

# Status of Effectiveness of Digital Platforms for Information Dissemination in Enhancing Strategic Communication

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## Index Terms:

digital platforms, information dissemination, strategic communication

**Abstract.** This study assessed the effectiveness of digital platforms in enhancing information dissemination within the municipality of Boac, Marinduque, to provide a basis for a Strategic Communication Plan. This study utilized a descriptive-correlational research design, the study surveyed 245 barangay officials, including captains, secretaries, treasurers, councilors, and SK chairmen – selected through stratified random sampling. The data was collected through a validated four-point Likert scale questionnaire with high internal consistency reliability, featuring Cronbach's Alpha indices ranging from 0.80 to 0.93. The findings revealed that the municipality relies exclusively on social media, specifically Messenger Groups with 50.6% and Facebook Pages with 49.4%, which were rated as Highly Effective with a weighted mean 3.58 across the domains of accessibility, audience reach, and public announcement. However, the respondents identified significant obstacles, particularly in countering fake news and managing limited budgets, which were rated as Highly Challenging with weighted mean of 3.36, most notably the difficulty in verifying information and countering fake news with a weighted mean of 3.42, alongside insufficient budgets for ICT equipment with weighted mean 3.41. Meanwhile, statistical validation through the Intra-class Correlation Coefficient (ICC) confirmed a significant agreement among respondents ( $p < .05$ ), rejecting the null hypothesis. Moreover, the study concludes that while digital platforms are successfully adopted in the municipality of Boac as their primary communication innovation, its efficiency is hampered by technical infrastructure and informational integrity threats. The developed Strategic Communication Plan prioritizes digital literacy workshops, infrastructure upgrades, and verification protocols like a Fact-Check Task Force. Therefore, these interventions aim to transition the municipality from basic notification to dynamic community engagement, ensuring a resilient digital governance framework tailored to the rural island context.

## Introduction

In the contemporary digital era, the speed and accessibility of information have become fundamental to informed decision-making and sustainable development. Across the globe, digital platforms have become essential tools for communication enabling institutions and governments to disseminate information efficiently while reshaping social interaction and governance. This evolution is marked by a significant shift from conventional broadcasting toward digital algorithms, as newer generations like Generation Z and Millennials prioritize social media for personalized and real-time news delivery. These platforms play a vital role in aligning communication strategies with organization goals by providing measurable engagement metrics and immediate feedback (Zerfass et. Al. 2022). Furthermore, organizations nowadays rely on digital media to support stakeholders' engagement and targeted messaging, facilitating a more responsive dialogue between the state and its citizens (Macnamara, 2021).

The effectiveness of these digital tools is conceptualized as a multi-dimensional construct that goes beyond mere delivery; it measured by the realization of public awareness, participation, and actual behavioral change. The impact of digital of digital communication is determined by its ability to achieve these intended outcomes in modern environments.

(Rosenberg, 2020; Johnson, 2021). Empirical evidence indicates that platforms used by local governments significantly improve the speed and reach of public information, particularly during period of crisis (Taneja et al. 2020). Similarly, this is especially critical in public safety, digital platforms are essential for emergency management, provided that announcements deliver accurate, timely and actionable instructions (Wukich, 2020; Bautista 2023). In addition, to maximize coverage across various demographic groups. Studies found that utilizing multiple platforms is far more effective than relying on a single channel (Liu et al. 2020).

While these innovations are promising, persistent systematic barriers and information threats place their efficiency in doubt. The digital divide continued access gap to infrastructure and standard of improvement in technical skill, requirements a barrier that is still present. Digital inequality is a prominent challenge, for instance in rural areas, where economic and geographic factors limit internet access as highlighted by (Van Dijk, 2020). Meanwhile, among major barriers in terms of information dissemination in the rural communities due to poor connectivity and high data costs in many survey respondents within Philippine context (Dizon & Molina, 2021). Moreover, integrity of information is increasingly threatened by the proliferation of fake news, which necessitates systematic verification protocols to maintain the public trust (Cruz, 2020).

In the Philippines, the move toward digital transformation has been accelerated to promote e-governance and citizen engagement. Meanwhile, Facebook, is the most widely utilized platform by local government units (LGUs) because of its user-friendly interface and high-accessibility (Reyes & Santos, 2022). Additionally, the ultimate success of these digital platforms is fundamentally tied to organizational culture and leadership commitment as the systematic management of digital engagement is what determines the real-world effectiveness (Febriana, 2025).

