



From digital literacy to public trust: the strategic role of E-government service quality

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Abstract

The transformation of public services in the digital era necessitates a synergistic alignment between e-governance practices and the digital competencies of the community to ensure services that are both high in quality and satisfactory to users. This study investigates the effect of e-governance and digital literacy on public satisfaction, with digital service quality serving as a mediating variable. The research focuses on the utilization of the S-Kepuharjo village digital service platform. Employing a quantitative approach, data were collected through a survey of 385 respondents and analyzed using Structural Equation Modeling (SEM) with AMOS software. The findings reveal that e-governance has a significant impact on satisfaction, both directly and indirectly via service quality. On the other hand, digital literacy does not directly influence satisfaction but exerts a significant indirect effect when mediated by digital service quality. The study confirms that service quality acts as a critical intermediary linking governance to user satisfaction. These results highlight that the success of village-level digital transformation is largely determined by the responsiveness and effectiveness of digital services. Accordingly, enhancing the inclusiveness, accessibility, and user-oriented nature of these services is essential for fostering public satisfaction and engagement in the digital landscape.

1. Introduction

The transformation of public services through the application of information and communication technologies (ICT) has become a central agenda in bureaucratic reform across many nations [1]. The adoption of e-governance presents considerable potential for enhancing public access to government services while simultaneously improving efficiency, transparency, and accountability [2]. E-governance is broadly understood as the utilization of digital tools to reinforce the performance of government institutions in delivering services to citizens, businesses, and other stakeholders. Its integration into public administration reshapes the government–society relationship, encouraging greater openness and responsiveness [3].

Nonetheless, the effectiveness of digital public services is contingent not only upon governmental infrastructure but also upon the capacity of citizens to access and utilize these platforms [4]. Digital literacy thus becomes a crucial enabling factor that determines how well individuals can navigate, comprehend, and benefit from e-government systems [5][6]. Individuals with higher digital literacy are more likely to engage with service features, understand digital procedures, and form positive evaluations of service performance [7].

In Suket Kepuharjo District, digital transformation efforts have materialized through the development of web- and mobile-based public service platforms. These initiatives aim to modernize service delivery to align more closely with community needs [8]. However, to date, there has been a lack of empirical evaluation regarding whether the quality of these digital services aligns with public expectations. A mismatch between service delivery and user expectations can potentially diminish satisfaction and discourage long-term engagement.

To comprehensively evaluate this phenomenon, the present study integrates the constructs of e-governance, digital literacy, and digital service quality to assess their collective and individual influence on public satisfaction [9][10][11]. Utilizing the E-GOVQUAL framework, which includes dimensions such as usability, reliability, trust, content quality, and user support, this research seeks to measure perceived service quality from the user's perspective. Satisfaction is positioned as a key performance indicator of digital service implementation, reflecting both system functionality and user acceptance [12][13].

This study investigates the effects of e-governance and digital literacy on public satisfaction, mediated by the quality of digital public services [14]. Focusing on the S-Kepuharjo digital service platform, this research addresses an empirical gap in sub-district-level digital governance studies [15][16]. The findings aim to inform policy development for inclusive, citizen-centered, and satisfaction-driven digital public service models.

2. Research Method

This study adopts a quantitative approach utilizing a survey method [17]. The survey targeted individuals who had accessed digital government services in the Suket Kepuharjo District, either via the village website or mobile-based applications. The primary aim of this research is to investigate the influence of e-governance (X1) and digital literacy (X2) on public satisfaction (Y), with digital service quality (Z) serving as a mediating variable. Given the unknown total number of e-government users in the study area, the sample size was determined using the Cochran formula, which is appropriate for estimating sample sizes for infinite populations. The calculation was based on a 95% confidence level, a 5% margin of error, and an assumed response proportion of 0.5 (50%). The result indicates that at least 385 respondents are required to ensure statistical representativeness [18].

Data collection was conducted through a structured questionnaire using a Likert scale with closed-ended questions. For data analysis, Structural Equation Modeling (SEM) was employed using AMOS software. This method enabled the testing of both direct and indirect relationships among constructs, as well as the mediating effect of digital service quality within the conceptual model. Confirmatory Factor Analysis (CFA) was conducted to assess construct validity and instrument reliability prior to testing the full structural model [19][20]. The model developed in this study evaluates how the two exogenous variables—e-governance and digital literacy—influence public satisfaction, both directly and indirectly, through the mediating role of digital public service quality.

