in this study consists of 78 employees. All 78 employees are considered relevant to the research population because they are directly involved in public service processes and the use of digital technology in administrative activities and service-related communication.

Sample

A sample is a subset of a population selected to represent the overall characteristics of that population in a study. The use of samples in research aims to obtain data that can describe the population's conditions more efficiently without having to examine every member of the population, particularly when the population is very large.

Methodologically, a sample can be defined as a subset of the population's size and characteristics selected through a specific procedure to serve as a source of research data. A good sample should adequately represent the characteristics of the population so that the research findings can be generalized to the population as a whole.

Sample selection in research must be conducted systematically, taking into consideration various aspects, such as population size, research objectives, and the research methods employed. A representative sample provides an accurate picture of the actual conditions of the population.

The respondents in this study are individuals who have previously used the services provided by the Public Appraisal Services Office of Dasa'at, Yudistira and Partners. This approach is used because not all members of the population possess characteristics relevant to the research focus. Therefore, respondents are deliberately selected according to the needs of the study. The respondents in this study are individuals who have previously used the services provided by the Public Appraisal Services Office of Dasa'at, Yudistira and Partners. The sample criteria are as follows: respondents must reside in Medan City, belong to employee age categories ranging from 30 years or younger to 50 years or older, and own or use a smartphone that supports applications relevant to digital literacy competence and online communication responsiveness in improving public service effectiveness at the Public Appraisal Services Office of Dasa'at, Yudistira and Partners.

The census sampling technique, commonly referred to as saturated sampling, is generally employed when the population is relatively small, allowing all population members to be included as research respondents. In this study, the available population is relatively small and can still be examined in its entirety. Therefore, the researcher employs purposive sampling, which is described here as a technique in which all members of the population are included as the research sample.

The use of saturated sampling in this study is expected to provide a more comprehensive understanding of digital literacy competence, online communication responsiveness, and public service effectiveness within the Public Appraisal Services Office of Dasa'at, Yudistira and Partners.

Variables and Operational Definitions of Variables

This study involves three main variables that are interrelated within a causal model. The following presents the operational definitions of each variable.

Table 1. Operational Definitions of Variables.

Variable	Operational Definition	Indicators
Digital Literacy Competence (X1)	The ability of service employees to access, understand, evaluate, and use digital information effectively and securely in performing public service duties.	1. Proficiency in using digital applications and devices. 2. Ability to search for and manage information. 3. Digital communication skills. 4. Awareness of digital security and ethics.
Online Communication Responsiveness (X2)	The speed, quality, and completeness of responses provided by employees to public inquiries or service requests through digital communication channels.	1. Response time to inquiries. 2. Quality of information provided. 3. Level of service user satisfaction.
Public Service Effectiveness (Y)	The extent to which service objectives are achieved in providing public satisfaction in accordance with established quality standards.	1. Service compliance with established standards. 2. Timeliness of service completion. 3. Public satisfaction and trust.

Validity and Reliability Tests

In conducting research, the implementation of validity and reliability tests cannot be separated from the research process. Both concepts are crucial to the success of a study because they determine whether the research instrument is valid and reliable. Validity and reliability tests are measurement instruments used to assess the quality of research instruments.

Validity Test

The validity test is used to assess the extent to which a questionnaire is truly capable of measuring what it is intended to measure. An instrument is considered valid when the items contained in the questionnaire are able to represent and reveal the aspects or variables intended to be measured (Ghozali, 2020). In other words, each item in the questionnaire must be appropriately related to the construct that is the focus of the study.

The validity test is conducted by correlating the score of each questionnaire item with the total score of the corresponding construct or variable. The hypotheses proposed are as follows:

H_0: The score of the questionnaire item is positively correlated with the total construct score.

H_a: The score of the questionnaire item is not positively correlated with the total construct score.

Operationally, the validity test is conducted by comparing the calculated *r* value with the critical *r* value at a 5% significance level with degrees of freedom (df) = $n - 2$, where n represents the number of samples. A questionnaire item is declared valid if the calculated *r*

value > the critical *r* value. Conversely, if the calculated *r* value < the critical *r* value, the questionnaire item is declared invalid (Ghozali, 2020).

Reliability Test

The reliability test is used to assess the consistency of a measurement instrument, namely the extent to which a questionnaire produces relatively stable responses when administered under similar conditions. A questionnaire is considered reliable when respondents' answers to the statement items demonstrate consistency over time (Ghozali, 2020). Thus, reliability indicates the degree of dependability of an instrument in measuring the same construct.

