

Analysis of Digital Literacy Interest Among Rural Communities in the Development of E-Government Systems

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Abstract

The Electronic-Based Government System (SPBE) has been developed through various initiatives, significantly impacting the level of digital literacy among rural communities in Cirebon Regency. This study examines the results of an evaluation of the effectiveness of e-government policies using William N. Dunn's policy evaluation framework. Data were collected using qualitative methods and an interview approach, with the Cirebon Regency Communication and Information Agency (Diskominfo) serving as the primary informant and two village officials in Palimanan Subdistrict as supporting informants. Field findings reveal that while digitization has successfully created bureaucratic efficiency and service transparency, aspects of access adequacy and equity remain hindered by infrastructure gaps and the digital generation divide. The research findings indicate that theoretical educational strategies have proven ineffective for rural communities; therefore, a practical, context-based mentoring approach is required through strategic collaboration between village governments, the Cirebon Regency Communication and Information Technology Agency (Diskominfo), and rural communities in Cirebon Regency. Thus, the success of digital transformation at the local level does not rely solely on technological sophistication but is heavily dependent on integrating system innovations with simpler literacy programs to ensure the digital self-reliance of communities even in the most remote villages, thereby realizing responsive and equitable governance.

Keywords: e-government, digital literacy, rural communities, system development, Cirebon Regency communication and information office

INTRODUCTION

Information and verbal exchange generation has advanced rapidly in numerous aspects of human life, including the provision of both public and administrative services. This initial phenomenon began with the evolution of public services, which became the government's primary obligation to fulfill the needs of society as a whole. Historically, public services have undergone a significant transformation from the Old Public Administration (OPA) model, which focused more on traditional bureaucracy, toward *New Public Management* (NPM), which emphasizes efficiency, accountability, and client orientation (Behnampour & Momeni, 2025; Horsu, 2022; Saleh et al., 2025; Van Hau et al., 2023). In this context, the government faces demands to adapt to the digital era, in which traditional services are gradually being replaced by technology-based systems. This is reflected in the national policy on the implementation of the Electronic-Based Government System (*Sistem Pemerintahan Berbasis Elektronik* [SPBE]) through (PERPRES No. 95, 2018), which aims to integrate information technology into government operations and promote transparency and efficiency in service delivery.

The Electronic-Based Government System (*Sistem Pemerintahan Berbasis Elektronik* [SPBE]), often referred to as e-government or digital government, not only promotes efficiency and cost reduction but also enhances government integrity by providing

services that are more accessible to the general public. This development also has far-reaching implications for society's readiness to adapt to change, in which technology serves as the primary catalyst for collectively improving the quality of life. Nevertheless, the implementation of SPBE faces numerous challenges that hinder the achievement of its objectives (Ferreira, 2023; Lamssarbi et al., 2024; West, 2025). The primary issue identified is that interest in digital literacy among rural communities remains limited to administrative needs. This is considered the greatest obstacle to the full implementation of e-government. Without the fundamental capability and willingness to locate, evaluate, and use digital information, these systems are often considered ineffective, resulting in digital services failing to reach all regions equally (Mustafa et al., 2020; Wulf et al., 2017).

Internal factors such as a lack of knowledge and motivation to learn new technologies—which are often perceived as complex and unfamiliar—create psychological barriers for villagers. Meanwhile, external factors such as limited internet access and the uneven distribution of technological devices remain persistent issues, further hindering community participation in e-government development (Djarmiko et al., 2025; Nirmani, 2025; Omweri, 2024). The Literacy Rate (*Angka Melek Huruf*[AMH]) in Cirebon Regency has remained stable over the last five years (Istiadari, 2023). The decline in the AMH from 95.42% in 2021 to 93.70% in 2023 serves as a warning to remain vigilant regarding the erosion of the community's foundational literacy. This situation is further highlighted by the Community Literacy Development Index (*Indeks Pembangunan Literasi Masyarakat*[IPLM]) in 2024, which remained stagnant at a score of 57.56% in the “Moderate” category. This indicates a significant gap in skills at the grassroots level (Ali & Ariffin, 2017). The Indonesian Digital Society Index (*Indeks Masyarakat Digital Indonesia*[IMDI]) showed a positive increase in 2025, reaching 49.34 and entering the “High” category; however, in practice, this has not yet fully reflected the equitable distribution of skills in rural areas, which still face various internal and external barriers in Cirebon Regency.