Within the province of Marinduque, an island province characterized by both urban and rural needs, there is a heavy reliance on efficient communication for public safety, health services, and governance. While local officials in Boac, utilizing platforms such as Messenger Groups and Facebook Pages, there is still empirical evidence confirming their efficacy in this specific rural context. This study addresses these identified gaps by assessing the accessibility, audience reach and public announcement. This research anchored in the Diffusion Innovations Theory (Rogers, 2003), this research treats digital platforms as communication innovations whose success depends on systematic adoption and audience utility. Ultimately, this study aims to develop an evidence -based Strategic Communication Plan to foster more inclusive, responsive, and sustainable governance at the province level.

### *Research Questions*

This study's primary purpose is to assessed the effectiveness of digital platforms in enhancing information dissemination across the municipality of Boac. Specifically, this study sought to answer the following questions;

1. What digital platforms are currently being used by the selected Barangays in the Municipality of Boac?
2. What is the extent of effectiveness of these digital platforms used in enhancing information dissemination in terms of the following;
  - a) Accessibility
  - b) Audience Reach
  - c) Public Announcement
3. What are the challenges of the municipality in disseminating information to the public via digital platforms?
4. Is there significant agreement among the respondents on the extent of effectiveness of a Digital Platforms used by the selected barangay in the municipality of Boac in enhancing information dissemination?
5. What strategic communication plan can be proposed based on the findings of the study to enhance and strengthen the dissemination of information on digital platforms in the Local Government of Boac Marinduque?

## **Methodology**

### *Research Design*

The study employed a descriptive-correlational design using numerical approach, to systematically analyze the digital communication platforms from the selected barangays of the municipality of Boac.

This approach is suitable for examining the relationship between variable using numerical data. The descriptive variables were utilized to identify the digital platforms currently used and the frequent challenges faced by the community in information dissemination. Meanwhile, the correlational aspect determined the relationship between these platforms and the extent of effectiveness in information dissemination.

### *Respondent /Participants*

The population consisted of 671 local government officials in selected barangay in the municipality of Boac. Using stratified random sampling technique and the Raosoft formula with 95% confidence level, a sample size of 245 respondents was determined. On the other hand, the respondents included Barangay Captains, Secretaries, Treasurers, Councilors, and SK Chairmen. These participants were chosen because they serve as the frontline communicators between the local government and the constituents, representing a critical link in the chain of public information dissemination.

### *Instrumentation of the Study*

The primary instrument was a structured survey questionnaire featuring a four-point Likert scale. The tool underwent content validation by experts and pilot testing with 25 participants. Meanwhile, reliability was confirmed using Cronbach's Alpha, yielding a ranging from 0.80 in Accessibility to 0.93 in Challenges. Moreover, data were analyzed using Weighted Mean to determine effectiveness levels and challenges. To test the consistency of respondent, the Intra - class Correlation Coefficient (ICC) was utilized, providing a statistical basis for the significance of the agreement regarding platform effectiveness.

### *Procedure*

The data gathering process followed a structured sequence to ensure accurate and reliable collection of quantitative data. It was implemented in three phases; pre-implementation phase, implementation phase and post-implementation phase. During the pre-implementation, the researcher sought for formal approval from the Municipal Mayor of Boac and the relevant barangay authorities. Once approvals were granted, the researcher oriented the participations about the nature of the study and their rights as participants, including voluntary participation and confidentiality. During this phase, the self-made instrument was validated for language suitability and relevance to the local context.

In the implementation phase, the validated questionnaire was distributed to the 245 selected respondents via both printed copies and Google Forms. To facilitate the process, a dedicated Group chat was created for the federation of Barangay officials to ensure accessibility and real-time coordination.

Meanwhile, during the post-implementation phase, collected responses were checked for completeness and organized for statistical treatment. The scores from the said survey were tabulated and statistically analyzed using the mean, standard deviation and intra-class correlation coefficient.

All ethical protocols were strictly followed throughout the process, including informed consent, anonymity, and confidentiality.

