

The Effectiveness of the Village Information System in the Realization of E-Government

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DOI: <https://doi.org/10.61796/icossh.v2i2.471>



Sections Info

Article history:

Submitted: June 14, 2025

Final Revised: July 24, 2025

Accepted: August 10, 2025

Published: September 26, 2025

Keywords:

Effectiveness

Village information system

E-government

Public service

Village

ABSTRACT

Objective: This study aims to analyze the effectiveness of the Village Information System (SID) in realizing e-government in Sumokali Village, Candi District, Sidoarjo Regency, by emphasizing the accuracy of program targets, socialization, objectives, and monitoring as explained in the theory of effectiveness by Budiani. **Method:** The research uses a descriptive qualitative approach with data collection techniques in the form of interviews, observations, and documentation, as well as data analysis following the Miles and Huberman model. **Results:** The results of the study show that SID has been targeted at the village community as recipients of information, but its use has not been evenly distributed due to differences in digital literacy. Socialization is still limited through WhatsApp groups so that it does not reach all residents, while the program's goals have not been fully achieved because the system has not been optimally managed and the community relies more on unofficial social media. Program monitoring is carried out through visit traffic and village evaluation forums, but it is still administrative and has not touched the quality of utilization. Overall, the effectiveness of SID in Sumokali Village has not been optimal. **Novelty:** These findings confirm that the success of e-government implementation at the village level is not only determined by the existence of a digital system, but also the readiness of human resources, digital literacy, and local institutional support, so this study makes a new contribution to examining the practical obstacles to SID implementation at the village level.

INTRODUCTION

Today's technological developments are happening very quickly and touch almost all aspects of human life. Where human needs have increased as a result of current technological advancements. Indonesia is currently in the phase of accelerating digital transformation, which has a major impact including the government system [1]. Governments at various levels, both central and regional, are required to be able to utilize information technology as a means of public service. One of the manifestations of this transformation is the implementation of Electronic Government (E-Government), which is the use of digital information technology to improve the quality of public services and the efficiency of government administration [2].

With the birth of Law Number 6 of 2014 concerning villages, it marked a paradigm shift in village governance in Indonesia. Where now the village is the front line that plays the role of government organizer and public service at the lowest level. In more detail, especially article 86, states that villages have the right to access information through the Village Information System (SID) and are obliged to organize and improve SID to support the planning and implementation of village development [3]. In addition, from regional regulations contained in Law No. 22 of 1999 and Law No. 32 of 2004 concerning local government, which stipulate the role of villages in village governance. The stipulation that village administration of the government system must be based on information and technology is in line with the principle of e-government [4]. In improving the quality of

services to the community, the East Java Provincial Government stipulated Regional Regulation No. 11 of 2005 which regulates the implementation of public services in the province. Through this regulation, local governments are given the freedom to realize e-government independently while still being guided by the principles of quality service [5].

One of the manifestations of this e-government is the village information system. This system includes key components such as population data, management of village activity information, storage of administrative documents, and submission of feedback from the community [6]. The presence of this SID by the village government is to present accurate information, improve the efficiency of public services, accelerate the development planning process, and increase community involvement in the village supervision and decision-making function [7]. Therefore, SID is a strategic factor in the realization of modern, effective, participatory and responsive village governance to the dynamics of the community [8].

SID not only serves as a tool for data management, but also supports community empowerment through public information disclosure [9]. With SID, it makes it easier for villagers to access information related to programs, budgets, and administrative services. Therefore, this is with the principle of Good Governance to realize a good, transparent, accountable, and participatory government that will improve the quality of the public [10].

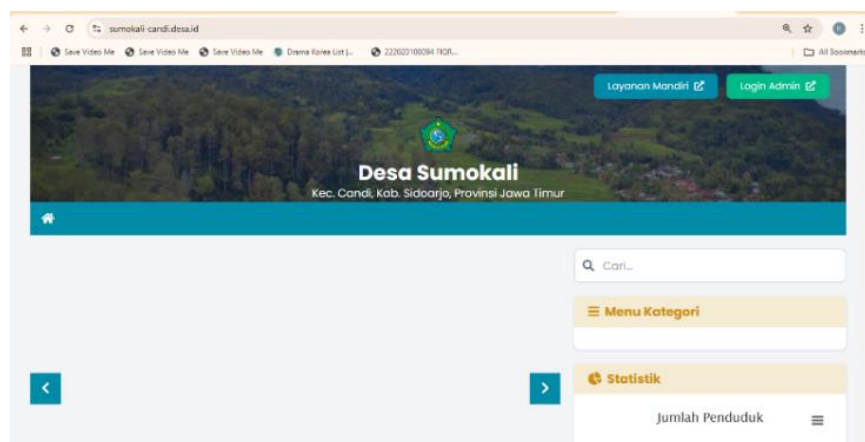


Figure 1. Display of Sumokali Village SID.

