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RESEARCH ARTICLE

Death Reporting Information System at the Camat Office in Manggeng, Aceh Barat Daya District

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Abstract
This study focuses on the development of a more efficient Death Reporting Information System at the Camat Office in Manggeng, Aceh Barat Daya, addressing the challenges of the existing manual system. The main objectives were to streamline data management, reduce errors, and improve report generation. The new system was developed using Visual Basic .NET to automate processes and ensure more accurate, timely data management. The methodology employed included observation, interviews, system analysis, design, testing, and evaluation. During the observation phase, issues such as the lack of a dedicated death data management application and limited access to accurate data were identified. Interviews with staff further confirmed the need for an automated solution to enhance efficiency. The system analysis showed significant flaws in the existing system, including inefficiencies caused by manual data entry. The newly designed system features an intuitive interface, enabling staff to input, process, and generate death reports more effectively. Testing confirmed that the new system significantly reduced processing times, minimized data entry errors, and improved the overall efficiency of death reporting. It also provided real-time access to data, allowing staff to retrieve and process information more quickly. The successful implementation of this system highlights the importance of integrating technology into public administration. Moreover, it emphasizes the need for adequate staff training to ensure successful adoption and effective system usage. The study concludes that technological integration is essential for improving the efficiency, accuracy, and transparency of public sector services.

Keywords
Death Reporting; Information System; Visual Basic .NET; Automation; Public Administration.

1 | INTRODUCTION

The rapid advancement of technology and information systems has had significant implications in daily life, particularly in the fields of business and public administration. Modern information systems enable more efficient and accurate processes, as well as contributing to better data-driven decision-making. In this regard, information technology plays a crucial role in improving operational efficiency and data accuracy. For instance, the use of integrated accounting information systems can enhance the reliability of financial reports generated by various organizations, including both public and private institutions (Nokas *et al*., 2022). In this context, the importance of adopting efficient information systems becomes apparent. The integration of technology into administrative processes not only streamlines tasks but also ensures accuracy and timeliness. This is especially relevant in public institutions that handle large amounts of sensitive data, such as local government offices. The integration of information systems in such environments can reduce human error and enhance the speed at which services are delivered, ultimately improving public trust and satisfaction. Therefore, embracing technology in governmental operations is no longer a luxury, but a necessity for maintaining transparency, accountability, and operational excellence.

The Office of the Sub-district Head in Manggeng, Aceh Barat Daya, which is responsible for maintaining population data, must adopt an efficient information system to improve the quality of death reporting. The development of a system capable of processing death data more quickly and accurately is essential. A well-designed system not only accelerates the creation of Death Certificates but also reduces errors and increases public satisfaction. This aligns with research that indicates the use of information technology can positively impact the quality of financial management in government institutions, where accountability and transparency are crucial (Aprianti, 2021). Furthermore, the research emphasizes the importance of developing a death reporting application based on Visual Basic .NET as a solution to meet the need for more reliable data management at the Manggeng Sub-district Office. By utilizing field studies, data collection through interviews provides a real-world understanding of the challenges currently faced in the reporting process, as well as the specific needs of staff involved in the data entry process (Efendi *et al*., 2024). Additionally, library studies provide theoretical support for designing and implementing a system that is expected to improve the efficiency and effectiveness of the death reporting process (Zubaidi *et al*., 2019).

One of the key challenges in the implementation of information systems in public administration is ensuring that the staff who will operate these systems have the necessary skills and competence. As such, the adoption of technology must be accompanied by adequate training for personnel. Research shows that user competence plays a significant role in determining the effectiveness of the information systems being implemented. Thus, training and human resource development become pivotal factors in ensuring the success of the newly implemented information systems (Hidayatuloh *et al*., 2022). Training programs are essential to ensure that employees are well-versed in using the system efficiently. Effective training helps employees overcome initial barriers to using new technology and allows them to leverage the system's full potential. In addition, ongoing training is necessary to keep up with updates or changes in the system and ensure that employees continue to operate the system at the highest level of efficiency. This helps foster an environment where technology enhances the work processes rather than complicating them. Moreover, the development of a robust death reporting system is not only about technology but also about ensuring that the system aligns with the needs and workflows of the staff. System design should be user-centric, incorporating feedback from the staff who will use it daily. A system that is intuitive and easy to navigate will naturally result in fewer errors, faster processing times, and higher satisfaction levels among users.