The role of public participation in the development of e-government systems is considered a key indicator, as a lack of public involvement in administrative systems can result in systems that operate in a one-sided manner, fail to respond to the public's actual needs, and potentially erode public trust. This issue is further complicated by the fact that the success of SPBE is highly dependent on the readiness of all parties—both service providers and users—and this imbalance hinders overall digital transformation (Aulia et al., 2025; Putuasduki & Putri, 2024; Wahyudi et al., 2025).

The urgency of this study is highly significant, considering the potential negative impacts if issues related to digital literacy are left unaddressed. Without increased interest and understanding among rural communities, the optimization of e-government may be hindered, ultimately obstructing the achievement of transparent, accountable, and participatory village governance. In an era in which technology serves as the backbone of government reform, unequal access and participation can erode public trust in state institutions and exacerbate the digital divide between urban and rural areas. Without the basic ability to locate, evaluate, and use digital information, these systems are often considered ineffective, preventing digital services from being delivered equitably across all regions. This issue is also driven by the need to prevent unilateral and unresponsive administrative systems, which have the potential to create social conflict and inefficiency in public decision-making (Chan, 2024; Justice & Miller,

2018). Through this regulation, the government has established national targets for SPBE; however, without support from grassroots communities, these goals will be difficult to achieve.

Several studies have examined e-government and digital literacy in different contexts. Asmuiddin (2025), in the article “*The Influence of Digital Transformation on Community Participation in E-Government*,” concluded that digitalization has paved the way for the realization of more transparent and responsive governance; however, increased access to e-government services has not actively involved the community due to obstacles such as low public trust in data security and suboptimal services. Farhandhika (2024), in the article “*Village Government Resistance to E-Government-Based Public Services*,” found that in North Cikampek Village, the implementation of e-government was considered complicated for older village officials because they were more familiar with paper-based methods, whereas younger residents tended to prefer e-government methods because they were perceived to reduce data-entry errors. Imamah(2025), in the article “*Implementation of the Digital Village Program: A Digital Governance Perspective (Sidomulyo Village Case Study, Jember Regency, 2025)*,” emphasized that the success of village digitalization is highly dependent on sustainable governance and training, and that without adequate improvement in village apparatus competencies and infrastructure, the effectiveness of public services will remain constrained.

Although these studies have made important contributions, there remains a research gap. Most existing studies tend to focus on the readiness of technological infrastructure, technical aspects of information security, or the adoption of government services in urban areas. There has been no study specifically analyzing rural communities’ interest in digital literacy in the development of e-government systems using William N. Dunn’s policy evaluation framework (six dimensions: effectiveness, efficiency, adequacy, equity, responsiveness, and accuracy) in Cirebon Regency. In addition, studies identifying internal and external factors, as well as context-based practical mentoring strategies for rural communities, remain limited.

The novelty of this research lies in three aspects. First, this study uses William N. Dunn’s policy evaluation framework to analyze the implementation of SPBE at the village level, which has not been widely applied in e-government studies in Indonesia. Second, this study specifically highlights the factors that hinder rural communities’ interest in digital literacy, both internal (motivation and trust) and external (infrastructure and access), and formulates mentoring strategies based on practical and local contexts rather than solely theoretical approaches. Third, this study involves key informants from the Communication and Information Office (*Dinas Komunikasi dan Informatika* [Diskominfo]) of Cirebon Regency and two village officials in Palimanan District, thereby providing a comprehensive multi-stakeholder perspective. This research is essential for developing targeted strategies—such as inclusive educational programs and infrastructure development—to ensure that e-government does not merely function as a tool for elites, but genuinely serves all segments of society. In a global context where countries such as Singapore and Estonia have successfully implemented inclusive digital models, Indonesia must urgently close this gap to enhance national competitiveness and public welfare.

The overall objective of this study is to analyze and develop strategies to increase rural communities’ interest in and understanding of digital literacy in order to optimize the implementation of the Electronic-Based Government System (*Sistem Pemerintahan Berbasis Elektronik* [SPBE]) as an effective tool for village governance. Specifically, the study aims to

identify factors hindering two-way participation in e-government, as well as formulate practical recommendations that can be implemented at the village level to build an inclusive digital ecosystem. Thus, this objective is expected to contribute to more responsive government reform, in which the public is not merely the object of services but also an active subject involved in the decision-making process. Ultimately, achieving this objective will support the vision of SPBE as an efficient, transparent, and community-oriented digital government, thereby driving sustainable progress across the nation.