Table 1. Operationalization of Research Variables

No	Variables	Indicator	Question Items	Source
X1	E-Governance	Performance Expectancy	Digital services make it easier to access government information	Saleh et al. (2021)
		Effort Expectancy	The procedures in government service applications are easy to understand.	
		System Flexibility	E-government services can be accessed using various devices	
		Citizen-Centricity	Digital services are aligned with community needs	
		Facilitating Condition	The infrastructure supporting digital services is readily available	
X2	Digital Literacy	Knowledge Assembly	Have the ability to compile information from various trusted sources	Puro et al. (2022)
		Critical Understanding	Can distinguish between valid and invalid information on the internet	
		Reading Nonlinear Text	Able to understand information presented in dynamic formats (videos, infographics)	
		Conventional-Networked Awareness	Recognize the relationship between print and digital media	
		Network Literacy	Know how to access social networks to seek reference or assistance	
		Filtering Skill	Use filters to manage information received online	
		Digital Publishing	Feel comfortable sharing or publishing digital information	
Z	Quality of Digital Public Services	Tangible	The digital service interface looks professional and attractive	Anggraini (2023)
		Reliability	The digital service system rarely experiences disruptions	
		Assurance	User information and data are managed securely	
		Responsiveness	The service responds quickly to user needs	
		Empathy	Digital services consider the specific needs of community members	
Y	Community Satisfaction	Conformity to Expectations	Digital services meet user's expectations	Kurnia et al., (2024)
		Intention to Reuse	Intend to reuse digital services in the future	
		Willingness to Recommend	Willing to recommend services to others	

Source: Compilation of Previous Research (2025)

3. Results and Discussion

A total of 385 respondents from the Suket Kepuharjo District participated in this study. All respondents had utilized digital government services provided either through the official website or the S-Kepuharjo mobile application.

Participants were selected using a simple random sampling technique, with the minimum eligibility requirement being that they had used digital public services at least once within the last three months. The demographic profile of the respondents was examined to provide contextual insight into their socio-economic backgrounds, which are considered relevant in shaping perceptions and evaluations of e-government service quality. Table 2 summarizes the distribution of respondents based on their demographic characteristics.

Table 2. Respondent Demographic Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Man	200	51.9%
	Woman	185	48.1%
Age	< 25 years	72	18.7%
	25–35 years	145	37.7%
	36–45 years	108	28.1%
	> 45 years	60	15.6%
Education	High School/Equivalent	110	28.6%
	Diploma/Bachelor	212	55.1%
	Postgraduate	63	16.3%
Access Frequency	< 1 time/month	55	14.3%
	1–2 times/month	190	49.4%
	> 2 times/month	140	36.3%

Source: Processed Data (2025)

Table 2 shows that the gender distribution of respondents is relatively balanced, with 51.9% male and 48.1% female participants, indicating that the use of e-government services in Suket Kepuharjo has extended across gender lines. This finding is important because digital government services should be inclusive and accessible to all segments of society. Furthermore, based on age distribution, the majority of respondents fall within the productive age range of 25–35 years (37.7%) and 36–45 years (28.1%). Individuals within this age group are generally more likely to access digital services due to their familiarity with technological devices. However, there remains a notable proportion of respondents aged under 25 and over 45. This suggests that digital services may not yet be optimally utilized by older age groups, who may experience limitations in digital literacy or access to digital devices.

Furthermore, respondents' educational backgrounds were also examined, with 55.1% holding a diploma or bachelor's degree, while 28.6% were high school graduates or equivalent. This indicates that most e-government service users possess basic information technology skills, which are a crucial factor in the successful implementation of digital government services. However, segments of the population with lower levels of education still require support to improve accessibility. Finally, respondents' characteristics were analyzed based on the frequency of digital service access. Only 14.3% of respondents access digital services less than once a month, while the majority (49.4%) access them once or twice a month, and the remainder (36.3%) access them more than twice a month. These data demonstrate a high level of public interest in utilizing village digital services while also underscoring the need to improve system quality and user experience (UX) to ensure continued service usage.

When relating the demographic characteristics of respondents to the research background, it is important to note that there has not been a systematic evaluation of the quality of e-government services in Suket Kepuharjo District, particularly those delivered through websites and mobile applications. The demographic findings above indicate that the potential for active users is substantial, especially among individuals in the productive age group and those with higher educational attainment. Variations in digital literacy and access frequency reflect disparities in user experience, which may lead to dissatisfaction if the system quality is not optimal. Village governments need to understand user characteristics comprehensively to design responsive and inclusive services, particularly in adjusting interface design, feature accessibility, and user support mechanisms. Thus, the demographic characteristics of respondents serve not only as background information but also as a strategic basis for improving the quality of digital services that are more adaptive to community needs.