In conclusion, the adoption of information technology in public administration, especially for tasks such as death reporting, has the potential to significantly improve the efficiency, accuracy, and overall quality of public services. By developing a tailored system based on Visual Basic .NET, the Manggeng Sub-district Office can enhance the speed and accuracy of death reporting. However, successful implementation will also require sufficient training for the staff to ensure they are equipped with the necessary skills to use the system effectively. Therefore, this research highlights the importance of both technological solutions and human resource development in the successful integration of information systems in public administration.

2 | BACKGROUND THEORY

The advancement of information technology has had a profound impact on various aspects of daily life, especially in public administration. By adopting information systems, data management becomes more efficient and accurate, which in turn supports better decision-making. In the public sector, the use of technology in managing data is essential for improving service delivery to the community and ensuring accountability and transparency. One key area where effective information systems are crucial is in managing death records, particularly in the process of issuing death certificates, which need to be done accurately and promptly. Managing death data in public administration is a critical

task, as it involves sensitive and important information that affects multiple processes, such as legal matters, social services, and public health. Without an efficient system, delays and mistakes in processing this data can lead to problems for individuals and government agencies. Adopting an integrated information system can help to ensure that death data is updated quickly and that necessary documents are provided without delays. It also reduces the likelihood of human error, making the entire process more reliable. The implementation of technology in administrative processes not only streamlines data handling but also improves the accessibility and speed of services. Integrated systems can strengthen transparency and trust, making sure that public services are provided more effectively. As a result, citizens can benefit from a smoother, more reliable experience when dealing with administrative tasks like obtaining death certificates.

The implementation of information systems in public administration plays a crucial role in enhancing the speed, accuracy, and reliability of administrative processes within government sectors. Information systems, which integrate components for collecting, processing, storing, and distributing data, are designed to replace manual procedures that are often prone to errors. With integrated systems in place, various administrative processes can be simplified, including population registration, financial management, and the issuance of important documents such as ID cards, family cards, and death certificates (Noviarini *et al*., 2017). One of the most significant changes occurs in death reporting, where the shift from manual methods to digital information systems has a major impact. Accurate, real-time death data is essential for various administrative, legal, and social purposes. The use of an integrated system in death reporting can drive efficiency in updating vital data and issuing official documents, reducing human error and delays that are often encountered with manual methods. The application of digital information systems in the death reporting process enables the automation of data entry and verification, which in turn improves the speed and accuracy of issuing death certificates (Mishchenko & Naumenkova, 2022). However, the success of implementing information systems in the public sector depends not only on the technological aspects but also on the readiness to implement changes in organizational culture. One of the main barriers to adopting new systems is resistance from staff who are accustomed to manual methods. Therefore, adequate training is essential to ensure that staff can adapt to the new system. Effective training should cover not only technical aspects but also introduce managerial changes associated with adopting new technology. With proper training, staff will be able to understand the benefits of the new system and reduce their concerns about the changes taking place (Norcross, 2022).

It is also important to focus on developing skilled human resources capable of operating information systems. The success of the system depends significantly on how well its users can utilize the available technology. One approach that can be employed is a participatory approach in the process of gathering system requirements. By involving end-users in designing the system, the resulting system will be better aligned with the existing workflows and daily needs in the field. This approach also helps ensure that employees feel valued and are more likely to accept the changes being implemented (Šimonová, 2021). Programming languages such as Visual Basic .NET (VB.NET) have been used to develop death reporting applications that require data management-based systems with user-friendly interfaces. VB.N*Et al*lows applications to seamlessly integrate with existing databases and generate administrative reports automatically and efficiently. The simple interface and its ability to manage large volumes of data make it easier for users to operate the application, even if they do not have an in-depth technical background. As such, the use of VB.NET helps minimize data input errors and reduce processing time, thus improving the overall effectiveness of public administration systems (Rehouma *et al*., 2020). Furthermore, the use of VB.NET-based information systems also offers advantages in terms of processing death data quickly and generating more accurate and timely reports. Administrative processes related to death reporting can be carried out more efficiently, minimizing delays and errors in data entry. Therefore, the adoption of technology in public administration not only accelerates processes but also reduces the administrative burden that often arises from manual systems.