METHOD

The researcher used a qualitative research approach as the primary framework for collecting and analyzing data. A qualitative approach was selected because of its in-depth and flexible nature, which allowed the researcher to explore social phenomena holistically without being limited by statistical measurements. This approach was particularly suitable for examining the dynamics of communication and information technology at the district level, especially within the Cirebon Regency Communication and Information Office (*Dinas Komunikasi dan Informatika*[Diskominfo]) and village administrations in Palimanan District. The qualitative method enabled the researcher to capture the nuances of human behavior, work processes, and social interactions related to the implementation of digital governance.

One of the primary data-collection techniques used in this study was direct observation. Observation allowed the researcher to gather contextual information regarding work processes, communication patterns, and the use of digital systems within the institutions studied. The advantage of observation was its ability to capture information in real time, thereby reducing bias that could arise from respondents' memory limitations or socially desirable responses. Specifically, this study employed non-participant observation, in which the researcher acted as an external observer without directly participating in the activities being observed.

Through non-participant observation, the researcher observed employee work patterns, the dissemination of information through digital channels, and responses to public service issues within the Cirebon Regency Communication and Information Office and village administrations. Observations were conducted at the offices of the Cirebon Regency Communication and Information Office, Tegalkarang Village, and Lungbenda Village in Palimanan District from December 2025 to January 2026. The collected data were documented in the form of field notes, photographs (with ethical approval), and audio recordings when necessary. Although this technique provided rich contextual data, the researcher remained aware of the possibility of subjective interpretation; therefore, triangulation with other methods was conducted to strengthen the validity of the findings.

In addition to observation, the researcher conducted semi-structured interviews as a supplementary data-collection method. Semi-structured interviews allowed respondents to explain their experiences and perspectives freely while still following a set of guiding questions. The selected informants included staff members from the Statistics, Cryptography, and e-Government divisions of the Cirebon Regency Communication and Information Office. These informants were chosen based on their relevance, expertise, and direct involvement in the implementation of digital governance. Interviews with operational staff provided insights into the practical challenges and operational aspects of implementing e-government systems.

The interviews were conducted in person, lasted approximately 45–60 minutes, and were recorded with the participants' consent to ensure transcript accuracy. These interviews complemented the observational data by clarifying observed phenomena and explaining the reasons behind specific behaviors and institutional practices.

The integration of observation and interviews created methodological triangulation, which strengthened the validity and reliability of the research findings. Overall, the combination of non-participant observation and semi-structured interviews within this qualitative framework aligned with the study's objective of analyzing the dynamics of digital governance within the Cirebon Regency Communication and Information Office and village administrations. The collected data were analyzed by identifying key themes and drawing conclusions based on the findings obtained. By adhering to research ethics principles, including confidentiality and informed consent, this study was expected to contribute to the field of communication and information technology at the local-government level.

RESULTS AND DISCUSSION

Field findings indicate that the implementation of e-government structures in rural regions isn't most effective hindered with the aid of using the provision of infrastructure however additionally closely depending on the variety of virtual abilities some of the nearby population. The evaluation on this segment will provide an explanation for how sociocultural elements and confined get entry to to records form awesome styles of virtual literacy, which in the long run have an effect on the effectiveness of virtual transformation in villages. Through this discussion, it turns into clean that virtual literacy isn't simply an character technical skill, however a important prerequisite for growing obvious and inclusive village governance.

An Analysis of E-Government Systems Policy According to William N. Dunn

The implementation of the e-government system based on Presidential Regulation of the Republic of Indonesia No. 95 of 2018 on the Electronic-Based Government System (SPBE) in Cirebon Regency has developed and improved significantly. The implementation of the Electronic-Based Government System (SPBE) in Cirebon Regency reflects the region's efforts to align national mandates with the local needs of rural communities. This development is a strategic initiative aimed at improving the quality of public services through an inclusive digital transformation for rural communities.

Dunn defines policy analysis as an evaluation framework for assessing the extent to which a policy or program achieves its objectives. In the context of e-government system development, this concept is used to analyze the impact of SPBE on the public's interest in digital literacy. Dunn explains policy analysis across seven dimensions, each of which has parameters used to analyze how a policy—in this case, SPBE—addresses and identifies the factors causing digital literacy disparities among rural communities, particularly in Cirebon Regency.