Source. Author Documentation, 2025

In the existence of SID that has been regulated in Law No. 6 of 2014 concerning villages, as a manifestation of e-government, the level of effectiveness of its implementation in various regions is still very varied [11]. In reality, many villages have not been able to optimize SID features to support efficient, transparent, and participatory public services. These problems include limited human resources, inadequate technological infrastructure, and lack of commitment in management [9].

The researcher looked at the problem of the realization of e-government in Sumokali Village, found that there are human resources and weak institutional commitment. Where the SID operator concurrently serves as the village treasurer and socialization to the community is only carried out once and the delivery of information

relies more on social media such as WhatsApp and Instagram. As a result, public services to the community are still carried out manually at the village hall and many residents have not felt the presence of SID. This SID application can be accessed through the <https://sumokali-candi.desa.id/> website, where this web can be accessed by everyone. The following is a table of empirical data in the form of the number who accessed the SID in 2025 as of July.

Table 1. Number of visitors to Sumokali Village SID in 2025 (January-July).

No	Year 2025	Number of SID Visitors (People)
1	January	4.113
2	February	4.529
3	March	4.211
4	April	3.890
5	May	4.070
6	June	4.125
7	July	3.354
	Total	28.292

Source: Processed Researcher 2025

Based on Table 1, it can be seen that the number of people who accessed the Sumokali Village SID in 2025 last August reached 28,292 people. The number in this number includes many who have accessed even though compared to the number of SIDs in other villages that do not have SID. In addition, although many people have access to SID, many elderly or elderly residents who have difficulty accessing SID. Such as the difficulty of understanding the features in the SID, residents who can only use cellphones for phone or WhatsApp, lack of socialization to access, and people are more comfortable coming directly to the village office or manually. On the other hand, the village government is invited to BIMTEK activities related to the use of the SID website, but because the BIMTEK is only carried out in one way, the understanding of the village government operating the SID is still very limited. This condition causes the village apparatus to not operate the SID optimally.

Previous research on the Effectiveness of Village Information Systems in the realization of E-Governmnet is: First, entitled Effectiveness of Village Information Systems (SID) in Improving Village Administration Services prepared by Rosita Dwi N. and Isna Fitria A. in Sekardangan District, Sidoarjo Regency. This research uses a qualitative method. The results of the study are that Sekardangan Village provides effective, fast, precise, and efficient services. However, web-based SIDs have not been fully effective due to the challenges faced by elderly citizens with limited socialization from local governments [2].

Second, entitled The Effectiveness of the Mojokerto Information System Application Program in Improving Public Services prepared by Diah Purnamawati,

Suyeno, and Hirshi Anadza at the Mojokerto City DPMPTSP. This research uses a qualitative method. The results of the study show that the effectiveness of the Si-Mojo application program in improving licensing services at the Mojokerto City DPMPTSP in general has been running well and effectively. However, there are still several indicators whose implementation has not been maximized [12].

Third, entitled Effectiveness of Information Systems in Public Services in Kalidawir Village, Sidoarjo Regency was compiled by Shintya Kurniawati and Lailul Mursyidah in Kalidawir village, Tanggulangin District, Sidoarjo Regency. This research uses a qualitative method. The results of the study show that in electronic-based public services, there are problems such as the inactivity of the SID application system, the absence of socialization by village officials to the community so that it still does not run effectively, from the village apparatus experiencing its own obstacles which cause one of the village apparatus to manage several applications [5].

Based on these problems, this study uses the theory of effectiveness according to Budiani which explains that effectiveness can be measured through four variables, namely the accuracy of program targets, program socialization, program objectives, and program monitoring. These variables are used as a reference to assess the extent to which the implementation of the Village Information System (SID) really supports the realization of e-government in improving the quality of public services. Thus, the results of this study aim at the effectiveness of SID in Sumokali Village more comprehensively, as well as provide a real picture of the conditions in the field as a consideration for the village government in improving and optimizing public services.