The application of information systems in public administration replaces time-consuming and error-prone manual procedures with faster and more efficient digital processes. The success of this system's implementation requires investment not only in technology but also in developing human resource competencies through intensive training, active user involvement in system design, and the implementation of sound change management principles. Collaboration between system developers and government agencies is essential to ensure that the system built supports the goals of public administration modernization. With the right system in place, the management of vital data such as death reporting can be carried out more efficiently and effectively, providing tangible benefits to society and improving the quality of public services.

3 | METHOD

This study aimed to evaluate and develop a more effective information system for managing death data at the Population and Civil Registration Office of Aceh Barat Daya. Several steps were carried out to understand the existing problems and design an appropriate solution. The methodology for this research consists of the following

approaches.

1) Observation
   The research began with direct observation of how the current death data management system operates at the Population and Civil Registration Office of Aceh Barat Daya. Through observation, several key issues were identified, including the lack of a dedicated application for managing death data within the Population Information System (SIAK). There was also limited access to accurate death data, and a shortage of staff with a background in information technology. By observing the process, it became clear that the manual data entry system was inefficient, prone to errors, and lacked scalability for future needs.
2) Interviews
   To gain more detailed insights into the challenges faced by the office, interviews were conducted with staff members involved in managing death data. These included clerks, administrators, and department heads. The purpose of the interviews was to gather information on the difficulties encountered with the existing system and to understand the day-to-day workflow. The findings indicated that the manual system hindered efficiency, and there was a clear need for an automated, integrated solution to improve the handling of death records.
3) System Analysis
   After gathering data from observations and interviews, a system analysis was performed to assess the current workflow and identify the input and output processes of the existing system. This analysis helped identify areas where the system was lacking, such as the absence of automation and integration, which caused inefficiencies. Additionally, manual data entry led to inconsistencies and errors in death records, and there was a lack of timely access to accurate data for decision-making. This phase of the research helped clarify the system's limitations and provided a foundation for designing the new system.
4) System Design
   Based on the findings from the analysis, a new information system was designed to improve the management of death data. The design process included two main stages: conceptual design and detailed physical design. The conceptual design focused on outlining the overall structure and functionality of the system, while the physical design addressed the technical specifications, such as user interfaces, database management, and security features. The new system was designed as a desktop-based application with a user-friendly interface to ensure that staff without technical expertise could easily use it.
5) Testing and Evaluation
   Once the system was developed, it underwent thorough testing to ensure it met the needs of the users and functioned as expected. The testing process involved verifying that the system could manage death data, generate reports, and handle all required functions without errors. Feedback was gathered from staff members who tested the system to ensure it was user-friendly and addressed the issues identified earlier in the study. The evaluation also focused on ensuring that the system was capable of improving accuracy and efficiency in managing death data.
6) Efficiency and Effectiveness Analysis
   Finally, the new system was compared with the previous manual system to assess its efficiency and effectiveness. Several performance indicators, such as processing time, data accuracy, and the reduction of errors, were measured. The comparison revealed that the new system significantly reduced processing times and minimized data entry errors. Additionally, the automated system generated accurate reports faster than the manual system, improving the overall efficiency of the Population and Civil Registration Office. The new system also provided real-time access to death data, making it easier for staff to retrieve and process the information needed for decision-making.

