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IMPLEMENTATION OF THE OPENSID WEBSITE-BASED VILLAGE INFORMATION SYSTEM AT THE BELEGA VILLAGE OFFICE, BUAHBATUH DISTRICT, GIANYAR REGENCY

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Abstract

This study aims to examine the implementation of the village information system based on the OpenSID website at the Belega Village Office, Blahbatuh District, Gianyar Regency. The research focuses on how the policy implementation process, coordination, and obstacles faced by village officials in operating the system. This study employed a descriptive qualitative approach with data collected through observation, interviews, and literature study. The data were analyzed through the stages of collection, reduction, presentation, and verification using qualitative analysis techniques. The results show that the implementation of OpenSID in Belega Village has contributed to improving the quality of public services, particularly in terms of information transparency, accessibility of administrative services, and effectiveness of service delivery to the community. Nevertheless, several challenges remain, such as limited human resources, inadequate facilities and infrastructure, and uneven public understanding of the use of information technology. Overall, the application of OpenSID in Belega Village has been running fairly well, although it still requires capacity building for village officials and stronger infrastructure support to ensure that its benefits can be more optimally realized.

Keywords: implementation, village information system, public service, OpenSID, administration

A. INTRODUCTION

The development of information and communication technology (ICT) over the past two decades has had a significant impact on governance and public services. The digital era demands that government officials be increasingly agile, transparent, accountable, and participatory in providing services to the public. This applies not only at the central and regional levels, but also at the village government level, which spearheads public service delivery.

According to data from the Central Statistics Agency (BPS, 2023), Indonesia has more than 83,000 villages and sub-districts spread across the country. This number demonstrates the strategic role of villages in the national government system, given that the majority of Indonesia's population lives in rural areas. Furthermore, national internet penetration, which has reached over 78% of the population (APJII, 2022), presents a significant opportunity to utilize digital technology to improve the quality of public services in villages.

One important instrument introduced is the Village Information System (SID). This system is software designed to assist village governments in managing administration, providing population data, supporting development planning, and disseminating information

to the public. One form of SID implementation that is widely used is OpenSID, an open source-based application that is easily accessible, relatively inexpensive, and can be adapted to village needs.

The implementation of the website-based SID aligns with the mandate of Law Number 6 of 2014 concerning Villages, which affirms that villages have authority in governance, development, community development, and community empowerment. One of the main principles of the Village Law is transparent and accountable governance. This is reinforced by Law Number 14 of 2008 concerning Public Information Disclosure (KIP), which requires every public body, including village governments, to provide public information quickly, accurately, at a low cost, and simply.

Furthermore, Minister of Home Affairs Regulation Number 47 of 2016 concerning Village Government Administration also provides guidance on procedures for recording and managing village administration. In this context, the existence of OpenSID is considered a crucial innovation to ensure that village governance is carried out in accordance with regulations while meeting public demands for information transparency.

To understand the implementation of OpenSID, policy implementation theory serves as an important analytical foundation. According to Grindle (1980), policy implementation is influenced by both the policy's content and the context in which it is implemented. Inefficiencies within implementing organizations and weak internal coordination can hinder successful implementation. Meanwhile, Edward III (1980) identified four key variables in policy implementation: communication, resources, implementer disposition or attitude, and bureaucratic structure. These four factors serve as important indicators for assessing the extent to which OpenSID is operationalized by village officials.

Charles O. Jones's (1996) theory, which serves as the framework for this research, emphasizes three main dimensions of implementation: organization, interpretation, and application. Organization relates to the readiness of supporting structures and instruments; interpretation encompasses implementers' understanding of the policy; and application is how the policy is implemented in practice. This framework is relevant for assessing how Belega Village organizes its apparatus, interprets OpenSID's functions, and applies them in daily public services.

Several previous studies serve as important references for understanding the implementation of village policies and information systems. Sulandri S, et al. (2021), in their study "Implementation of the General Election Commission Regulation Concerning the 2019 General Election Campaign in Gianyar Regency," emphasized that the success of policy implementation is highly dependent on the compliance of implementers and the effectiveness of communication between actors. This is relevant to the implementation of OpenSID, where success depends on the synergy of village officials in operating the system.