### *Data Analysis*

This study employed descriptive-correlation design and inferential statistical tools to analyze the data gathered and to answer the stated research questions. These tools ensure an objective interpretation of the finding regarding digital platform utilization. Effectiveness, and the challenges faced by local government officials.

For Statement of the Problem No. 1, descriptive statistics – specifically frequency, percentage distribution, and ranking, are utilized to identify and prioritize the digital platforms currently employed by the selected barangays. Similarly, this method summarizes the platforms preferences of the 245 respondents, providing a clear representation of the digital communication landscape.

The analysis reveals that the municipality relies exclusively on social media for information dissemination. In terms of platforms used, Messenger Groups achieved the highest rank with a frequency of 124 users with 50.6%, while Facebook Pages followed closely in second place with 121 users with 49.4%. Moreover, this heavy dependence on social media suggests a strategic shift toward real-time interaction and targeted audience engagement.

With this analysis it serves as the empirical basis for the proposed Strategic Communication plan, identifying that while social system has successfully adopted these communication innovations, the current digital infrastructure is limited to just two primary social media tools.

For Statement of the Problem No 2 and No. 3, using the weighted mean, researcher was able to measure central tendency across the areas of accessibility, audience reach and public announcements, while also evaluating how severe the problems respondents were experiencing. The researcher used the standard deviation to evaluate how diverse or consistent the respondents scores were, to provide evidence of the reliability and consistency of their observations.

The researcher employed a four-point Likert scale to facilitate interpretation of results by providing defined range values to determine the effectiveness of what the respondents rated as Highly Effective or Highly Challenging between a range of 3.25 – 4.00.

On the other hand, for the Statement of the Problem No. 4, the Intra-class Correlation Coefficient (ICC) were utilized to test agreement between respondents regarding the effectiveness of these platforms. In addition, adopting the rigorous statistical criteria, the analysis conducted using a 0.05 level of significance. A p-value less than alpha level of 0.05 would indicate rejection of the null hypothesis and therefore that the respondents exhibited a collective perception represents a statistically reliable and cohesive assessment rather than individual chance.

Moreover, the consistency of the research instrument is verified using Cronbach's Alpha Coefficient, ensuring that the reliability guides for each domain, ranging from 0.80 Good to 0.93 Excellent, meet the academic standards for strategic planning. These indices signify that the instrument was reliable enough to be used for academic evaluation and community strategy planning, ensuring that the respondents gathered were not due to chance but reflected consistent perception among the officials.

Finally, the statistical treatment was not merely descriptive but functioned as the empirical basis for the proposed Strategic Communication Plan, which serves as structured, context – specific strategy.

#### *Ethical Considerations*

This study strictly adhered to established ethical standards and the Data Privacy Act of 2012. Prior to data collection, formal permission to conduct the study was obtained from the Municipality of Boac and from the selected barangay in Boac. Approval was secured before any interaction with the participants to ensure institutional compliance and transparency. Participation was entirely voluntary and respondents were informed of their right to withdraw at any time. On the other hand, to maintain anonymity and confidentiality, personal identifiers were omitted, and all data were stored securely, accessible only for academic evaluation.

## Results and Discussion

This section presents the finding according to the study's research questions.

Digital Platform	Frequency	Percentage	Rank
Facebook Page	121	49.4	2
Messenger Group	124	50.6	1
SMS/Text Blast			
Viber Group			
Website			
Others: (Indicate here the other platform)			
<b>Total</b>	<b>245</b>	<b>100</b>	

Table 1. Digital platforms currently utilized by the selected barangays in the Municipality of Boac

The data showed the digital platforms used by the respondents from the selected Barangay in Boac, Marinduque as part of the study. Messenger Groups are the most popular way to communicate with other people, with 124 number of users, which represents 50.6% of the total sample. On the other hand, Facebook Pages come in second, with 121 number of users, which represents 49.4% using this channel to share information. Meanwhile, other digital platforms had no activity in this data.

These results shows that barangays rely heavily on social media platforms. Relatively, these findings align with the study of Reyes & Santos (2022), which stated that Philippine local government units (LGU) found that Facebook is the most widely commonly used platform because of its high accessibility and user-friendly interface. Ultimately, this information shows that there is a move toward real-time interaction and targeted audience engagement, which are the objectives of the digital transformation being assessed within the province.