4 | RESULTS AND DISCUSSION

4.1 Results

4.1.1 Analysis of the Existing Information System

The current system for managing death data at the Population and Civil Registration Office of Aceh Barat Daya is computerized using the Population Information System (SIAK). However, several challenges have been identified in the reporting process, which does not align with the standards desired by the office. Some of the main issues identified include the lack of a dedicated application for managing death data within SIAK. This is a common issue in information management systems, requiring analysis and further development to address the weaknesses in the current system. Additionally, the availability of death data on the ground is limited, which is a significant challenge in the management of death records. The lack of data availability hampers the process of record-keeping. Furthermore, the shortage of human resources with a background in information technology is

also a contributing factor in the ineffective management of death data.

System analysis is conducted after defining the functional requirements for system development. This phase illustrates how the system will be built, including the design, creation, and arrangement of various elements into a cohesive and functioning unit. The system design is divided into two main categories: conceptual design, which provides an overview of the system, and physical design, which details the technical aspects of the system. The conceptual design aims to give users a general understanding of the system's functions, while the physical design outlines the technical components, including hardware and software configurations. The goal of designing the death data management system at the Population and Civil Registration Office of Aceh Barat Daya is to produce an application capable of handling death data processing. This system will be presented to the Head of the Population and Civil Registration Office for decision-making purposes. Additionally, the system will process all input data and generate outputs that meet the requirements, such as death data management reports. Based on observations and interviews with stakeholders, the system to be developed will integrate user management and death data management. Several key features of the system include: user creation and approval management by the administrator, the use of a desktop-based application that operates in a Windows environment, the creation of death certificates by users, and the generation of death certificates by the administrator.

The data structure design includes several tables required to store information related to administrators, citizens, and death data. The first table stores administrator data, including fields such as User ID, Name, Username, Password, and Status. The second table contains citizen data, including fields like NIK (National Identification Number), Full Name, Gender, Place of Birth, Date of Birth, Age, Religion, Occupation, Address, and Sibling Order. The third table stores death data, including fields such as Family Card Number, Head of Family's Name, NIK, Date and Time of Death, Cause of Death, Place of Death, and information about the reporter and witnesses.

4.1.2 Death Data Management System Design

This system includes several features that support more efficient death data management. The Login Menu is the first feature, ensuring security, where each user must verify their username and password. Once successfully logged in, users are directed to the main menu, where they can access various functionalities related to managing death data. The Data Flow Diagram (Flowchart) illustrates how the system operates, starting from the input of citizen data and death data, then processing and generating reports as required. The Form for Inputting Citizen Data and the Form for Inputting Death Data are the two main forms in this system. The Citizen Data Input Form is used for entering basic citizen information, which will later be used in the death management process. The Death Data Input Form is used to input death data, which will be processed by the administrator. All data entered is processed, and relevant reports, such as death records and other necessary reports for the Population and Civil Registration Office of Aceh Barat Daya, are generated. With a more structured system, it is expected that the management of death data will become more efficient, minimizing data entry errors, and making it easier to access information for faster and more accurate decision-making. This system will support a more transparent and accurate administrative process and enhance public service delivery.

Figure 1. Main Menu Form

The image shows the main menu of a death reporting system used at the Camat Office in Manggeng District, Aceh Barat Daya. It includes several sections such as "Log Out," "Data Penduduk" (Citizen Data), "Data Kematian" (Death Data), and "Data User" (User Data), where users can input and manage data related to death reports and citizen information. The user interface is simple, with clear navigation options. At the bottom, the user's details are displayed, showing administrative access. This system aims to streamline the process of managing death reports, improving efficiency at the district office.