After identifying the characteristics of the respondents—most of whom are individuals of productive age with a diploma or higher level of education and who actively use digital service—the next step is to analyze the construct validity through Confirmatory Factor Analysis (CFA) [25], which aims to ensure that the indicators used in the study accurately represent the variables, namely E-Governance, Digital Literacy, Digital Service Quality, and Public Satisfaction. The model fit criteria indicate that the CFA model demonstrates a good level of fit, allowing the analysis to

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 proceed to the structural testing (SEM) stage [19]. All construct indicators showed factor loadings above 0.5, with most exceeding 0.6, which is considered the ideal threshold. Table 3 presents the CFA results.

Table 3. Confirmatory Factor Analysis (CFA) Results

Variables	Indicator	Code	Loading	Information
X1 – E-Governance	Performance Expectancy	X1.1	0.78	Valid
	Effort Expectancy	X1.2	0.74	Valid
	System Flexibility	X1.3	0.81	Valid
	Citizen-Centricity	X1.4	0.76	Valid
	Facilitating Condition	X1.5	0.69	Valid
X2 – Digital Literacy	Knowledge Assembly	X2.1	0.71	Valid
	Critical Understanding	X2.2	0.82	Valid
	Reading Nonlinear Text	X2.3	0.68	Valid
	Conventional–Networked Awareness	X2.4	0.75	Valid
	Network Literacy	X2.5	0.77	Valid
	Filtering Skill	X2.6	0.79	Valid
Z – Digital Service Quality	Digital Publishing	X2.7	0.72	Valid
	Tangible	Z1	0.74	Valid
	Reliability	Z2	0.79	Valid
	Assurance	Z3	0.76	Valid
	Responsiveness	Z4	0.81	Valid
Y – Community Satisfaction	Empathy	Z5	0.78	Valid
	Conformity to Expectations	Y1	0.80	Valid
	Intention to Reuse	Y2	0.77	Valid
	Willingness to Recommend	Y3	0.84	Valid

Source: Processed Data (2025)

The consistently high factor loadings obtained in the Confirmatory Factor Analysis (CFA) indicate that respondents interpreted and responded to each questionnaire item with a high degree of consistency, particularly within the digital literacy construct. This finding strongly correlates with the respondents' demographic profile—primarily individuals of productive age with higher educational attainment—who are generally more accustomed to using digital technologies [26].

The high construct validity of the digital literacy indicators further supports the premise that the ability to access, critically evaluate, and produce digital content plays a key role in shaping how users perceive and interact with digital government services. These indicators have proven both conceptually and empirically reliable in representing their respective constructs, thereby enhancing the precision of subsequent analyses within the structural model. Moreover, the successful adaptation of measurement items from credible literature and their contextual alignment with the S-Kepuharjo digital service environment, validates the instrument's relevance and robustness. This reinforces the methodological soundness and scientific credibility of the research findings.

Following the validation of the measurement model, the next analytical step involved testing data normality to determine whether the distribution satisfies the assumption of multivariate normality. This is a prerequisite in Structural Equation Modeling (SEM), particularly when using the Maximum Likelihood Estimation (MLE) method, which relies on the assumption of normally distributed data to ensure optimal estimation accuracy. In this study, normality assessment was conducted using AMOS software, with evaluation based on the Critical Ratio (CR) values of skewness and kurtosis for each observed variable. A CR value within the range of ± 2.58 at the 0.01 significance level indicates acceptable normality. The detailed results of the normality test are presented in Table 4 [19][20][25].