Indicators	WM	SD	Interpretation	Rank
Digital content is easily found by the constituents.	3.68	.492	Highly Effective (HE)	2
The information on the platform is available 24/7	3.57	.578	Highly Effective (HE)	6
Information is written in a simple language that is easy to understand.	3.71	.450	Highly Effective (HE)	1
Information is well-organized	3.64	.486	Highly Effective (HE))	3
Content considers the needs of person with disabilities.	3.63	.507	Highly Effective (HE)	4
Important links (e.g., hotlines) are available.	3.55	.574	Highly Effective (HE))	7
Information is in multiple formats (e.g., text, infographics, photo, video)	3.53	.576	Highly Effective (HE)	8
Can easily send messages or inquiries.	3.60	.514	Highly Effective (HE))	5
The digital platform is “mobile-friendly” and easy to navigate on a smartphone.	3.63	.491	Highly Effective (HE)	4
The loading speed of the page or website is fast with a limited data connection.	3.42	.632	Highly Effective (HE))	9
<b>Average Weighted Mean</b>	<b>3.60</b>	<b>.381</b>	<b>Highly Effective (HE)</b>	

*Table 2. The effectiveness of digital platform in enhancing information dissemination in terms of Accessibility.*

Table 2 presents the effectiveness of digital platforms in enhancing information dissemination in terms of Accessibility. The table highlights accessibility highly effective with an average weighted mean of 3.60, with SD of 0.381 which is verbally interpreted as Highly Effective. The highest rated indicator was found on number 3, that information is written in a simple language that is easy to understand, with a weighted mean of 3.71 with SD of 0.450, interpreted as highly effective. Meanwhile, the second highest indicator showed that digital content is easily found by the constituents, with weighted mean of 3.68, with SD of 0.492, also interpreted as highly effective. Similarly, indicator 4 revealed that information is well-organized, garnered with an average of 3.64 with SD 0.486, which was interpreted as highly effective. Moreover, indicator 10, the loading speed of the page is fast with a limited data connection, which obtained the lowest-rated indicator garnered with an average of 3.42 with SD 0.632, interpreted as highly effective.

Overall, the findings reveal that the municipality excels at making information understandable and findable, though the effectiveness is slightly tempered by infrastructure-related issues like slow data speed. This reflects that LGUs are able to establish a good internet infrastructure to be able to directly address the concern matter. This result is supported by the study of Guo and Zhang (2024), who stated that digital accessibility acts as the cornerstone of e-government, while on the other hand, the lower score for loading speed supports Van Dijk (2020), that digital frequently stems from poor internet infrastructure.

Indicators	WM	SD	Verbal Interpretation	Rank
The digital platform is recognized as a primary source of Local Government Unit information.	3.65	.484	Highly Effective (HE)	1
Digital platforms are effectively reaching a large percentage of the community.	3.56	.528	Highly Effective (HE)	3
Post and announcements are widely shared.	3.56	.558	Highly Effective (HE)	3
Content generates a high level of engagement.	3.48	.569	Highly Effective (HE)	8
Can reach diverse groups such as youth, seniors and professionals.	3.59	.532	Highly Effective (HE)	2
Local community leaders and groups actively follow and share the information.	3.55	.537	Highly Effective (HE)	4
Digital platforms are complementing traditional media like radio.	3.55	.574	Highly Effective (VE)	4
There is a consistent growth in the number of audience/followers.	3.54	.531	Highly Effective (HE)	5
Digital content is regularly updated to keep the audience interested and coming back.	3.51	.555	Highly Effective (HE)	7
Collaborations with local influencers or community “stars” help spread Barangay information’s.	3.52	.516	Highly Effective (HE)	6
<b>Average Weighted Mean</b>	<b>3.55</b>	<b>.391</b>	<b>Highly Effective (HE)</b>	

*Table 3. The effectiveness of digital platform in enhancing information dissemination in terms of Audience Reach*

Table 3 presents the extent of effectiveness of digital platforms in enhancing information dissemination in terms of Audience Reach is highly effective with an average weighted mean of 3.55, with SD of 0.391, which is verbally interpreted as Very Effective.