RESEARCH METHOD

The study chosen in this study is a qualitative method with a descriptive approach. According to Sugiyono, the qualitative research method is a research method that focuses on a deep understanding of a phenomenon under natural conditions. This research was conducted in Sumokali Village, Candi District, Sidoarjo Regency. The data collection techniques used were interviews, observations, and documentation. The data sources in this study come from primary data and secondary data. Primary data was obtained through interviews, where the initial questions were general but developed according to the informant's response. The informant in this study is the service head who is the SID operator. In addition, secondary data is obtained from supporting literature such as the results of previous research, scientific journals, and related policy documents. The focus of this research is on the Effectiveness of Village Information Systems (SID) in the Realization of E-Government in Sumokali Village, Candi District. In measuring the effectiveness of SID in this study, the researcher used the Effectiveness indicator according to Budiani which consists of the accuracy of program targets, program socialization, program objectives, and program monitoring. The Miles and Huberman model is used in data analysis, covering the stages of collection, reduction, presentation, and conclusion [13].

RESULTS AND DISCUSSION

Results

The results of the study use the theory of effectiveness according to Budiani which has several indicators, namely the accuracy of program targets, program socialization, program objectives, and program monitoring:

Accuracy of Program Objectives

Based on the results of an interview with the SID operator, Mrs. Fitri, the head of Sumokali Village services, said:

"In my opinion, the use of this SID is appropriate, yes because it is aimed at village mastarakat so that it is easier to get information from the village. Such as village activities, social assistance, services, yes, all have been accessed through SID. So the target is indeed for the village community as a recipient of information."

This shows the accuracy of the program goals in SID to meet the needs of the community in Sumokali village. This program makes it easier for the community with services in the village.

Program Socialization

As a result of the interview with the village apparatus, Mrs. Fitri as the head of service and SID operator at the socialization of the program about SID, Mrs. Fitri said:

"Our way of conveying this SID is the SID link shared in the WhatsApp group. The group is specifically for RT, RW, LKMD, BPD institutions. So when it is shared, many people click on the SID link. For socialization, we don't hold it, it's just sharing in the whatsapp group. So many SIDs have access, even though those who access people who know, if they don't, they can't".

This shows that the socialization of the program is still carried out on a limited basis, namely only through Whatsapp groups. However, it has not been able to accommodate the entire community, especially residents who are lacking in technology.

Program Objectives

Based on the results of the interview on the program objective indicators, Mrs. Fitri stated:

"The main goal and benefit of the SID program is the same, so that the community can access more village information, for example social assistance, village activities, and services. However, this is not maximum. Because public education is diverse. Some already understand technology but there are still many who are lacking in technology, so they cannot take advantage of SID. In addition, this SID has also not been filled and is actively used. So the initial goal is still not well achieved."

This condition shows that the purpose of SID is caused by two main factors, namely the limitation of digital literacy and the condition of the village SID website that has not been optimally managed.

Program Monitoring

Based on the results of interviews with village officials in Sumokali village, it can be seen that monitoring the program on the effectiveness of SID, Mrs. Fitri as the head of service and SID operator said:

"We from the village apparatus do monitor this SID website, the way is seen from the visit traffic, so it can be seen how many people are open and whenever they access. From there, we monitor and we know whether residents are correct in using SID. In addition, every evaluation of our village talks about SID, including budgeting funds for the maintenance of this SID system so that it can continue to be used."

The Sumokali village government monitors SID traffic to see community usage and evaluates by allocating village budgets for SID maintenance and development.

Discussion

The Village Information System is a form of implementing e-government that is present for solutions to problems at the village government level. Through SID, villages have the right to obtain and disseminate access to information more openly [14]. This SID program makes it easier for the village government and its residents to document village data and various community activities so that it is more organized and easily accessible [11].

Accuracy of Program Objectives

Table 2. Comparison of the number of population and number of visitors to SID in 2025.

Information	Number (People)
Total Villagers	6.074
People Access the SID	4.444
The public has not accessed	1.630

Source: Processed Researcher 2025

The accuracy of the Program Objectives is to measure the level of program implementation in line with the previously set goals. Thus, the effectiveness of the program can be measured from the harmony between the implementation and the target group that has been determined from the beginning. The SID program in Sumokali Village, Candi District, Sidoarjo Regency is to meet the needs of villagers in accordance with the program targets. The village apparatus stated that SID users are indeed to make it easier to obtain village government information such as village activities, social assistance, administrative services, regulations, news, and village data. This shows that the target of the program, namely the village community as recipients of information and services, is in accordance with the set goals.

If it is related to the theory of Budiani, it can be concluded that the variable of the accuracy of program targets in the effectiveness of SID in Sumokali Village has run according to the target. This can be seen from the existence of SID which is indeed directed to the village community as the main recipient of public service information. Through this SID platform, residents can access various information ranging from village activity agendas, social assistance, to administrative services. However, the effectiveness of the program's targets still faces challenges, especially in the difference in the level of digital literacy of the community. Where not all people are able to make optimal use of SID, especially for those who are still classified as gaptech. Based on this, even though it is in accordance with the program's targets, the equitable distribution of SID benefits has not been fully achieved.