Table 4. Normality Test Results

Variables	Indicator	Skewness	CR Skew	Kurtosis	CR Kurtosis	Distribution
E-Governance	X1.1 – X1.5	-0.25 to 0.31	-1.42 to 1.65	-0.48 to 0.36	-1.80 to 1.25	Normal
Digital Literacy	X2.1 – X2.7	-0.40 to 0.28	-2.03 to 1.53	-0.72 to 0.45	-2.15 to 1.30	Normal
Digital Service Quality	Z1 – Z5	-0.33 to 0.30	-1.70 to 1.48	-0.55 to 0.38	-1.95 to 1.10	Normal
Community Satisfaction	Y1 – Y3	-0.12 to 0.25	-0.88 to 1.34	-0.35 to 0.41	-1.26 to 1.17	Normal
Multivariate		—	—	—	2.14	Normal

Source: Processed Data (2025)

Based on the results of the normality test, all skewness and kurtosis critical ratio (CR) values for each indicator were found to be within the acceptable threshold of ± 2.58 . Additionally, no significant outliers or abnormal distribution patterns were observed. The multivariate normality test produced a CR value of 2.14, which remained within acceptable limits. Therefore, it was concluded that the data met the assumptions of both univariate and multivariate normality. This

finding supported the suitability of the dataset for further analysis using the Structural Equation Modeling (SEM) approach with the Maximum Likelihood Estimation (MLE) method.

Following the confirmation of normality, multicollinearity and singularity tests were conducted. These tests were essential to verify that the relationships among independent variables did not exhibit excessively high correlations that could potentially distort parameter estimates and compromise the stability of the SEM model. Multicollinearity arises when two or more independent variables are highly correlated ($r > 0.90$), whereas singularity occurs when a perfect correlation exists between variables, causing the determinant of the covariance matrix to approach zero and rendering the estimation process unreliable. In the context of SEM using AMOS, the presence of multicollinearity and singularity was examined by reviewing the Determinant of the Sample Covariance Matrix. The determinant value obtained from AMOS indicated whether the matrix was suitable for further structural analysis. The detailed output of this test is presented in Table 5:

Table 5. Multicollinearity and Singularity Test Results

Component	Mark
Determinants of Sample Covariance Matrix	0.0234
Minimum Tolerance Limit (Cut-off)	> 0.00001

Source: Processed Data (2025)

The determinant value obtained exceeded the minimum required threshold of 0.00001, indicating the absence of singularity in the data. This confirms that the covariance matrix was appropriate for further structural analysis. These findings reinforced the robustness of the model and affirmed the adequacy of the data for causal testing using the Structural Equation Modeling (SEM) approach. Following the confirmation that no multicollinearity or singularity issues were present, as evidenced by the absence of excessive linear correlations among independent variables, the next step involved evaluating Construct Reliability (CR) and Average Variance Extracted (AVE) to further assess the quality of the measurement model.

Construct Reliability (CR) assesses the internal consistency of the indicators within a latent construct. A CR value above 0.70 indicates that the construct exhibits good reliability. Meanwhile, Average Variance Extracted (AVE) reflects the extent to which the variance of the indicators is captured by the latent variable. An AVE value equal to or greater than 0.50 is considered evidence of satisfactory convergent validity. These two metrics were calculated based on the standardized loading factors obtained during the Confirmatory Factor Analysis (CFA). The complete CR and AVE results for each construct in the model are presented in Table 6 [19][20][25].

Table 6. Results of construct reliability (CR) and convergent validity (Average Variance Extracted / AVE) tests

Variables	CR	AVE	Information
E-Governance (X1)	0.86	0.55	Reliable & Valid
Digital Literacy (X2)	0.91	0.61	Very Reliable & Valid
Digital Service Quality (Z)	0.88	0.59	Reliable & Valid
Public Satisfaction (Y)	0.84	0.64	Reliable & Valid

Source: Processed Data (2025)

Based on the results presented in the table, it was evident that all constructs exhibited Construct Reliability (CR) values exceeding 0.70, signifying strong internal consistency among the indicators of each latent variable. Additionally, all constructs demonstrated Average Variance Extracted (AVE) values greater than 0.50, indicating that each latent construct possessed satisfactory convergent validity. This means that the indicators used were capable of effectively explaining the variance of the respective constructs they were intended to measure.