The highest-rated indicator was found on number 1, that the digital platform is recognized as a primary source of Local Government Unit information, with a weighted mean of 3.65, with SD of 0.484, interpreted as highly effective. Meanwhile, indicator 5 revealed that platforms can reach diverse groups such as youth, seniors, and professionals with a weighted mean of 3.59, with SD 0.532, also verbally interpreted as highly effective. Moreover, indicator 9, that digital content is regularly updated to keep the audience interested, obtained the lowest-rated indicator with a weighted mean of 3.51 with SD 0.555, interpreted as highly effective.

Similarly, this means that while platforms have established high institutional credibility, there is a challenge in sustaining dynamic updates. The finding of this study, strongly supported by Bautista (2023), stated that public trust is a major determinant of effectiveness, when residents view the source as credible, reach expands. These findings indicated that the digital platforms used by the barangays in terms of information dissemination highly gets the engagement with the community of each barangay. Furthermore, Delos Santos (2021) observed that many LGUs or Barangay struggle in the technical capacity to maintain active, high-engagement online presence.

Overall, the digital platforms have established high institutional credibility as primary information sources, the struggle with maintaining the dynamic, frequent updates and local partnerships necessary for maximum community engagement.

Indicators	WM	SD	Verbal Interpretation	Rank
The information posted in the digital platform are official and credible.	3.58	.525	Highly (HE) Effective	5
The digital platform is effective for announcing LGU/Barangay services.	3.63	.498	Highly (HE) Effective	2
Digital platform is being used to disseminate important information like typhoon warnings, class suspension.	3.63	.507	Highly (HE) Effective	2
A digital platform is being used to announce public health advisories.	3.60	.505	Highly (HE) Effective	4
Announcements are timely and posted in a consistent and predictable manner.	3.51	.547	Highly (HE) Effective	8
Digital platforms are effective in mobilizing community activities.	3.53	.516	Highly (HE) Effective	7
Information about Barangay activities, programs and projects are clearly disseminated through digital platforms.	3.65	.492	Highly (HE) Effective	1
Digital platforms effectively gather public feedback and answer questions/queries on the posted announcements.	3.62	.549	Highly (HE) Effective	3
Emergency announcements include clear "call-to-action" steps for residents to follow.	3.63	.522	Highly (HE) Effective	2
The Barangays uses "Live Streaming" for transparency during the public hearing or events.	3.57	.626	Highly (HE) Effective	6
<b>Average Weighted Mean</b>	<b>3.60</b>	<b>.362</b>	<b>Highly Effective (HE)</b>	

*Table 4. The effectiveness of digital platform in enhancing information dissemination in terms of Public Announcement*

Table 4 presents the extent of effectiveness of digital platforms in enhancing information dissemination in terms of Public Announcement is highly effective with an average weighted mean of 3.60, with SD of 0.362 which is verbally interpreted as Highly Effective.

The highest rated indicator was found on number 7, that the information about the Barangay activities, programs, and projects are clearly disseminated through digital platforms, with a weighted mean of 3.65, with SD of 0.492, which is verbally interpreted as highly effective. However, three indicators tied for the second-highest rated with a weighted mean of 3.63; indicator 2, effectiveness for announcing services, indicator 3, disseminating warnings and suspensions, and indicator 9 including clear call-to-action steps. Meanwhile, the lowest rated indicator was that the announcement is timely and posted in a consistent and predictable manner, with weighted mean of 3.51, with SD 0.547, which was still interpreted as highly effective.

These findings indicated that in terms of Public Announcement, digital platforms are highly reliable for service in the Barangays. This supports Wukich (2020), who stated the vital role of social media in emergency management and public safety. Moreover, the lower score for the Live Streaming suggests a need for more “media-rich” communication, as suggested by Media Richness Theory (Daft R.L., & Lengel R. H., 1986) to minimize misinterpretation during complex events. Overall, the findings stated that the platforms are highly reliable for emergency and service broadcasting, but there is room to improve the speed of delivery and the use of interactive tools like live streaming to better mobilize the public.