In this study, the reliability test was conducted using the one-shot method, in which measurement is performed only once, with the assistance of SPSS software through the Cronbach's Alpha (α) statistical test. A construct or variable is declared reliable if the obtained Cronbach's Alpha value is greater than 0.60 (Nunnally in Ghozali, 2020).

Data Analysis

Data analysis refers to the process of examining, categorizing, organizing, interpreting, and validating data in order to obtain meaningful information and draw appropriate conclusions (Dewi, 2024).

Multiple Linear Regression Analysis

Regression analysis is used to determine the influence of independent variables on a dependent variable. In this study, multiple linear regression analysis was used to examine the relationships between the independent variables, namely Digital Literacy Competence (X_1) and Online Communication Responsiveness (X_2), and the dependent variable, Public Service Effectiveness (Y) The multiple linear regression equation used in this study is as follows:

$Y = a + b_1X_1 + b_2X_2 + e$ …….. (i)

Explanation:

Y = Public Service Effectiveness

a = Constant

b_1 = Regression coefficient of Digital Literacy Competence

b_2 = Regression coefficient of Online Communication Responsiveness

X_1 = Digital Literacy Competence

X_2 = Online Communication Responsiveness

e = Error term or measurement error

Through this regression equation, the researcher can determine the direction of the relationship and the magnitude of the effect of the independent variables on the dependent variable. If a regression coefficient is positive, it indicates that an increase in the independent variable is associated with an increase in the dependent variable, assuming that the other variables in the model remain constant.

Simultaneous Test (F-Test)

The F-test is used to determine whether the independent variables simultaneously have a significant effect on the dependent variable. Statistical calculations are performed using SPSS with a significance level of $\alpha = 0.05$. The decision-making criteria are based on the significance probability value. If the significance probability is greater than 0.05, H_0 is accepted and H_a is rejected. Conversely, if the significance probability is less than 0.05, H_0 is rejected and H_a is accepted.

Partial Test (t-Test)

The t-test is used to determine whether each independent variable individually has a significant effect on the dependent variable. In this study, the t-test was used to determine whether Digital Literacy Competence (X_1) and Online Communication Responsiveness (X_2) were individually associated with Public Service Effectiveness (Y) at a statistically significant level. The statistical test is conducted using SPSS with a significance level of $\alpha = 0.05$. The decision-making criteria are as follows: if the significance value (Sig.) is less than 0.05, H_0 is rejected and H_a is accepted. Conversely, if the significance value (Sig.) is greater than 0.05, H_0 is accepted and H_a is rejected.

Coefficient of Determination (R^2)

The coefficient of determination (R^2) aims to measure the ability of the regression model to explain the variation in the dependent variable (Ghozali, 2020). The coefficient of determination ranges from zero to one. A value of R^2 closer to one indicates that the independent variables provide a greater proportion of the information needed to explain the variation in the dependent variable. Conversely, a value of R^2 closer to zero indicates that the ability of the independent variables to explain the variation in the dependent variable is relatively limited.

3. RESULTS AND DISCUSSION

Descriptive Statistical Analysis

It can be observed that the mean scores of all research variables fall within the good category. This indicates that respondents expressed positive assessments of each variable

examined. The digital literacy variable (X_1) obtained a mean score of 4.03. This score indicates that employees' abilities to use digital technology, access information, and utilize digital media are considered good. Furthermore, the online communication responsiveness variable (X_2) recorded a mean score of 4.06. This finding indicates that online communication services provided to the public are considered responsive, particularly in terms of response speed and ease of communication.

Meanwhile, the public service effectiveness variable (Y) obtained a mean score of 4.07, which also falls within the good category. This indicates that the public services provided are perceived to operate effectively and meet the needs of the community. Overall, all three variables recorded mean scores above 4.00. Therefore, it can be concluded that digital literacy, online communication responsiveness, and public service effectiveness are classified as good based on the respondents' assessments.

Table 2. Mean Scores of Research Variables.

No	Variabel	Mean	Category
1	Digital Literacy Competence (X_1)	4,03	Good
2	Online Communication Responsiveness (X_2)	4,06	Good
3	Public Service Effectiveness (Y)	4,07	Good

Digital Literacy Competence (X_1)

Most respondents selected agree and strongly agree. This indicates that employees' digital literacy competence falls within the good category, although some respondents provided neutral responses.