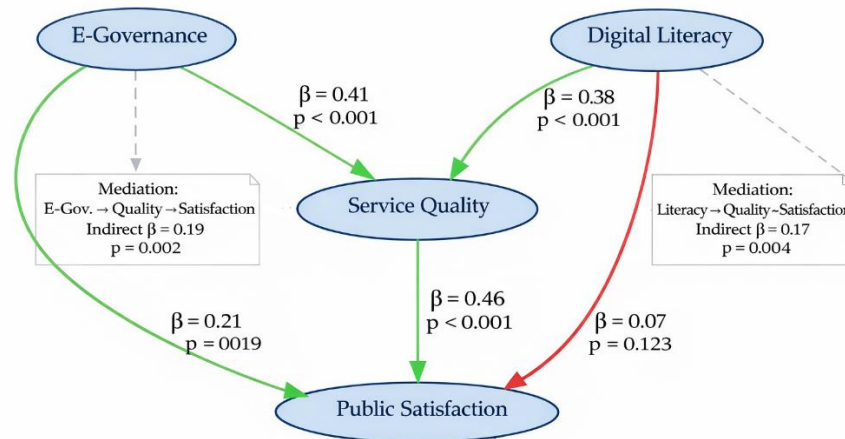
These findings further validate the results obtained from the Confirmatory Factor Analysis (CFA), confirming that the measurement items were both reliable and valid. The constructs met the essential psychometric criteria in terms of indicator consistency and conceptual alignment with the underlying latent variables. With the measurement model confirmed to have met the required standards for indicator reliability (CR), convergent validity (AVE), as well as the assumptions of normality and absence of multicollinearity, the next step involved testing the structural model using Structural Equation Modeling (SEM) [25]. This stage aimed to analyze the causal relationships among the latent constructs, specifically investigating the direct and indirect effects of the exogenous variables (e-governance and digital literacy) on the endogenous variable (public satisfaction), mediated by the quality of digital public services. The complete path analysis results are presented in Tabel 7.

Table 7. Causality Test Results

Connection	Coefficient	P-Value	Information
E-Governance → Service Quality	0.41	< 0.001	Significant
Digital Literacy → Service Quality	0.38	< 0.001	Significant
Service Quality → Satisfaction	0.46	< 0.001	Significant
E-Governance → Satisfaction (immediate)	0.21	0.019	Significant
Digital Literacy → (immediate) Satisfaction	0.07	0.123	Not Significant
Mediation Path	Indirect Effect	P-Value	Information
E-Governance → Quality → Satisfaction	0.19	0.002	Significant
Digital Literacy → Quality → Satisfaction	0.17	0.004	Significant

Source: Processed Data (2025)

The results of the causality test, when translated into a model image, are presented in Figure 1.



Source: Processed Data (2025)

Figure 1. Test Results Through AMOS

Based on the table above, the results can be explained as follows:

- E-Governance → Digital Service Quality ($\beta = 0.41$)**
The adoption of e-governance principles has a significant positive impact on digital service quality. This indicates that effective digital governance—characterized by system flexibility, service efficiency, and a strong focus on public needs—leads to more reliable and responsive services for citizens.
- Digital Literacy → Digital Service Quality ($\beta = 0.38$)**
The level of digital literacy among the public positively influences their perception of service quality. Individuals with strong digital competencies are better equipped to access, comprehend, and critically evaluate the performance of digital services.
- Digital Service Quality → Public Satisfaction ($\beta = 0.46$)**
This pathway demonstrates the strongest and most significant influence. It suggests that well-designed and technically sound services—those that are secure, user-friendly, and responsive—are key drivers of user satisfaction.
- E-Governance → Satisfaction (direct) ($\beta = 0.21$, $p = 0.019$)**
E-governance also has a direct effect on public satisfaction, although its impact is smaller than the mediated effect through service quality. This implies that perceived transparency, accountability, and citizen-centric approaches contribute meaningfully to satisfaction, even in the absence of tangible service improvements.
- Digital Literacy → Satisfaction (direct) ($\beta = 0.07$, $p = 0.123$)**
This result is statistically insignificant, indicating that digital literacy alone does not directly result in higher satisfaction. Even if users have the skills to engage with technology, their satisfaction is contingent upon the quality and responsiveness of the services they receive.
- Digital Service Quality significantly mediates the relationship between:**
 - E-Governance → Satisfaction:** The influence of e-governance on satisfaction is significantly mediated by digital service quality, meaning that governance practices lead to satisfaction primarily when translated into high-quality services.

- b. **Digital Literacy** → **Satisfaction**: Similarly, digital literacy contributes to satisfaction only when supported by a responsive and functional service platform.

These findings emphasize that digital service quality serves as a critical bridge. Citizens seek not just access, but also a meaningful and seamless user experience. Without high-quality service implementation, neither digital infrastructure nor user competence alone is sufficient to generate satisfaction. The following discussion explores these relationships in greater depth.