Scale	Domains	WM	SD	Verbal Interpretation	Rank
Extent of effectiveness	Accessibility	3.60	.381	Highly Effective	1
	Audience reach	3.55	.391	Highly Effective	3
	Public announcement	3.60	.362	Highly Effective	2
<b>OVERALL</b>		<b>3.58</b>	<b>.311</b>	<b>Highly Effective</b>	

*Table 5. Overall Extent of Effectiveness of Digital Platform in Enhancing Information Dissemination Summary*

Table 5 presents the overall extent of effectiveness of digital platforms in enhancing information dissemination with an overall weighted mean of 3.58, with SD of 0.311, which is verbally interpreted as Highly Effective.

This indicates that the extent of effectiveness of the digital platform used in information dissemination in the Barangays was highly effective towards the community, in terms of accessibility, audience reach and public announcement. Among all the domains, Accessibility and Public Announcement lead the assessment with the same weighted means of 3.60, as interpreted as highly effective ranking first and second respectively. Meanwhile, Audience Reach ranked third, with a weighted mean of 3.55, which was still verbally interpreted as highly effective.

On the other hand, these findings suggested that while the information flow is strong, there is a relative gap in information dissemination across the entire community. Innovations Theory (Rogers, 2023), suggested that these digital platforms have been successfully adopted as essential communication innovations within the social systems of the barangays in Boac.

Indicators	WM	SD	Interpretation	Rank
Lack of stable or fast internet connection.	3.31	.661	Highly Challenging	7
Limited internet access or poor signal for residents in many barangays.	3.31	.679	Highly Challenging	7
Low digital literacy skills among the general public.	3.37	.644	Highly Challenging	3
Insufficient budget for digital communication (e.g., for boosting posts, software, equipment)	3.41	.657	Highly Challenging	2
Lack of dedicated, trained personnel to manage the Barangay's/LGU's digital platforms.	3.36	.678	Highly Challenging	4
Difficulty in creating high-quality, engaging content (e.g., graphic design, video production)	3.36	.678	Highly Challenging	4
Lack of a clear policy or strategy for digital communication.	3.35	.665	Highly Challenging	5
Difficulty in managing negative comments, trolls, or political "bashing."	3.35	.701	Highly Challenging	5
Difficulty in verifying information or countering "fake news" spread by other pages.	3.42	.664	Highly Challenging	1
Poor coordination among LGU departments for sourcing and approving information to be posted.	3.32	.814	Highly Challenging	6
<b>Average Weighted Mean</b>	<b>3.36</b>	<b>.558</b>	<b>Highly Challenging</b>	

*Table 6. Challenges of the Municipality in Disseminating Information to the Public via Digital Platform*

Table 6 answers the challenges faced by the selected barangays in Boac, with an average mean of 3.36, with standard deviation of 0.558 which is verbally interpreted as Highly Challenging.

The highest rated indicator was the indicator 9, difficulty in verifying information or countering fake news with a weighted mean of 3.42, with SD of 0.644, which was verbally interpreted as highly challenging. While, indicator 4, ranked as second, that there is an insufficient budget for digital communication, with a weighted mean of 3.41, with SD 0.657, also interpreted as highly challenging. Meanwhile, indicator 1 and 2, for lack of stable or fast internet connection followed, with a weighted mean of 3.31, with SD of 0.661, likewise interpreted as highly challenging.

Similarly, the prominence of “fake news” is similar with Tan and Garcia (2022), who stated that misinformation is a significant barrier to successful crisis in communication. With this, it can result in the high challenge in reliability of the source of the information that is being disseminated by the Barangay. Moreover, this suggests that while digital connectivity remains an issue, the municipality and barangay is more concerned with data ethics and resource allocation, aligning with the research gap that emphasizes the need for a plan that manages misinformation and improves administrative capacity.

Domains	ICC Coefficients	F	p-value <sup>b</sup>	Interpretation
Accessibility	.791	9.216	<.001	Significant
Audience Reach	.555	3.376	<.001	Significant
Public Announcement	.577	3.301	.001	Significant

Table 7. Significant Agreement on the Extent of Effectiveness of Digital Platform in Enhancing Information Dissemination

Table 7 shows the statistical validation for the study, utilizing the Intra-class Correlation Coefficient (ICC) to measure the consistency and reliability of respondent agreement regarding the effectiveness of digital platforms. The results reveal that accessibility achieved the highest level of agreement with an ICC coefficient of .791, which was interpreted as good reliability, meanwhile audience reach and public announcement showed moderately reliability with coefficients of .555 and .577 respectively.