Online Communication Responsiveness (X_2)

Online Communication Responsiveness obtained a mean score of 4.06, placing it in the good category. However, the presence of neutral responses suggests that some aspects of service responsiveness may still require improvement.

Public Service Effectiveness (Y)

Public Service Effectiveness obtained a mean score of 4.07 and was categorized as good. Nevertheless, challenges remain regarding the timeliness of service delivery.

Validity Test

The validity test was conducted to determine whether each statement item measuring the digital literacy competence variable (X_1) was suitable for use as a research measurement instrument. An item is considered valid if its calculated r-value (r-count) is greater than the critical r-value (r-table) and its significance value is less than 0.05. The test results indicate that all statement items for the digital literacy competence variable have relatively high calculated

r-values, namely 0.811 for $X_1.1$, 0.816 for $X_1.2$, 0.709 for $X_1.3$, and 0.753 for $X_1.4$. Furthermore, all items have significance values of 0.000, which are below 0.05.

Therefore, all statement items measuring the digital literacy competence variable are declared valid and capable of appropriately measuring the variable under investigation. This indicates that the questionnaire used is suitable for collecting research data on digital literacy competence.

Table 3. Results of the Questionnaire Validity Test.

Item	r Hitung	Sig	Remarks
X1.1	0,811	0,000	Valid
X1.2	0,816	0,000	Valid
X1.3	0,709	0,000	Valid
X1.4	0,753	0,000	Valid

Normality Test

The normality test aims to determine whether the disturbance term or residuals in the regression model are normally distributed. A good regression model is one in which the data are normally distributed or approximately normally distributed.

In this study, the normality test was conducted using the Kolmogorov-Smirnov test (or the Shapiro-Wilk test, depending on which test was used) through the SPSS software. The decision-making criteria for the normality test are as follows: if the significance value (Sig.) is greater than 0.05, the data are considered to be normally distributed. Conversely, if the significance value (Sig.) is less than 0.05, the data are considered to be not normally distributed.

Table 4. Uji Normalitas One-Sample Kolmogorov-Smirnov Test.

One-Sample Kolmogorov-Smirnov Test	Unstandardized Residual
N	78
Mean	0
Std. Deviation	0,270154
Most Extreme Differences Absolute	0,072
Most Extreme Differences Positive	0,051
Most Extreme Differences Negative	-0,072
Test Statistic	0,072
Asymp. Sig. (2-tailed)	0,2

Based on the results of the normality test using the Kolmogorov-Smirnov method, a total of 78 samples were analyzed. The mean residual value was 0, indicating that the model's prediction errors were centered around zero. The standard deviation of 0.270154 indicates the degree of dispersion of the residual data around their mean. The maximum difference (Most Extreme Differences) between the observed data distribution and the normal distribution was 0.072, with a positive difference of 0.051 and a negative difference of −0.072.

The Kolmogorov-Smirnov test statistic was 0.072. Most importantly, the significance value (Asymp. Sig. (2-tailed)) was 0.200. Since this value is greater than 0.05, it can be concluded that the residuals are normally distributed.

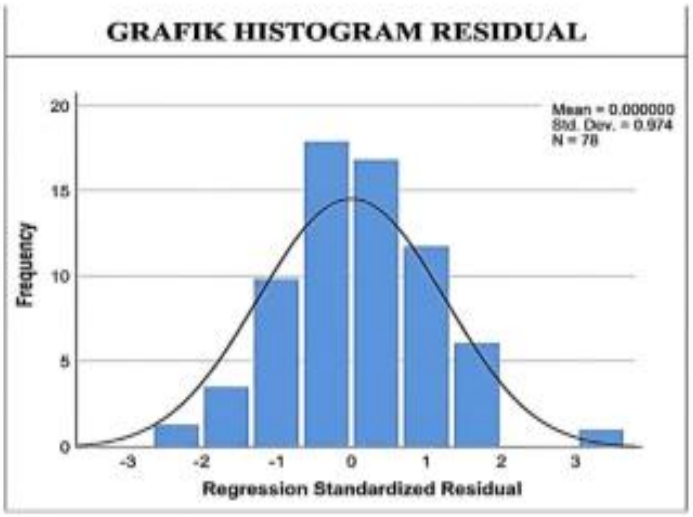


Figure 1. Histogram of Regression Residual Normality Test.

The histogram shows that the data bars form a pattern resembling a bell-shaped curve. Most of the residual data are concentrated in the center, with fewer observations on the left and right sides. This pattern indicates that the residuals are approximately normally distributed, with no substantial deviation from a normal distribution. In addition, the mean residual is close to zero, indicating that the regression model satisfies the normality assumption.