When the program is first launched, users will encounter several stages, including the citizen data input form, the death data input form, and the user data input form. Each form plays a crucial role in ensuring the smooth management of death data at the Population and Civil Registration Office. The Citizen Data Input Form serves as the primary form for entering basic citizen information. In this form, users will fill in details such as name, National Identity Number (NIK), place and date of birth, occupation, address, and other relevant data. All this information will later be used to process death data in the next stages. This form ensures that each record is properly linked, making it easier to manage death data accurately and efficiently. The form is designed to be user-friendly, even for staff with no technical background. Users simply need to fill in the available fields, and the system will store all the information neatly. Accuracy in entering data is critical, as errors could affect the creation of official documents such as death certificates, family cards, or ID cards. With an efficient system for citizen data input, the death registration process becomes faster and more organized. All data entered in this form is directly connected to other data in the system, allowing users to easily monitor, update, and verify the information. This form helps reduce input errors and improves the efficiency of managing death data, ensuring quicker and more accurate reports.

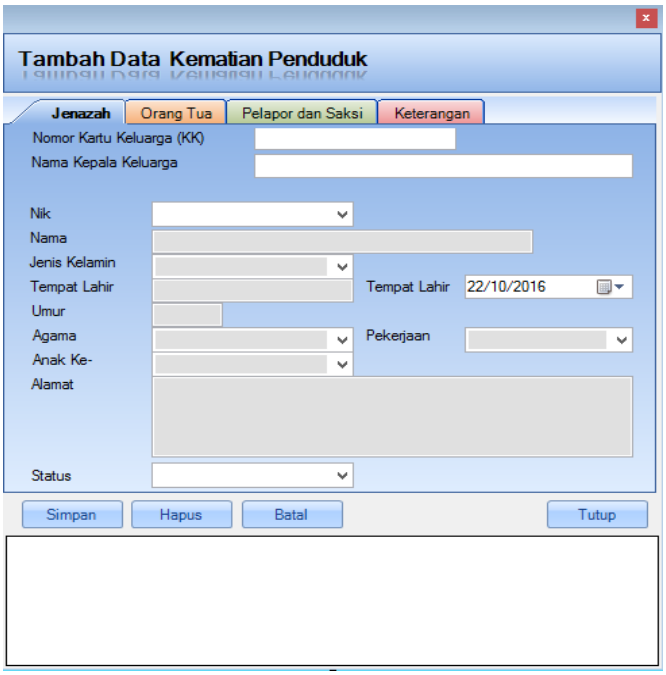

Figure 2. Population Death Data Input Form

The Death Data Input Form serves as the primary data entry point for managing death records. This form is used to record essential information about a death, such as the date, time, cause, and place of death, as well as the details of the reporter and witnesses. All the information entered is stored in the system and used to generate the necessary death reports required by the Population and Civil Registration Office. This form helps ensure that death records are accurately documented and organized. Additionally, there is the User Data Input Form, which records information about the system's users. This form is used to register users authorized to access and manage the data within the system. Each user is granted access based on their role in managing the data. This system ensures that user data is securely and systematically handled. Both forms are accompanied by data flow diagrams (flowcharts) that clearly outline the steps for entering and processing data. These flowcharts guide users in following the correct sequence when inputting data, ensuring a smooth process and timely generation of reports. The Death Certificate Report Output Form is the result of printing the death certificate that was previously entered in the Death Certificate Input Form.

KABUPATEN ACEH BARAT DAYA

KANTOR CAMAT MANGGENG

REKAPITULASI PENDUDUK

NIK	NAMA	JENIS KELAMIN	TEMPAT LAHIR	TGL LAHIR	UMUR	AGAMA	PEKERJAAN	ALAMAT	ANAK KE
3319045 3049100 01	ABDUL WAHAB	Laki-Laki	Aceh Barat Daya	08/06/1991	-	ISLAM	BURUH HARIAN	-	-
3319045 6116600 02	MUHAM MAD	Laki-Laki	Aceh Barat Daya	08/06/1966	-	ISLAM	TUKANG KAYU	-	-
3319045 7081300	SUKADI	Laki-Laki	Aceh Barat Daya	08/06/2013	-	ISLAM	BELUM/TID AK	-	-
3319045 4071300 01	SUNARY O	Laki-Laki	Aceh Barat Daya	08/03/2013	-	ISLAM	BELUM/TID AK	-	-
3319045 1071300 01	SURANT I	Perempuan	Aceh Barat Daya	07/30/2013	-	ISLAM	BELUM/TID AK	-	-
3319045 3071300 01	NURUL AFRIDA	Perempuan	Aceh Barat Daya	07/22/2013	-	ISLAM	BELUM/TID AK	-	-
3319045 3071300 01	NGADEN AN	Laki-Laki	Aceh Barat Daya	07/22/2013	-	ISLAM	BELUM/TID AK	-	-
3319045 0071300 01	MUHAM MAD	Laki-Laki	Aceh Barat Daya	07/19/2013	-	ISLAM	BELUM/TID AK	-	-
3319045 1071300 01	HARTATI K	Perempuan	Aceh Barat Daya	07/10/2013	-	ISLAM	BELUM/TID AK	-	-