Imelda, et al. (2023), in their study entitled "Implementation of the Village Information System to Improve the Performance of Village Office Employees in Kepatihan, Menganti District," demonstrated that the implementation of the SID was able to improve village employee performance, but still faced technical obstacles and limited human resources. Diana Hertati (2020), in her study "A Web-Based Village Government Information System Implementation Model for Village Government in Sidoarjo Regency," emphasized the importance of a systematic implementation model to support village governance.

Meanwhile, A. Hildayanti, et al. (2022) in "Implementation of Website-Based Public Information Systems in Taeng Village, Pallangga District, Gowa Regency" revealed that village websites can increase information transparency, but their success is highly dependent on the support of village officials and the level of community participation.

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Novia Isnaini et al. (2023), in their study "Implementation of a Website-Based Village Information System as a Village Information Medium," emphasized that village websites can serve as an effective medium for delivering information, although challenges remain in management and dissemination.

Finally, Hazid Jalma et al. (2019), in their study "E-Government with the Utilization of the OpenSID Web in Public Services in Nagari Tanjung Haro Sikabu-kabu Padang Panjang," found that OpenSID had a positive impact on public services, particularly in terms of speed and transparency, despite ongoing internet network and other technical issues.

These studies demonstrate that the implementation of a website-based village information system has significantly improved transparency, accountability, and service efficiency. However, obstacles such as limited human resources, infrastructure, and dissemination remain key challenges hindering optimal implementation.

Belega Village, Blahbatuh District, Gianyar Regency, is one of the villages in Bali that has adopted OpenSID as an effort to improve digital-based public services. This village is known for its dynamic social, cultural, and economic activities, making the need for fast and transparent public services crucial. The implementation of OpenSID in Belega Village aims to support more efficient and open village governance.

However, based on field observations, OpenSID implementation in Belega Village is not yet fully optimized. The main obstacles include the limited capacity of village officials to operate the system, inadequate technological infrastructure, and minimal outreach to the community, resulting in suboptimal system utilization. This situation creates a gap between the ideal goals of digitizing public services and the reality on the ground.

Although previous research has extensively discussed the implementation of village information systems, there are still research gaps that can be filled. First, most previous studies have focused on the implementation of OpenSID in other regions with different social, cultural, and geographic contexts. Few studies have focused on the context of Belega Village, Gianyar Regency, which has its own characteristics, both in terms of demographics and village governance. Second, some studies have emphasized the technical aspects and benefits of the system, while this study attempts to examine the implementation of OpenSID using Charles O. Jones' theory, which covers organizational, interpretation, and application aspects. Therefore, this study is expected to provide a more comprehensive understanding of the supporting and inhibiting factors for OpenSID implementation in Belega Village.

B. LITERATURE REVIEW

Village Information System

A village information system is a data and information management mechanism used by village governments to improve the effectiveness of public services. This system integrates various population, administrative, and village potential data into a single, easily accessible database. This system enables villages to be more transparent and accountable, and accelerates the delivery of services to the public.

In addition to supporting administrative services, the village information system also plays a role in development decision-making. The collected data can be used as the basis for program planning tailored to community needs. Therefore, the village information system serves not only as a recording tool but also as a strategic instrument for comprehensively managing village potential and issues.

OpenSID as a Village Digital Platform

OpenSID is a website-based application developed openly to assist village governments in implementing village information systems. This platform provides various features, such as population data management, administrative services, village information publication, and

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development report preparation. OpenSID's primary advantage is its open-source nature, allowing villages to customize features to suit their local needs without being restricted by a paid license.

Utilizing OpenSID also increases community participation in village development. Through the publication feature, information on work programs, village budgets, and community activities can be conveyed transparently. This supports the creation of public information transparency at the village level and strengthens community trust in village government.

Implementation of Village Information Systems at the Local Level

Implementing a village information system at the local level requires readiness across various aspects, such as human resources, technological infrastructure, and the commitment of the village government. Without adequate training, village officials may encounter difficulties operating the system. Therefore, technical assistance is essential for the system to run optimally and provide tangible benefits to the community.

Furthermore, successful implementation is also determined by the support of the community as service recipients. When villagers experience easy access to information and administrative services, participation levels will increase. This can strengthen the relationship between the village government and the community, while simultaneously encouraging more inclusive and sustainable development in the village.