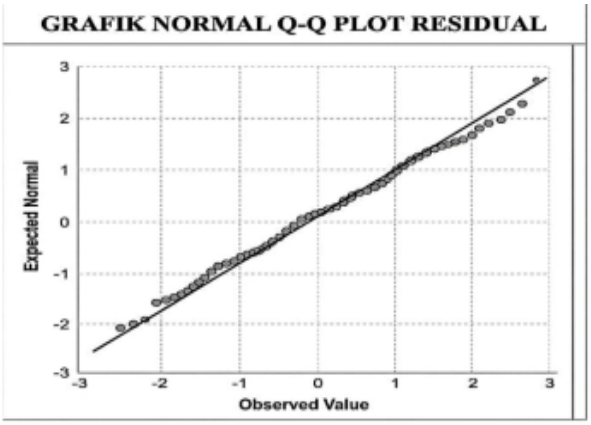


Figure 2. Normal Q-Q Plot of Regression Residuals.

The Normal Q-Q Plot shows that the residual points follow and lie close to the diagonal line. Although slight deviations are observed in some points, they remain within an acceptable range. This indicates that the residual distribution approximates a normal distribution. The closer the points are to the diagonal line, the more closely the data conform to a normal distribution.

Multicollinearity Test

The multicollinearity test aims to determine whether there is a high correlation among the independent variables in the regression model. An appropriate regression model should be free from multicollinearity. This test is conducted by examining the tolerance and variance inflation factor (VIF) values.

Table 5. Multicollinearity Test (Coefficients).

Model	Variabel	Tolerance	VIF	Remarks
1	Digital Literacy (X1)	0,514	1,946	No multicollinearity
1	Online Communication Responsiveness (X2)	0,514	1,946	No multicollinearity

The multicollinearity test was conducted to determine whether the independent variables in the regression model have excessively strong relationships with one another. This is important because high correlations among independent variables may reduce the accuracy of regression analysis and make it difficult to interpret the individual effects of each variable.

In SPSS output, multicollinearity can be assessed using the tolerance and variance inflation factor (VIF) values. Tolerance indicates the proportion of variance in an independent variable that cannot be explained by the other independent variables. Meanwhile, VIF indicates the extent to which the variance of a regression coefficient is inflated due to correlations among the independent variables. Based on the test results, the Digital Literacy variable (X1) has a tolerance value of 0.514 and a VIF value of 1.946, while the Online Communication Responsiveness variable (X2) also has a tolerance value of 0.514 and a VIF value of 1.946.

According to the commonly used criteria, the tolerance value should be greater than 0.10, while the VIF value should be less than 10. Both variables meet these criteria. The relatively high tolerance values indicate that the independent variables are not substantially explained by the other independent variables. In addition, the low VIF values indicate that there is no substantial inflation of variance due to correlations among the independent variables.

Therefore, it can be concluded that there is no evidence of multicollinearity in the regression model used in this study. This means that Digital Literacy and Online Communication Responsiveness do not exhibit excessive overlap and can be included simultaneously in the research analysis.

Multiple Linear Regression Analysis

The results of the multiple linear regression analysis yielded the following equation:

$Y = 4.110 + 0.093 (X_1) + 0.810 (X_2)$

The regression equation illustrates the relationship between Digital Literacy (X_1) and Online Communication Responsiveness (X_2) and Public Service Effectiveness (Y). The constant value of 4.110 indicates that when Digital Literacy and Online Communication Responsiveness are held constant or assigned a value of zero, Public Service Effectiveness has a value of 4.110.

The regression coefficient for Digital Literacy (X_1) is 0.093, indicating that every one-unit increase in Digital Literacy will increase Public Service Effectiveness by 0.093 units, assuming that the other variable remains constant. This indicates a positive regression coefficient for Digital Literacy Competence, although its partial relationship with Public Service Effectiveness was not statistically significant (p = 0.097).

Meanwhile, the regression coefficient for Online Communication Responsiveness (X_2) is 0.810, indicating that every one-unit increase in Online Communication Responsiveness will increase Public Service Effectiveness by 0.810 units, assuming that the other variable remains constant. This value indicates that Online Communication Responsiveness has a greater positive effect than Digital Literacy. Therefore, it can be concluded that both independent variables, Digital Literacy and Online Communication Responsiveness, have positive effects on Public Service Effectiveness. However, Online Communication Responsiveness is identified as the more dominant variable influencing Public Service Effectiveness.