3.1 E-Governance → Digital Service Quality ($\beta = 0.41$)

These findings reinforce that e-governance principles significantly and positively shape public perceptions of digital service quality. Theoretically, this aligns with the UNDP's Good Governance framework, which highlights transparency, participation, accountability, and efficiency as key pillars for delivering citizen-oriented, high-quality public services. However, within the context of village-level digital services, these principles should not be evaluated solely on the basis of normative policies or the mere existence of digital platforms. Rather, their effectiveness lies in how well they are operationalized into tangible system mechanisms that directly impact citizens' daily experiences [27].

The deployment of e-governance via the S-Kepuharjo platform has successfully expanded public access to services such as correspondence, civil administration, and village-related information. Critically, however, this expanded access has not consistently been matched by reliable and convenient system performance, especially in terms of user experience and responsiveness. Many users continue to face technical challenges, including delayed responses, failed logins, and unintuitive interfaces, which collectively diminish perceived service quality [28][29].

Thus, the significant influence of e-governance on service quality found in this study underscores the role of e-government systems as a means to enhance service quality, rather than a guarantee of success in and of themselves. A system's credibility hinges on users' real-life interactions with it, not merely on policy statements about digital governance. In essence, effective e-governance goes beyond providing infrastructure or digital channels; it depends on translating governance values into services that are equitable, responsive, and user-centered. Accordingly, village governments must invest not only in developing digital platforms but also in designing citizen-centric services and equipping service personnel with the capacity to manage digital interactions in a proactive and meaningful way [30][31].

3.2 Digital Literacy → Digital Service Quality ($\beta = 0.38$)

The findings of this study reveal that digital literacy significantly affects how citizens perceive the quality of digital services offered by village governments. This supports the conceptual framework of Feliciano-Cestero et al., which defines digital literacy as encompassing not only technical competencies but also the cognitive, critical, and social capacities necessary to access, evaluate, and engage with digital information effectively and responsibly. In this regard, digital literacy emerges as an essential foundation for meaningful interaction with digital service systems.

Nevertheless, this relationship is neither linear nor automatic. While individuals with high digital literacy can more easily comprehend service structures, navigate digital platforms, and assess content delivery, this does not inherently translate into favorable perceptions of service quality, particularly if the service lacks functionality, coherence, or user-centered design. As emphasized by Fang et al., digital competence alone is insufficient if the supporting digital systems are poorly implemented or misaligned with user expectations.

This dynamic is evident in Suket Kepuharjo, where most respondents are of productive age and possess at least a diploma or bachelor's degree, representing over 70% of the sample. Although they have the fundamental skills to engage with online services, many reported issues such as interface inconsistencies, lack of integrated features, and unclear instructions. These challenges reveal a disconnect between user capability and system performance, which undermines the effective utilization of digital literacy [32].

Theoretically, these findings underscore the notion that digital literacy functions as an enabler rather than a sole determinant of service quality. This aligns with Hanisch et al.'s discussion of the "usage gap," which refers to a scenario where users have the technical ability to access services but still experience subpar outcomes due to inadequate system design. As such, enhancing digital competence must be complemented by continuous improvements in service quality and interface design by local governments. Otherwise, users may experience digital frustration, thereby erode trust and discourage engagement with e-government platforms.

Similarly, the results affirm Malodia et al., who argue that digital literacy involves both the technical and cognitive ability to access and process digital information efficiently. Citizens with such competencies are more adept at evaluating and adapting to digital platforms. However, as observed in Suket Kepuharjo, the benefits of digital literacy materialize only when the services provided are functional, user-friendly, and responsive to community needs.

3.3 Digital Service Quality → Public Satisfaction ($\beta = 0.46$)

The results of this study reinforce that the quality of digital services is a critical factor in determining user satisfaction, as indicated by the highest path coefficient ($\beta = 0.46$) among all causal relationships in the tested model. This aligns with the SERVQUAL framework, which posits that user satisfaction is driven by five key service quality

dimensions: tangibles, reliability, responsiveness, assurance, and empathy. In the realm of digital public services, however, these dimensions must be interpreted through a more modern lens. For instance, tangibles now refer to digital aesthetics such as user interface design, platform navigation, and the visual professionalism of websites. Similarly, reliability and responsiveness extend to system uptime, uninterrupted functionality, and prompt communication through chat features, email, or automated alerts.