C. RESEARCH METHODOLOGY

This research uses a qualitative, descriptive approach. This approach was chosen because it is appropriate for understanding the phenomenon of village information system implementation in depth through the experiences, perspectives, and interactions of implementers and the community. The descriptive approach was used to provide a comprehensive overview of the implementation process, obstacles, and strategies used in implementing OpenSID in Belega Village.

The scope of this research focuses on the implementation of the OpenSID website-based village information system at the Belega Village Office, Blahbatuh District, Gianyar Regency. The research focuses on three dimensions of implementation according to Charles O. Jones: organization, interpretation, and application. Organization refers to the structure and division of tasks of village officials, interpretation refers to the understanding and interpretation of policies related to the use of OpenSID, while application emphasizes the concrete actions of village officials in implementing the system.

The operational definitions of this research were established to facilitate analysis. Implementation is defined as the series of activities carried out by village officials in operating OpenSID, from planning and implementation to evaluation. Constraints are defined as internal and external obstacles that affect the effectiveness of OpenSID use. Meanwhile, problem-solving efforts are defined as strategies employed by village officials to overcome these obstacles so that the system runs optimally.

This research was conducted in Belega Village, Blahbatuh District, Gianyar Regency, Bali Province. This location was chosen because Belega Village is one of the villages that has adopted the OpenSID system and experienced dynamics in its implementation, making it relevant for research.

The population in this study was all village officials and the Belega community. However, due to time constraints and the need for more in-depth research, the researcher used a purposive sampling technique to select informants. The research sample consisted of 12 informants deemed directly relevant to the implementation of OpenSID: four village officials involved in system operations and eight community members who use village services.

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The primary data for this study consisted of primary data obtained through field observations, in-depth interviews, and documentation. The primary tools used in this study were interview guidelines, field notes, and recording devices used to capture information from informants.

Data collection techniques were conducted through three methods. First, observation, which directly observed public service activities at the Belega Village Office related to the use of OpenSID. Second, in-depth interviews, which involved conducting structured and semi-structured conversations with village officials and community members to gather information about experiences and challenges in using the system. Third, documentation, which involved collecting documents and archives related to OpenSID implementation, such as activity reports, service archives, and data from the village website.

The data analysis technique in this study follows the Miles and Huberman model, which includes four stages: data collection, data reduction, data presentation, and verification or conclusion drawing. Data obtained from the field were reviewed, categorized according to the research focus, and then analyzed thematically to uncover patterns, obstacles, and strategies for OpenSID implementation in Belega Village. Data validity was maintained through triangulation of sources, techniques, and time to enhance the credibility and accountability of the research findings.

This research method is expected to provide a comprehensive overview of the implementation of the OpenSID website-based village information system in Belega Village and offer applicable solutions to improve the quality of public services at the village level.

D. RESULT AND DISCUSSION

The research results indicate that OpenSID has been implemented in Belega Village with the primary goal of improving administrative services, information transparency, and supporting village governance. This system is used to manage population data, administer correspondence, develop development information, and publish village activities.

However, based on interviews with village officials, observations, and documentation, OpenSID implementation still faces various obstacles. These can be analyzed through Charles O. Jones's (1996) three dimensions of implementation: organization, interpretation, and Application.

- Organization: The village apparatus structure has been established, but human resources with information technology skills are still limited.
- Interpretation: Village apparatuses' understanding of OpenSID's objectives varies; some see the system as an administrative service tool, but not yet as a means of public transparency.
- Application: The system has been running in several services, but has not been fully optimized due to infrastructure and internet network limitations.

To strengthen the results, the following table shows the use of OpenSID based on the results of observations and interviews:

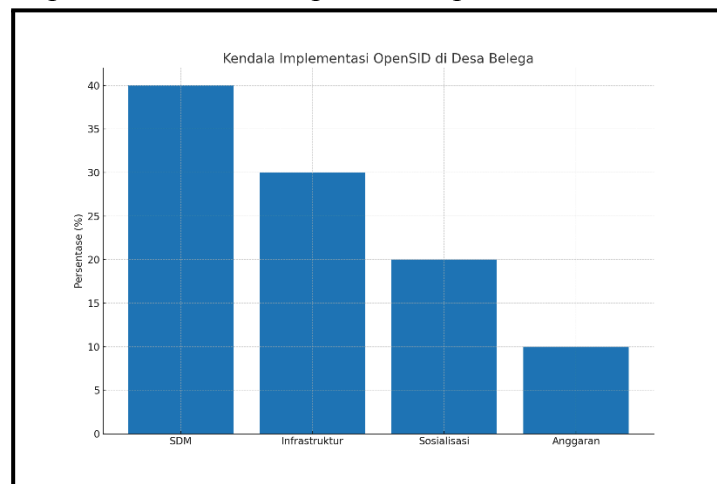Table 1. Level of OpenSID Utilization in Belega Village