Table 6. Results of Multiple Linear Regression Analysis.

Variable	Coefficient
Constant	4,11
X1	0,093
X2	0,81

Partial Test (t-Test)

The t-test was conducted to determine the partial effect of each independent variable on the dependent variable, namely Public Service Effectiveness. For the Digital Literacy variable (X_1), the calculated t-value was 1.681, with a significance value of 0.097. Since the significance value is greater than 0.05, Digital Literacy does not have a statistically significant partial effect on Public Service Effectiveness. This indicates that an increase in Digital Literacy has not demonstrated a statistically significant effect on improving Public Service Effectiveness.

Meanwhile, the Online Communication Responsiveness variable (X_2) obtained a calculated t-value of 13.764, with a significance value of 0.000. Since the significance value is less than 0.05, Online Communication Responsiveness has a statistically significant partial

effect on Public Service Effectiveness. This means that better Online Communication Responsiveness is associated with higher Public Service Effectiveness.

Therefore, it can be concluded that, among the two variables examined, only Online Communication Responsiveness has a statistically significant partial effect on Public Service Effectiveness, whereas Digital Literacy does not demonstrate a statistically significant effect:

Table 7. Results of the t-Test.

Variabel	t	Sig	Remarks
X_1 - Digital Literacy	1,681	0,097	Not significant
X_2 - Online Communication Responsiveness	13,764	0,000	Significant

Source: Processed Data (2026).

Based on the regression analysis results, Digital Literacy (X_1) does not have a statistically significant effect on Public Service Effectiveness, whereas Online Communication Responsiveness (X_2) has a statistically significant effect on Public Service Effectiveness.

Simultaneous Test (F-Test)

The F-test results show a calculated F-value of 353.301, with a significance level of 0.000. The F-test is used to determine whether the independent variables simultaneously have an effect on the dependent variable. In this study, the independent variables are Digital Literacy Competence (X_1) and Online Communication Responsiveness (X_2), while the dependent variable is Public Service Effectiveness (Y). Since the significance value of 0.000 is less than 0.05, it can be concluded that both independent variables simultaneously have a statistically significant effect on Public Service Effectiveness. This means that Digital Literacy Competence and Online Communication Responsiveness jointly explain variations in Public Service Effectiveness.

Therefore, the hypothesis stating that Digital Literacy Competence and Online Communication Responsiveness simultaneously affect Public Service Effectiveness is supported. This finding also indicates that better employee digital competence and more responsive online communication tend to be associated with improved Public Service Effectiveness.

Table 8. Simultaneous F-Test Results.

F	Sig
352,301	0,000

Table 9. F-Test Results (ANOVA)

Model	Sum of Square	df	Mean Square	F	Sig
Regression	53.528	2	26.764	352.301	0,000
Residual	5.698	75	0.076	-	-
Total	59.226	77	-	-	-

The ANOVA F-test results show a calculated F-value of 352.301, with a significance level of 0.000. The F-test is used to determine whether the independent variables jointly influence the dependent variable.

In this study, the independent variables consist of Digital Literacy Competence (X_1) and Online Communication Responsiveness (X_2), while the dependent variable is Public Service Effectiveness (Y). Since the significance value of 0.000 is less than 0.05, it can be concluded that X_1 and X_2 simultaneously have a statistically significant effect on Y. This means that Digital Literacy Competence and Online Communication Responsiveness jointly influence Public Service Effectiveness.

Furthermore, the Regression Sum of Squares value of 53.528 indicates the amount of variation in Public Service Effectiveness explained by the two independent variables. Meanwhile, the Residual Sum of Squares value of 5.698 represents the remaining variation that is not explained by the research model and may be associated with other factors. Therefore, the regression model is considered statistically significant, and the hypothesis stating that Digital Literacy Competence and Online Communication Responsiveness jointly affect Public Service Effectiveness is supported

Results of the Coefficient of Determination (Adjusted R^2)

The coefficient of determination results show an R Square value of 0.904, or 90.4%. This value indicates that Digital Literacy Competence (X_1) and Online Communication Responsiveness (X_2) jointly explain 90.4% of the variation in Public Service Effectiveness (Y). In other words, 90.4% of the variation in Public Service Effectiveness can be explained by the two independent variables examined in this study, namely Digital Literacy Competence and Online Communication Responsiveness.

Meanwhile, the remaining 9.6% is attributable to other factors outside the research model that were not examined in this study, such as human resource quality, facilities and infrastructure, work systems, leadership, and other relevant factors.