Figure 2. Sumokali Village SID operator.
Source: Author Documentation, 2025

Program Socialization

In Budiani's theory of effectiveness, program socialization is related to the extent to which information about the program can be conveyed clearly to the community so that the program's goals can be achieved. Good socialization should be carried out comprehensively and structured in a target group to be able to understand the purpose and benefits of the program.

Based on the results of the interview, the village officials stated that the socialization of the SID program was not carried out through formal activities such as citizen meetings, training, or face-to-face forums, but only by sharing the SID website link through the WhatsApp groups of village institutions such as RT, RW, LKMD, and BPD. This condition causes information about SID to only be accessed by people who are used to using technology and are members of the group, while residents who are lacking or not members of the WhatsApp group do not gain an understanding of the existence of SID.



Figure 3. Submission of Sumokali Village SID through whatsapp group.

Source: Author Documentation, 2025

If related to the theory of effectiveness of Budiani, the indicators of socialization of this program can be seen that the effectiveness of SID faces challenges, because the village government only relies on the dissemination of SID links through WhatsApp groups. Where according to Budiani, socialization should be carried out in a way that is able to reach the entire community both in general and specifically to the main target of the program.

Program Objectives

In the framework of Budiani, the purpose of the program refers to the main direction and goals to be achieved from the implementation of a program, namely how the benefits of the program can be felt directly by the target group. This goal serves as a benchmark for success, because the more results obtained with the initial goal, the higher the level of effectiveness of the program.

This finding is in line with the research of Diah Purnamawati which shows that the objectives of the application program *Si-Mojo* in the DPMPSTP the city of Mojokerto has a goal in accordance with Guardian Regulation No. 18 of 2020 concerning the Implementation of Electronic Licensing and Non-Licensing Services. But they tend to

improve and improve the quality of public services, especially licensing and non-licensing services [10].



Figure 4. Sumokali Village social media.

Source: Author Documentation, 2025

If associated with the effectiveness theory of Budiani, the indicators of the goals of this program in Sumokali Village still do not fully achieve the goals that have been set. Where the purpose of the SID is to make it easier for villagers to gain access to village information. The main factor in the use of this SID is the diverse level of education and digital literacy of the community, where some residents already understand technology but there are still many who are not able to access digital-based services. In addition, the condition of the SID that has not been fully filled and has not been actively used so that the village government uses more social media such as WhatsApp and Instagram is also the main obstacle to achieving the program's goals.

Program Monitoring

In Budiani's theory of effectiveness, program monitoring is an important part of measuring the extent to which the program is running according to the initial goal. Program monitoring is carried out to find out how the program is running, what obstacles arise, and how improvement efforts can be designed [15].



Figure 5. Sumokali Village SID constraint monitoring meeting.

Source: Author Documentation, 2025

Based on the results of interviews on the effectiveness of SID monitoring programs, the village apparatus stated that through the observation of SID website visit traffic. Where to find out the number and time of public access to SID. In addition, monitoring is also carried out in the village evaluation forum, where SID is always on the agenda for discussion, including budgeting planning for system maintenance so that it continues to function properly. This shows that program monitoring has obstacles in optimizing the use of SID.

CONCLUSION

Fundamental Finding : This study shows that the implementation of the Village Information System (SID) in Sumokali Village is on target as a public information medium, but its effectiveness is not optimal because socialization is still limited, the digital literacy of the community is diverse, and the management of the system has not run optimally. **Implication :** These findings confirm that the success of SID does not only depend on the availability of technology, but also on increasing the capacity of village apparatus and community education so that the benefits of SID can be felt equally. **Limitation :** This study only focuses on the perspective of village officials and operators, so it does not fully represent the direct experience of the community as the main user. **Future Research :** The next study can involve respondents from the community and conduct comparisons between villages to obtain a more comprehensive picture of the factors that affect the effectiveness of SID.

ACKNOWLEDGEMENTS

Praise and Thanksgiving, we pray to God Almighty because with the grace of monotheism and His guidance, the author can complete the research on "The Effectiveness of Village Information Systems in the Realization of E-Government" until it is completed. Prayers and greetings are always poured out to the Prophet Muhammad SAW. Not only that, the author would like to thank all parties involved in completing this research to the Village Heads of all Sumokali village apparatus.

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