These findings emphasize that digital service quality is a core determinant of satisfaction with e-government services. Citizens expect such platforms to be intuitive, secure, quick, and responsive to personal needs. When these expectations are fulfilled, satisfaction increases substantially. In the case of S-Kepuharjo, consistently strong performance in areas such as online correspondence accessibility and quick response time from service staff emerged as key drivers of satisfaction. In this study, perceptions of digital service quality were assessed through factors such as ease of use, system security, speed of service delivery, and responsiveness to user concerns. High ratings on these indicators were directly associated with increased satisfaction, including behavioral intentions to reuse the services and recommend them to others. This suggests that digital service quality not only produces immediate satisfaction but also fosters long-term user loyalty.

Field evidence from the S-Kepuharjo platform reveals positive public responses to features such as digital correspondence, document submission, and complaint management. However, challenges persist, such as inconsistent staff responsiveness or technical malfunctions, which negatively affect overall service perception. These findings demonstrate that digital service quality is shaped by a convergence of technological infrastructure, administrative competence, and community expectations. Weaknesses in any of these components can limit user satisfaction. Therefore, enhancing digital governance at the village level must prioritize improvements not only in platform capabilities but also in service management and responsiveness. Conceptually, this supports the User-Centered Design (UCD) approach, which advocates placing the user experience at the heart of system development. Satisfaction, therefore, hinges not just on technological sophistication, but also on the relevance and usability of services in meeting the everyday needs of citizens.

3.4 E-Governance → Public Satisfaction ($\beta = 0.21$, $p = 0.019$)

The analysis reveals that e-governance exerts a significant direct influence on public satisfaction ($\beta = 0.21$, $p = 0.019$), though this effect is notably weaker than its indirect impact mediated by digital service quality. This suggests that while citizens recognize and value the principles of digital governance—such as transparency, accountability, and citizen orientation—these elements alone are insufficient to fully determine satisfaction. Conceptually, this finding supports the Technology Acceptance Model (TAM) introduced by Davis, which emphasizes that perceived usefulness facilitates system acceptance, whereas actual usage experience and perceived ease of use are more directly associated with post-adoption satisfaction [32].

In this context, the public may view the implementation of a digital village system as a progressive step in administrative reform, valuing conceptual benefits such as procedural clarity, transparent information access, and efficient decision-making. The significant, albeit modest, direct influence of e-governance on satisfaction resonates with Wong et al., who argue that while perceived benefits promote initial system adoption, user satisfaction depends on the real-world performance of the system. Citizens may appreciate transparency and open access; however, when digital services fall short due to slow response times, non-functional features, or unintuitive interfaces, the perceived benefits of e-governance may not translate into meaningful satisfaction [33].

This underscores that the influence of e-governance often remains perceptual unless supported by functional service delivery. In the case of Suket Kepuharjo, for instance, although residents acknowledged the innovation behind the digital village service, they also reported issues such as limited system outreach, lack of clear information, and a heavy reliance on operator assistance. These concerns suggest that while public trust in transparent and efficient systems may exist, any gap between expectations and actual experiences could temper overall satisfaction [34].

Consequently, the direct impact of e-governance on public satisfaction cannot be considered in isolation. Its effectiveness is intrinsically linked to the operational quality of the service systems in place. Strengthening e-governance thus requires more than merely deploying digital platforms; it demands comprehensive human capacity development, continuous technical refinement, and participatory governance strategies that translate digital governance principles into tangible and impactful service experiences.

3.5 Digital Literacy → Community Satisfaction ($\beta = 0.07$, $p = 0.123$) – Not Significant

The results of the path analysis indicate that digital literacy does not significantly affect public satisfaction with village-level digital government services, with a regression coefficient of $\beta = 0.07$ and a p-value of 0.123 ($p > 0.05$). This outcome challenges the commonly held assumption that higher levels of digital literacy automatically led to greater satisfaction with e-government platforms. On the contrary, the insignificance of this relationship offers an important insight: technical digital competence alone does not directly determine satisfaction, particularly when it is not supported by effective, functional, and user-centered service delivery [35].

From a theoretical perspective, this finding reinforces the conceptual distinction proposed by Abd Al Ghaffar, who differentiates between digital skills (technical abilities) and digital outcomes (the benefits derived from using technology). Within this framework, digital literacy should be seen as a necessary but not sufficient condition for satisfaction. In other words, although individuals may be proficient in navigating websites, understanding digital menus, and accessing online content, these skills will not lead to a positive experience unless the services provided align with their expectations in terms of speed, clarity, and responsiveness [36].