Effectiveness

According to Dunn, the dimension of effectiveness essentially serves to assess the extent to which an institution has achieved tangible results in implementing its programs. This assessment is conducted by comparing the degree of alignment between the efforts expended and the previously established targets or objectives. In this context, the Cirebon Regency Communication and Information Agency (Diskominfo) has implemented various strategic

efforts to develop and increase interest in digital literacy among rural communities. These strategic steps are now considered sufficiently effective in achieving the desired goals. This success can be clearly demonstrated by the high volume of public traffic on the village service portal provided.



Figure 1. Increase in Website Traffic for the Cirebon Regency Communication and Information Office in December 2025

Source: Traffic Visit Page on the website of the Cirebon Regency Communication and Information Technology Agency (diskominfo.go.id)

The results of this digital transformation program have shown a steady and significant improvement over time. This is driven by the high level of active usage by citizens and the speed at which public services are delivered, compared to the situation before the digital system was implemented. Through this system, the low level of digital literacy among the public has gradually decreased as citizens have become accustomed to interacting with technology more frequently.

A comparison of figures every three days shows that the demand-to-page-view ratio indicates a rising trend from November 23 to December 23, 2025, and reveals a significant increase in website traffic. This increase is largely driven by administrative needs—such as accessing public services (document and data processing, information, etc.)—rather than exploratory browsing.

Currently, the implementation of e-government at the village level is focused on the digitization of civil registration through the integration of applications such as the Digital Identity System (IKD) and the Post-Marriage Civil Registration Service (PADUKA). The digital service system in Tegalkarang Village currently only covers civil registration through services provided by the Population and Civil Registration Office. Although the implementation is running smoothly and the community feels greatly assisted, the village does not yet have an official website as instructed by the relevant agency for the sake of information transparency. This is due to the lack of pressure or complaints from residents regarding the availability of such a website. So far, the level of public understanding regarding the use of digital services is estimated to have reached only 60%, as seen from participation in submissions via the IKD application.

The effectiveness of digital service delivery in Lungbenda Village is considered to be less than optimal due to numerous technical issues with the application and the community’s limited

understanding of how to use the devices and access the services. The system’s effectiveness is rated at 7 out of 10, given the technical challenges faced by the central operators and the residents’ incomplete digital literacy.



Figure 2. Results of the 2023 SPBE Evaluation

Source: Cirebon Regency SPBE, accessed on December 12, 2025

Based on the visualization, in terms of internal governance policies for SPBE, electronic-based services, and government administrative services have exceeded their implementation targets and demonstrate significant improvements in internal digitalization, the quality of digital services, and regulatory frameworks. Regarding the SPBE implementation aspect, the organizational structure and human resources have met the standards sufficient to meet the minimum expected requirements. However, there are indicators showing gaps in other aspects such as SPBE management implementation, information and communication technology, and ICT audits. These gaps indicate that change management and data utilization have not yet been fully implemented. Predicted challenges in certain infrastructure areas—such as networks, servers, or hardware integration—are factors contributing to the current implementation level remaining below the target achievement. The frequency or quality of inspections/audits conducted on the information technology systems implemented in 2023 also has not yet reached the maximum level in accordance with established standards.

The 2022 literacy index (71.55) served as the foundation for the Cirebon Regency Communication and Information Agency (Diskominfo) to design a targeted system. The success of the 2023 SPBE in the public service aspect proves that direct mentoring strategies and the use of everyday communication media (WhatsApp) are key to addressing the low interest in digital literacy in rural areas of Cirebon Regency. Overall, Cirebon Regency demonstrates strong performance in service output and regulatory frameworks, though this

performance is not yet fully supported by internal governance and infrastructure. There is a disparity between what is provided to the public and how the system is managed behind the scenes, which is quite evident in the 2023 SPBE evaluation report.

Efficiency

Efficiency is carefully tied to the quantity of attempt required to attain a positive degree of effectiveness in public offerings. In this context, the Cirebon Regency Communication and Information Technology Agency (Diskominfo) is operating to streamline bulky bureaucratic procedures and reduce using bodily files thru virtual innovations. The use of chatbots at the WhatsApp app and populace management structures including Paduka and IKD (Digital Population Identity) is taken into consideration some distance greater cost-powerful in numerous components, starting from time performance and tour distance for citizens to the discount of immoderate paper usage. This 24-hour carrier permits the general public to get entry to administrative offerings each time and everywhere with out being sure via way of means of workplace hours. To bridge this gap, village officers play a essential position as facilitators of virtual literacy, connecting generation regulations with the actual desires of the network.