Therefore, it can be concluded that the research model has a strong explanatory capacity, as indicated by the coefficient of determination approaching 1. This finding suggests that Digital Literacy Competence and Online Communication Responsiveness play an important role in explaining variations in Public Service Effectiveness:

Table 10. Results of the Coefficient of Determination (Adjusted R^2).

R Square	Persentase
0,904	90,40%

The Effect of Leadership on Employee Performance

Based on the data analysis, the first hypothesis, namely "the effect of leadership on employee performance," states that leadership has a statistically significant effect on employee performance. This is indicated by a leadership significance value of 0.008, which is lower than the alpha level of 0.05, and a calculated t-value of 2.735, which is greater than the reported critical t-value of 0.2335. Therefore, H0 is rejected and Ha is accepted. This means that leadership (X1) has a statistically significant effect on employee performance (Y).

This finding is also supported by previous research conducted by Rifdayanti in 2019, entitled "The Effect of Leadership Style and Compensation on Employee Performance at PT Pegadaian (Persero), Regional Office VI Makassar." The findings showed that the calculated t-value for leadership style (X1) was 9.195, greater than the critical t-value of 2.010, with a significance value of 0.000, less than 0.05. This indicates that leadership style (X1) has a positive and statistically significant effect on employee performance (Y). In other words, H0 is rejected and Ha is accepted.

Leadership is the process of directing and influencing activities related to the work of group members. Leadership is an important factor within an organization because, without a leader, the organization's direction and operations may become disorganized due to the absence of someone responsible for supervising and managing subordinates.

The Effect of Digital Literacy Competence on Public Service Effectiveness

The research findings indicate that Digital Literacy Competence has a positive regression coefficient but does not demonstrate a statistically significant partial relationship with Public Service Effectiveness ($B = 0.093$; $p = 0.097$). Therefore, the findings do not provide sufficient statistical evidence that higher digital literacy competence is associated with improved public service effectiveness after accounting for Online Communication Responsiveness.

However, the descriptive results reveal that employees' mastery of digital applications is still not optimal. This indicates that employees' digital literacy remains at a basic level and has not yet fully supported the delivery of optimal services.

The Effect of Online Communication Responsiveness on Public Service Effectiveness

Online Communication Responsiveness demonstrated a stronger and statistically significant positive relationship with Public Service Effectiveness ($B = 0.810$; $p < 0.001$), whereas Digital Literacy Competence did not show a statistically significant partial relationship. These findings highlight the importance of timely and effective online communication in supporting public service delivery. This finding is consistent with conditions

observed in the field, where delayed responses still occur and affect public perceptions of service quality.

The Simultaneous Effect of the Variables on Public Service Effectiveness

Simultaneously, both variables have a significant effect on Public Service Effectiveness. This indicates that the success of digital public services depends not only on employees' technical capabilities but also on how responsively they interact with the public.

Research Implications

The findings of this study indicate that improving Public Service Effectiveness requires more than simply digitizing systems. It also requires enhancing employee competence and improving online communication systems. Therefore, the institution needs to improve digital skills training for employees, accelerate service response times, and optimize the use of digital communication media.

4. CONCLUSION

The research findings indicate that Digital Literacy Competence has a positive regression coefficient but does not demonstrate a statistically significant partial relationship with Public Service Effectiveness ($p = 0.097$). Thus, although digital literacy remains conceptually important for technology-based services, its independent statistical contribution was not significant in the regression model examined. However, the contribution of this variable is not as dominant as that of the other variable. This suggests that although digital literacy is essential as a foundation for technology-based services, digital literacy alone is insufficient to significantly improve Public Service Effectiveness.

The Online Communication Responsiveness variable has been shown to have a strong effect on Public Service Effectiveness. This indicates that the speed, accuracy, and quality of employees' responses to the public are critical factors in improving Public Service Effectiveness. Providing responses to the public through digital media is a key factor in determining public satisfaction and perceptions of the services provided. The faster and more accurate the responses, the higher the level of Public Service Effectiveness perceived by the public.

The simultaneous test results indicate that the two independent variables jointly have a significant effect on Public Service Effectiveness. Given the high coefficient of determination, it can be concluded that the combination of employees' digital capabilities and effective communication responsiveness explains most of the variation in Public Service Effectiveness. This emphasizes that improving public service quality in the digital era depends not only on

technical capabilities but also on the quality of communication and interaction between the government and the public.

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