Empirically, although the majority of respondents in this study were regular internet users with sufficient access to digital devices, dissatisfaction persisted due to several shortcomings in the system. These included non-intuitive user interfaces, delayed responses, insufficient service information, and limited accommodation of diverse user needs, particularly for vulnerable groups such as the elderly, people with disabilities, or those in informal employment sectors [32]. This scenario reflects a phenomenon known as “digital experience dissonance,” in which technically capable users become disillusioned when their interactions with digital platforms fail to deliver the expected level of quality. This dissonance can erode public trust and prompt users to revert to conventional, offline methods, such as in-person visits to the village office, which they may perceive as more reliable or personal [34], [37].

In the broader context of developing inclusive and sustainable village-level digital governance, digital literacy should be cultivated in tandem with significant improvements in system design, usability, and responsiveness. Without this parallel development, the gap between user competencies and system performance risks diminishing the impact of investments made in the digital transformation of village services [38].

3.6 The Mediation Role of Digital Service Quality

a. Mediation of E-Governance → Satisfaction (Indirect $\beta = 0.19$, $p = 0.002$)

b. Digital Literacy Mediation → Satisfaction (Indirect $\beta = 0.17$, $p = 0.004$)

The mediation test results highlight the pivotal role of digital service quality in bridging the influence of both e-governance and digital literacy on public satisfaction. The indirect effect of e-governance on satisfaction via service quality is $\beta = 0.19$ ($p = 0.002$), while the indirect effect of digital literacy is $\beta = 0.17$ ($p = 0.004$). Both values are statistically significant, underscoring that service quality is a crucial intermediary in fostering positive user perceptions of e-government services.

Theoretically, these findings align with the DeLone and McLean Information System Success Model, which positions service quality as one of the core dimensions—alongside system quality and information quality—in determining the overall success of an information system. Within this framework, robust system infrastructure (such as e-governance implementation) and user competencies (via digital literacy) do not guarantee satisfaction unless the services themselves are consistently high in quality. Simply put, even if platforms like S-Kepuharjo are made widely accessible and built upon sound governance, community satisfaction will remain elusive if the services lack clarity, speed, reliability, and user-friendliness. Service quality thus serves as the vital link that transforms technological infrastructure into a meaningful and engaging user experience [35][36][39].

Empirical findings from Suket Kepuharjo support this argument. While access to devices and internet connectivity is relatively widespread, satisfaction arises only when services are fast, responsive, and tailored to users' needs—for instance, through features like self-printing certificates, real-time status updates, and swift responses from village officials. The strong mediating effect of service quality further implies that the development of e-government systems must move beyond mere digitization of administrative processes. It requires a more human-centered approach that focuses on designing services from the user's perspective, ensuring inclusivity, ease of navigation, and clear service workflows for all community members.

Therefore, strategies aimed at enhancing e-governance or improving digital literacy should be implemented in tandem with efforts to elevate both the technical and interpersonal aspects of digital service quality. Only through such an integrated approach can digital transformation initiatives translate into tangible outcomes, such as increased satisfaction, trust, and active civic engagement in digital village governance [36].

4. Conclusion

This study investigates the impact of e-governance and digital literacy on public satisfaction, with digital service quality serving as a mediating variable, in the context of e-government services in Suket District, Kepuharjo. The analysis reveals that e-governance significantly influences public satisfaction both directly and indirectly. In contrast, digital literacy does not directly affect satisfaction, but exerts a significant indirect influence through digital service quality. The findings confirm that digital service quality is a robust and significant mediator, as well as a key determinant of satisfaction in digital public service delivery. These outcomes highlight that both digital governance and user competencies must be operationalized into services that are efficient, responsive, and user-centered in order to achieve meaningful public satisfaction.

Based on these findings, it is recommended that village administrations and digital service providers focus on enhancing the overall quality of e-government services, particularly in terms of system reliability, data protection, and

service responsiveness. In addition, targeted digital literacy programs and outreach initiatives should be developed in alignment with specific platforms in use, enabling citizens' digital skills to effectively enhance their service experience. Prioritizing user-centric design and implementing feedback mechanisms are essential for fostering engagement and satisfaction.

Theoretically, this study contributes to the existing body of knowledge by reinforcing the mediating role of digital service quality in the relationship between e-governance, digital literacy, and public satisfaction. Practically, the findings provide a foundation for shaping village-level digital transformation policies that prioritize service quality as the bridge between infrastructure provision and citizen experience. These insights may also inform the development of future digital platforms that are more inclusive, adaptive, and responsive to the specific needs of rural populations.

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