Based on the results, all p-values are less than the value of  $\alpha = 0.05$ , there is enough evidence to reject the null hypothesis. Therefore, there is a significant agreement on the extent of effectiveness of digital platforms in enhancing information dissemination. Furthermore, this cohesive perception agreed with the finding of Febriana (2025), who stated that the effective implementation of information systems in public governance is fundamentally related to the commitment of leaders and the organization’s culture.

These data support interventions targeting verification protocols and media-rich content. Anchored in Media Richness Theory (Daft & Robert H. Lengel, 1986), the results suggested that the LG should move beyond text-based posts toward Live Streaming with weighted mean of 3.57, and infographics to minimize misinterpretation during complex events.

Based on these cross-referenced findings, the significant agreement reflected in Table 6 suggested that the effectiveness of the use of digital platforms in Boac is not merely a collection of personal insights, but represents a statistically reliable collective assessment, providing an empirical basis for the development of the Strategic Communication Plan, which advocates for the formalization of a Barangay Information Management System (BIMS) to institutionalize digital governance.

## Conclusion and Recommendations

### Conclusion

Based on the findings of the study, it is concluded that the Municipality of Boac had effectively utilized social media, specifically Messenger Groups and Facebook Pages, as essential communication innovation for disseminating public information, these platforms are perceived as Highly Effective and have become the main and most reliable source of Local Government Unit (LGU) information for their community. The statistically significant agreement among respondents ( $p < .05$ ) across all the domains of accessibility, audience reach, and public announcement confirms that this high level of effectiveness is a reliable collective assessment rather than a result of chance, thereby leading to the rejection of the null hypothesis.

The findings also revealed that the efficiency of this digital dissemination system is currently vulnerable to technical infrastructure limitation and significant informational integrity threats. While information is generally rated as highly

accessible and understandable, issues such as poor signals or slow loading speeds continue to hinder the overall effectiveness of the platforms. Furthermore, the most critical barrier identified is the difficulty in countering fake news and the lack of a defined digital policy that limit the ability of the digital dissemination systems to provide accurate and up-to-date announcements to the public, The findings also indicate that while new officials show strong potential for digital adoption, older (non-tech) oriented employees will need additional organizational support to successfully use these systems.

Finally, the study concludes that there remains a gap between basic service notification and dynamic community engagement, suggesting a need for media-rich communication tools such as live streaming to minimize misinterpretation. To address these challenges, a Strategic Communication Plan was developed as a systematic, evidenced-based product of the research process. Similarly, the purpose of the proposed plan aims to institutionalize digital literacy, upgrading technology infrastructure, developing verification processes, and providing the municipality with communication strategies that are responsive, inclusive, and able to withstand the negative effects of false information.

### *Recommendations*

The following recommendations were proposed based on the findings and conclusions drawn:

To the Local Government Unit and Barangay Officials, they should prioritize Digital Literacy and Capacity Building. Experts should be invited to facilitate workshops targeting officials and staff to ensure they can navigate digital platforms safely and effectively.

To the Municipal and Barangay Administration, they should allocate sufficient funds and invest in infrastructure upgrades for high-speed internet and install free public Wi-Fi in various Sitios in Barangay, to ensure constituents can receive timely updates regardless of personal data limitations.

To the Public Information Officers, it is recommended to establish a Barangay Information Management System (BIMS) and pass local ordinances to formalize digital communication protocols. This includes creating verified official pages to actively counter misinformation and maintain the integrity of disseminated news.

To the Communication Personnel, efforts should be made towards content broadening. To minimize misinterpretation of complex events, officials should use media rich communication formats such as infographics, videos, and live streaming for public hearings and events and prioritize funding for digital equipment, software, and dedicated personnel to manage social media platforms, and to ensure that updates are consistent and community engagement is sustained.

To the Future Researchers, future studies should replicate this research in other municipalities or at the provincial level to check the reliability of the results across different contexts. They may also consider integrating qualitative approaches such as interviews, to gain deeper insights into the specific social processes between officials and constituents.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this article.

## Data Availability Statement

Data sharing is not applicable to this article as no new data were created or analyzed in this study; all data used were obtained from previously published sources as cited in the reference list.

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## Appendices

No appendices are attached to this study.