Service Type	Utilization Rate	Information
Population Administration	Tall	Used for cover letters and family cards
Village Development Information	Currently	Not regularly updated
Village Budget Transparency	Low	Not fully published

Correspondence Services	Tall	Mail services are running well
General Information Publications	Low	Website is rarely accessed by residents

Source: Processed by Researchers, 2025

The table above shows that OpenSID is primarily utilized for administrative purposes, while information transparency and public participation are not yet optimal. Interviews with village officials and the community revealed several major obstacles to OpenSID implementation in Belega Village.

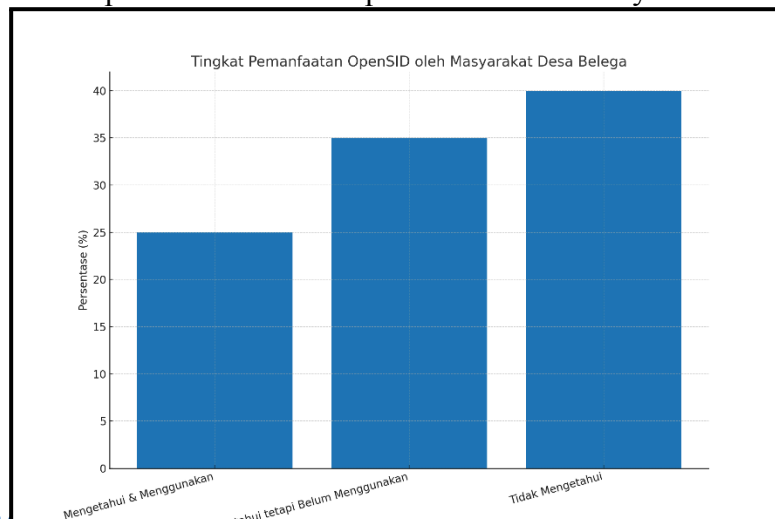Figure 1. Graph of Obstacles to OpenSID Implementation in Belega Village

Source: Processed by Researchers, 2025

- Human Resources (HR): 40%
- Infrastructure (devices & internet): 30%
- Community outreach: 20%
- Budget: 10%

The graph above shows that limited human resources are the most significant obstacle. Many village officials are unfamiliar with digital-based applications, resulting in suboptimal system utilization. Uneven infrastructure also slows system optimization.

In addition to internal constraints, community utilization of OpenSID remains low. Interviews revealed that only a small portion of the community is aware that village services can be accessed through this system.

Figure 2. Graph of the Level of OpenSID Utilization by the Community

Source: Processed by Researchers, 2025

- Know and use: 25%
- Know but not yet use: 35%
- Don't know: 40%

These results indicate that more intensive outreach efforts are needed to ensure the community truly utilizes this website-based service.

Based on the research, the implementation of OpenSID in Belega Village demonstrates a gap between its normative objectives and the reality of its implementation. Normatively, OpenSID aims to support the principles of good governance: transparency, accountability, and participation. However, in practice, utilization focuses more on population administration and correspondence.

This aligns with Charles O. Jones' theory:

- From an organizational perspective, limited human resources are a barrier.
- From an interpretation perspective, not all village officials understand the system as a means of information transparency.
- From an application perspective, administrative services are running well, but information publication is not yet optimal.

The obstacles identified in Belega Village align with previous research findings, such as those found by Imelda et al. (2023), who highlighted limited human resources, and Hazid Jalma et al. (2019), who noted challenges with internet network infrastructure. Therefore, this study's findings reinforce empirical evidence that successful SID implementation requires comprehensive support from both village officials and the community as service users.

The results indicate that OpenSID implementation in Belega Village is underway, but not yet fully optimized. This discussion outlines the research findings in depth, linking them with policy implementation theory and relevant previous research, to understand the factors influencing success and obstacles in implementation.