Figure 3. Population Recapitulation Report Data Print Output Form

The image displays a population summary report from the Camat Office in Manggeng, Aceh Barat Daya. It includes a list of citizens along with their NIK, name, gender, place of birth, date of birth, age, religion, occupation, address, and birth order. This report offers a clear overview of the local population, which is essential for administrative purposes, helping the office manage and update citizen information effectively.

4.1.3 Efficiency and Effectiveness of the Information System

The analysis of the benefits from implementing the information system (supporting application) developed using Microsoft Visual BASIC.NET, when compared to the existing system used at the Population and Civil Registration Office, can be seen in the table below. The implementation of the new system based on Microsoft Visual BASIC.NET offers several advantages. First, the system reduces reliance on manual processes, which are prone to errors. By using the new system, data processing becomes faster and more accurate. The previous system, which depended on manual input, often led to mistakes and data duplication, which hindered efficiency. In contrast, the new application automates data management, reduces input errors, and speeds up the process of generating reports and handling death data. Another advantage is the ability of the new system to automatically generate reports. Users no longer need to spend time manually compiling reports. The data management process becomes more efficient, and the generated reports are more timely and aligned with administrative needs. Additionally, the new system is more flexible and can be adapted to meet future needs. The technology used allows for updates and the development of new features as required. Overall, the implementation of this information system helps improve operational efficiency, facilitates data management, and accelerates decision-making processes at the Population and Civil Registration Office.

Table 1. Efficiency and Effectiveness of Information Systems

No	Current System	New Information System Design
1	Requires high operational costs for purchasing equipment or office supplies to support manual data processing.	Costs are lower regarding office supplies because the application is automated for data processing.
2	The current death data management system is manual and unstructured.	The new system is developed using Microsoft Visual BASIC, structured, and easy to adapt to the organization's needs.
3	Difficult to manage larger data sets as the existing system is still manual.	Data management is easier and more efficient because the system handles larger data sets and utilizes output (reports).
4	Data entry redundancy occurs because of the manual process, leading to potential data duplication without a filtering function.	No redundancy in data entry as the system is automated. Data duplication is prevented with filtering during data entry.
5	Users lack a foundation or specific information to make initial policy analysis because the manual system lacks specific reports.	Users have the necessary foundational data or specific information to support initial policy analysis, as the system is automated and can generate specific reports.

6	Using Microsoft Excel manually requires more memory.	The application designed with Microsoft Office Access requires less memory, for example, when five records are entered and then converted using Microsoft Excel.

Table 1 compares the current system with the new information system design. The current system requires significant operational costs for purchasing office supplies to support manual data processing. In contrast, the new system reduces these costs by automating data management. The existing system for death data management is manual and lacks structure, while the new system, developed using Microsoft Visual BASIC, is structured and easier to adapt. The new system also simplifies data management, eliminating redundancy and duplication due to automation and filtering. Additionally, it provides specific reports for decision-making and reduces memory usage compared to the manual Excel-based processes.