Village officers actively assist enhance citizens` virtual literacy thru one-on-one steerage for each applicant who comes in. Amid a network divided among supporters of virtual structures and people who nonetheless sense unusual with them, village officers offer step-via way of means of-step steerage on working carrier programs. The use of acquainted structures like WhatsApp is fundamental to making sure citizens do now no longer sense beaten via way of means of complicated features. Through this customized education, interactions on the village workplace are now no longer simply administrative topics however have grow to be a area for citizens to find out about generation.

The number one advantage for citizens is the saving of time and attempt, as they now no longer want to go to district or sub-district authorities places of work in person; instead, they are able to truly undergo the village workplace or post programs independently from home. Efficiency demanding situations rise up from the application`s operational components in addition to staffing boundaries on the imperative authorities or company degree, which make it hard to assure short record processing times. This virtual transformation maintains to prioritize the precept of inclusivity to make certain that inclined groups, including the elderly, do now no longer lose their proper to get entry to those offerings.

Village officers in each Tegalkarang and Lungbenda villages offer greater in depth and affected person steerage to senior citizens who have a tendency to have worries approximately the brand new system. For essential help including social aid, the villages maintain to apply guide strategies or in depth steerage to make certain that no citizens are neglected because of constrained verbal exchange tools. Thus, the performance efforts promoted via way of means of the Cirebon Regency Communication and Information Agency (Diskominfo) can continue in tandem with strengthening citizens` virtual capabilities, wherein virtual-primarily based totally offerings now no longer most effective streamline paperwork however additionally function a method to enhance network literacy below the direct steerage of village officers.

Sufficiency

This factor refers back to the provision of primary infrastructure for the implementation of SPBE, which include public Wi-Fi and ok hardware—which include computer systems withinside the village hall, to help network get right of entry to to virtual services. The adoption of virtual generation has a balanced effect at the workload of village officers. On one hand, paintings will become extra green due to the fact coordination and administrative techniques with higher-stage organizations may be carried out on line with out the want for bodily presence. On the alternative hand, village officers in Tegalkarang nonetheless should serve extra citizens who select guide techniques or request direct help for report processing, which include acquiring a Business Identification Number (NIB), because of citizens` restrained cappotential to function self-provider systems. As for the network of Lungbenda Village, they've extra succesful centers to enforce virtual-primarily based totally services, despite the fact that in keeping with village officers, present centers are nonetheless now no longer completely optimized, which include the village website. Attendance monitoring for each village officers continues to be finished manually with the aid of using filling out attendance in an attendance book.

Facilities which include virtual provider help equipment are enough for primary needs, which include storing citizens` data. However, overall, the provision of those ok equipment has now no longer but reached its complete potential. To date, the village has now no longer installed a proper schooling software for citizens on the way to use virtual services. That said, the centers asked with the aid of using the village are commonly furnished with the aid of using the primary authorities according with the village`s submitted proposals.

Equity

Equity measures whether or not the blessings and prices of a coverage are disbursed pretty amongst unique organizations. SPBE targets to offer equitable offerings to all users. The efforts of the Cirebon Regency Communication and Information Agency to offer net get right of entry to via third-birthday birthday celebration vendors in regions with terrible sign insurance are a concrete instance of the implementation and improvement of virtual get right of entry to. There is a putting distinction among the more youthful operating-age population, who're greater supportive of current structures, and the elderly, who experience alienated and warfare to adapt. Targeted help techniques for susceptible organizations and efforts to attain geographically far flung villages show a dedication to equitable get right of entry to. The Cirebon Regency Communication and Information Agency (Diskominfo) is likewise operating to bridge the virtual divide due to geographical elements with the aid of using in search of net provider vendors able to achieving far flung villages with risky signals.

The village places of work in Tegalkarang and Lungbenda are ready with good enough infrastructure, inclusive of frequently up to date laptop device and net connections from provider vendors. To bridge the virtual divide, village officers have selected to apply WhatsApp because the number one way of communicate and records dissemination. This app is taken into consideration greater powerful and acquainted to citizens in comparison to specialised apps, whose functions is probably greater tough for the overall public to understand. In line with efforts closer to equitable distribution, records is disseminated via outreach on the RT/RW degree in order that virtual offerings can attain all segments of the community.