Organizational Aspects

Organizational aspects relate to the readiness of the structure, human resources (HR), and supporting devices. Field findings indicate that village officials in Belega Village have an organizational structure that supports the implementation of OpenSID, but the quality of human resources remains a major obstacle. Only a small proportion of village officials have the ability to operate digital-based applications effectively. This limitation results in several OpenSID features, particularly those related to budget transparency and the publication of development information, not being optimally utilized.

This aligns with Charles O. Jones's view, which emphasizes the importance of organizational readiness for successful policy implementation. Without adequate resources, even good policies are difficult to implement. These results also corroborate the findings of Imelda et al. (2023), who stated that limited human resources are a major obstacle to the implementation of village information systems in various regions. Therefore, improving human resource capacity is a crucial prerequisite for OpenSID to function as intended.

Interpretation Aspect

The interpretation aspect concerns implementers' understanding of the policy's objectives and benefits. In Belega Village, village officials' understanding of OpenSID remains varied. Some view OpenSID merely as an administrative tool to simplify document preparation, while its function as a means of public information transparency is not yet fully understood. As a result, published information on village budgets, development planning, and activity reports is rarely updated.

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This situation reflects challenges in the policy communication process. Edward III (1980) emphasized that unclear communication or inconsistent understanding can reduce the quality of implementation. This also aligns with research by Sulandri et al. (2021), which found that effective communication plays a crucial role in the successful implementation of public policies in Gianyar Regency. Therefore, improved internal communication strategies, such as training and mentoring, are needed to ensure village officials understand and implement OpenSID in accordance with regulatory objectives and community needs.

Application Aspects

The implementation aspect relates to how the policy is operationalized in practice. OpenSID in Belega Village has been used quite effectively for population administration and correspondence services, as evidenced by the high level of utilization of these services. However, implementation in terms of public information transparency remains low. One contributing factor is the lack of public outreach, resulting in only 25% of residents actively using this service.

This lack of outreach reinforces the conclusions of Hildayanti et al. (2022) and Novia Isnaini et al. (2023) that the success of a public information system is largely determined by community participation, which can only be achieved through effective outreach. Infrastructure barriers, such as unstable internet connections in some village areas, are also technical factors hindering the optimal utilization of OpenSID. Research by Hazid Jalma et al. (2019) indicates that infrastructure issues are a common challenge in OpenSID implementation across various regions, and this finding is consistent with the situation in Belega Village.

Theoretical and Practical Implications

Theoretically, the results of this study confirm the relevance of Charles O. Jones's theory that successful policy implementation is influenced by the interaction between organization, interpretation, and application. Obstacles in any one aspect will impact the entire implementation process. Practically, this research provides a basis for village governments and policymakers in Gianyar Regency to design programs to increase human resource capacity, improve infrastructure, and develop more effective outreach strategies.

Thus, the implementation of OpenSID in Belega Village illustrates the common challenges of digital transformation at the village level: significant potential benefits are hampered by limited resources, understanding, and infrastructure support. To achieve transparent, accountable, and participatory village governance as mandated by the Village Law and the Public Information Disclosure Law, a stronger commitment to overcoming these obstacles is required.

E. CONCLUSION

Based on research findings on the implementation of the Village Information System (OpenSID) in Belega Village, Blahbatuh District, Gianyar Regency, the following conclusions can be drawn:

The OpenSID implementation process in Belega Village has been ongoing and has made a positive contribution, particularly in supporting faster and more efficient village administration services. Organizationally, the village apparatus structure supports the implementation of OpenSID, but is still hampered by limited human resources familiar with information technology. Interpretation-wise, some village officials understand the system's purpose of supporting administrative services, but their understanding of OpenSID's role as a means of public information transparency remains limited. Application-wise, population administration and correspondence services have been implemented effectively through

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OpenSID, but implementation in terms of budget transparency, development information publication, and community participation has not been optimal.

Factors hindering the implementation of OpenSID in Belega Village include limited human resources skilled in technology, supporting infrastructure such as uneven internet access, minimal community outreach, and limited village budgets. These obstacles have resulted in the suboptimal use of OpenSID for its intended purpose.

The results of this study indicate that the success of policy implementation, as theorized by Charles O. Jones, is influenced by organizational readiness, the implementer's understanding of the policy, and the effectiveness of implementation in the field. For OpenSID to operate optimally and support transparent, accountable, and participatory village governance, human resource capacity building, infrastructure strengthening, and ongoing outreach are required.

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