4.2 Discussion

The development of a more efficient information system for managing death data at the Population and Civil Registration Office of Aceh Barat Daya was aimed at addressing several issues within the existing system. Through the methodology applied, consisting of observation, interviews, system analysis, design, testing, and evaluation, key challenges were identified and subsequently resolved. Initial observations and interviews revealed significant challenges in the existing system. The manual data entry process was identified as inefficient and prone to errors, leading to delays in data processing and report generation. Furthermore, the absence of a dedicated application for managing death data within the Population Information System (SIAK) created barriers to streamlining workflows (Aprianti, 2021; Mishchenko & Naumenkova, 2022). Limited access to accurate data and a lack of IT-trained staff compounded the issues. The observations clearly indicated that the system needed automation to enhance accuracy and scalability.

The analysis phase further supported the findings from the observation and interview stages. The system's lack of automation and integration was one of the key issues, leading to data inconsistencies and inefficiencies. As pointed out by several researchers (Zubaidi *et al*., 2019; Nokas *et al*., 2022), the absence of real-time data access and the reliance on manual processes hindered the efficiency of decision-making and the overall management of death records. This reinforced the need for a more structured and automated system to reduce errors and improve the speed of report generation. The design of the new system, developed using Microsoft Visual BASIC, focused on addressing the issues identified during the analysis phase. As per the design principles discussed by Noviarini *et al*. (2017), a structured, user-friendly application was crucial to ensure seamless adoption by staff without technical expertise. The new system incorporated features such as automatic data management, report generation, and real-time data access, which aligned with the need for automation and efficient data processing (Efendi *et al*., 2024; Hidayatuloh *et al*., 2022). The new system was also flexible enough to be adapted to future needs, allowing for the easy addition of features as necessary.

Testing the system confirmed that it met user expectations and addressed the shortcomings of the previous system. As noted by Šimonová (2021), involving users in the design and evaluation phases ensures the system is more likely to be accepted and efficiently utilized. Feedback from staff indicated that the system was not only user-friendly but also significantly improved data entry speed, minimized errors, and facilitated faster report generation, meeting the objectives set out in the design phase. The new system's efficiency and effectiveness were evaluated by comparing it with the previous manual system. Key performance indicators, such as processing time, data accuracy, and error reduction, showed considerable improvements. The new system automated many previously manual tasks, which lowered operational costs and allowed for more efficient data processing and report generation (Rehouma *et al*., 2020). The system's ability to manage larger data sets and provide real-time access to data was critical in enhancing decision-making and reducing delays. The comparison indicated that the new system was more efficient in managing death data and generating reports in a timely manner.

This study successfully demonstrated that the implementation of an automated information system for managing death data at the Population and Civil Registration Office significantly improved efficiency and effectiveness. The system reduced errors, improved processing speed, and allowed for real-time data access, all of which contributed to better decision-making. The findings align with research emphasizing the importance of automation and the use of technology to improve public administration processes (Norcross, 2022; Zubaidi *et al*., 2019). The new system provides a solid foundation for future improvements and highlights the need for adopting modern technology in public service to ensure better governance and public service delivery.

5 | CONCLUSIONS AND FUTURE WORK

This study successfully developed and implemented a more efficient Death Reporting Information System at the Camat Office in Manggeng, Aceh Barat Daya. Previously, death data management was done manually, which was prone to errors and hindered administrative processes. With the new system built on Visual Basic .NET, data processing has become faster and more accurate. The results from testing showed a reduction in processing time, fewer data entry errors, and timely death reports. Additionally, real-time data access improved staff decision-making capabilities. One important takeaway from this study is the need for intensive training for users to ensure they can fully utilize the technology. Staff competence plays a crucial role in the success of system implementation. Ongoing training programs should be provided to help staff adapt to the new system and maximize its potential. The success of this system opens up opportunities to develop similar applications for other administrative processes in government. Technology can reduce manual workload and enhance the overall efficiency of public service delivery. Future work should focus on adding features to support other administrative processes within government offices. Integrating the system with other applications, such as a broader population management system, will further improve data handling and efficiency. Additionally, regular maintenance and system updates are essential to keep the system relevant and optimal. Expanding the training program for all staff will ensure faster adoption and more effective use of the system.

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