The Cirebon Regency Communication and Information Office is operating to make certain equitable get right of entry to with the aid of using assembly the numerous desires of village administrations and simplifying provider structures in order that they're effortlessly understood with the aid of using rural communities. Although outreach efforts are mentioned to nevertheless have shortcomings in a few regions, the involvement of ICT volunteers enables enlarge instructional outreach to far flung rural regions which might be tough for the corporation to attain directly.

Responsiveness

This measurement assesses the quantity to which guidelines cope with the needs, preferences, and values of network groups. The improvement of cell apps and WhatsApp chatbots is a reaction to rural communities` want for simple, acquainted interfaces of their every day lives. The availability of grievance channels which include lapor.identityentification and the inner ADIK (Aduan Tik) app permits the general public to file insects or technical problems directly. Additionally, the Cirebon Regency Communication and Information Technology Agency (Diskominfo) mechanically video display units visitors and conducts pleasure surveys (even though formal survey facts remains being collected) to make sure the machine aligns with on-the-floor needs.

The village governments of Tegalkarang and Lungbenda are giving unique interest to susceptible network groups, especially the aged and low-earnings citizens, to make sure same get entry to to services. Village officers have answered proactively to the demanding situations confronted via way of means of citizens at some stage in the virtual transition. Village officers offer extensive help, consisting of with the BPJS software process. For the distribution of social help, the villages keep to apply a guide method, related to common domestic visits to citizens. Village officers are nonetheless striving to maximise help to cope with proceedings from citizens who experience the brand new machine is greater complex than the guide method. This step is taken to make sure that citizens who do now no longer personal cell telephones or have net get entry to nonetheless get hold of their entitlements with out feeling careworn via way of means of the virtual machine.

Appropriateness

Appropriateness refers back to the price or benefit of a coverage`s targets and whether or not the coverage virtually has a useful effect on society. In phrases of coverage direction, the frenzy closer to digitalization is taken into consideration suitable, however its implementation nevertheless calls for fine-tuning. Based at the outcomes obtained, this coverage is powerful in bridging the technological “gap” for residents who have been formerly left behind, step by step constructing their self belief to transition from conventional strategies to virtual ones.

The device turned into designed with social norms and ethics in mind, inclusive of decreasing the function of middlemen in civil registration offerings to foster transparency and accountability. The getting to know strategies have been shifted from in basic terms text-primarily based totally to visible hands-on sporting activities to lead them to greater available to residents with restricted instructional backgrounds. This digitization initiative is taken into consideration suitable as it now no longer most effective accelerates offerings however additionally helps the values of transparency and accountability, inclusive of decreasing the

function of middlemen in civil registration offerings. By handling and working packages like IKD, the authorities has taken the proper steps to assist rural groups adapt to generation with out feeling intimidated with the aid of using complicated systems.

In the villages of Tegalkarang and Lungbenda, Palimanan Subdistrict, the e-authorities coverage is taken into consideration suitable, however the outcomes at the floor have now no longer but absolutely maximized the cappotential to fulfill the community`s desires comprehensively. The community, in general, is starting to simply accept virtual transformation as a necessity, basically because of the ease it gives in coping with bureaucratic matters. This e-authorities coverage is carried out according with village guidelines and district authorities policies. Although the improvement of web sites for each villages continues to be withinside the starting stage and isn't but taken into consideration urgent, village officers are dedicated to persevering with to align technological improvements with the norms, ethics, and customs triumphing withinside the village community.

E-Government Development Initiatives Undertaken by the Cirebon Regency Communication and Information Agency for Village Officials

The Department of Communication and Information Technology, as a issuer of virtual-primarily based totally public offerings centered on assembly the desires of the network and enhancing carrier accessibility, has tested good sized outcomes in its development efforts. Based on interview findings, the Department of Communication and Information Technology (Diskominfo) of Cirebon Regency specializes in device improvement with the aid of using simplifying carrier get right of entry to via cell gadgets and presenting ordinary and ongoing guidance. Outreach activities, schooling sessions, and workshops are held often in order that village officers and the network can end up greater acquainted with and function the village`s virtual offerings. More extensive direct assist efforts also are being deployed, specially focused on prone businesses and groups with restricted get right of entry to to education.

One of the improvements that has been applied is an statistics get right of entry to carrier thru a chatbot at the WhatsApp app and a virtual-primarily based totally civil registration carrier at the IKD platform, in order that the general public does now no longer sense careworn approximately having to down load a brand new app, which they may discover cumbersome. The improvement of the e-authorities device that has been applied is supported with the aid of using ICT Volunteers (RTIK), who act as an extension to assist the Cirebon Regency Communication and Information Agency (Diskominfo) attain far flung regions. These efforts encompass the availability of net infrastructure together with hotspot regions and hardware in village halls. These efforts align with the “Cirebon Smart Village 2025” initiative, released on the cease of 2025, via a Train-of-Trainer (ToT) application to boost up virtual transformation on the village level.

Digital Literacy Factors Are the Main Obstacle to the Development of E-Government Systems in Cirebon Regency

Rural communities in Cirebon Regency have highly varied and uneven literacy levels, ranging from low to high. Based on observations conducted by the Cirebon Regency Communication and Information Technology Agency (Diskominfo), a significant gap is evident in the utilization of available digital public services. Vulnerable groups, such as the

elderly and those with limited access to education, require more time to adapt to understanding the workflow of digital services and often find the digital applications used to be confusing or too complex to grasp. This situation leads to a lack of confidence, making it difficult for them to try and causing them to fear using the available digital services.

Limited understanding also makes people—especially vulnerable groups—feel more comfortable using conventional services and visiting local government offices in person rather than accessing services and information through digital systems. Another factor is geographical; existing e-government systems face obstacles and challenges in reaching certain villages that lack adequate internet infrastructure. This affects the level of public digital literacy due to difficulties in accessing the available digital service systems.

The Most Effective Methods for Improving Village Officials' Understanding of and Readiness for the E-Government System

The Cirebon Regency Communication and Information Technology Agency (Diskominfo) has significant revel in in figuring out the techniques taken into consideration simplest for growing the general public's hobby in virtual literacy. Based on an evaluation through the Cirebon Regency Communication and Information Technology Agency (Diskominfo), the mastering techniques and substances supplied to the general public should be added in a contextual or theoretical manner, thru hands-on practices supported through clean and easy-to-apprehend visible aids. This makes it less difficult and quicker for the general public and village officers to apprehend the ideas and use of virtual-primarily based totally public offerings.

Intensive mentoring on the village hall, in addition to direct on-web website online mentoring, is taken into consideration extra powerful due to the fact village officers are visible as being near the local people and extra approachable, so the shipping techniques may be perceived as extra acquainted and less difficult for the network to apprehend. Additionally, contributors may be grouped primarily based totally on their needs, and unique classes may be held the use of a extra comfortable but extensive technique for susceptible agencies to make sure they do now no longer sense rushed in know-how the material.

The collaboration among the Cirebon Regency Communication and Information Technology Agency (Diskominfo) and RTIK to amplify the attain of training has been deemed rather powerful, facilitating the improvement of an e-authorities device this is extra equitable and impactful withinside the faraway rural regions of Cirebon Regency. The involvement of volunteers, the network, and the neighborhood authorities has facilitated the dissemination of training and the implementation of the SPBE, making sure that virtual offerings may be applied similarly through all segments of society in Cirebon Regency. Of course, the device hints have additionally been tailored and simplified in order that village officers can manual their citizens independently.

CONCLUSION

The implementation of the Electronic-Based Government System (*Sistem Pemerintahan Berbasis Elektronik* [SPBE]) in Cirebon Regency, as regulated under Presidential Regulation No. 95 of 2018, demonstrated significant progress in digital transformation by improving service effectiveness and bureaucratic efficiency through applications and digital platforms

tailored to rural community needs. However, major challenges remained in terms of adequacy and equity due to limited access to digital devices and the persistent digital divide, which contributed to low interest in digital literacy among some rural communities. The success of SPBE implementation largely depended on the active role of village officials and government institutions in promoting transparent governance through continuous education and outreach programs. Therefore, more inclusive and sustainable digital-literacy initiatives are needed to strengthen community participation and improve equitable access to digital services. Future research is recommended to examine the long-term impact of digital-literacy programs on rural community participation and to explore comparative studies across different regions to identify more effective and context-based e-government implementation strategies.

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