

Effectiveness of Implementation of the Personnel Information System (SIMAK) in Supporting ASN Human Resource Management at the BKPSDM of Padang Panjang City

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Abstract. Government digital transformation requires effective, efficient, integrated, and data-based personnel management. The Personnel Management Information System (SIMAK) at the BKPSDM of Padang Panjang City has been utilized to support personnel data management and services, although its implementation still faces several challenges. This study aimed to analyze the effectiveness of SIMAK implementation in supporting ASN human resource management at the BKPSDM of Padang Panjang City. This study employed a qualitative approach using a case study method. Informants selected purposively, including BKPSDM leaders, SIMAK managers, operators, and users. Data were collected through interviews, participant observation, and documentation, then analyzed using the Miles and Huberman interactive model and validated through triangulation. SIMAK has supported data searching, updating, and provision, accelerated personnel services, reduced physical documentation, saved time, and improved work efficiency. However, several challenges remain, including system disruptions, internet network problems, delayed data updating, feature changes, and differences in ASN digital capabilities. SIMAK has provided tangible benefits for personnel management, but its optimization requires stronger infrastructure, data quality, user competence, communication, and organizational coordination.

Keywords: Effectiveness; Human Resource Management; Implementation; Personnel Information System; Public Sector Digital Transformation.

1. BACKGROUND

The development of information and communication technology has driven the transformation of government administration, including the management of human resources for state civil servants (ASN). Public sector digitalization is aimed at creating more effective, efficient, transparent, accountable, and data-driven governance (Koton et al., 2026); (Ma'sum et al., 2025). In the context of ASN management, personnel information systems play a crucial role as a data source supporting employee administration, transfers, promotions, career development, performance appraisals, and personnel decision-making.

The implementation of personnel information systems in various local governments has shown benefits in accelerating data processing, improving administrative efficiency, and providing information to support decision-making. (Sadat, 2019) demonstrated that SIMPEG can improve the effectiveness of personnel data processing and presentation, while (Muslikhah, 2025), found that personnel information systems support the provision of information for decision-making. However, their implementation still faces issues regarding database completeness, resources, user competency, and the quality of system utilization. (Dharmawan et al., 2019); (Kamal et al., 2020); (Para et al., 2020). These findings indicate that system success is determined not only by the existence of the application, but also by the readiness of human resources and organizational support.

Recent studies have shown that the effectiveness of personnel information systems is increasingly linked to system quality, user understanding, organizational engagement, and procedural compliance. (Hermawan et al., 2023), demonstrated that digital transformation of personnel services is geared toward more real-time, accurate, transparent, and integrated services. Meanwhile, (Nurhasanah et al., 2023), and (Irianto et al., 2023), demonstrated that personnel information systems can improve work effectiveness and efficiency, although limitations remain in system functionality and information availability. (Abdullah et al., 2025), also identified issues of procedural inconsistency, limited user understanding, user engagement, and system quality.

This phenomenon was also observed at the Padang Panjang City Human Resources Development Agency (BKPSDM) through the use of the Personnel Management Information System (SIMAK) as a central ASN database. SIMAK is expected to accelerate administration, provide personnel information, reduce reliance on manual documents, and support other digital government systems. However, initial observations indicate that its utilization is not yet fully optimal. Data is still incomplete or does not meet requirements, additional processing is required before data is used, administrative processes are still carried out manually, and user capabilities are unequal in utilizing system features. These conditions indicate a gap between the availability of SIMAK as a central personnel data center and the level of its utilization in supporting ASN HR management.

Based on previous research, there are still *research gap* in the study of the effectiveness of personnel information systems. Some studies focus more on application implementation, personnel administration, system quality, or decision-making separately, while studies linking system effectiveness with more integrated ASN HR management in local governments are still limited. (Lubis & Veri, 2025), emphasized that SIMPEG can improve administrative effectiveness and efficiency when implemented optimally, while (Sholeha, 2023), showed that the system's effectiveness is still influenced by a number of obstacles in its use. Thus, studies are needed that examine not only the system's existence but also the quality of information, user capabilities, organizational processes, and its utilization in work.

This research is important to conduct because the effectiveness of SIMAK is related to the ability of BKPSDM to provide accurate, complete, up-to-date, and easy-to-use ASN data for services and decision-making. The novelty of this research lies in analyzing the effectiveness of SIMAK implementation as an instrument for ASN human resource management by integrating aspects of technology, human resources, organizational processes, information quality, and system utilization in one study at the Padang Panjang City Human

Resources Development Agency (BKPSDM). This research is expected to provide an empirical picture of the actual condition of SIMAK implementation, identify factors that influence its effectiveness, and serve as a basis for optimizing information systems in supporting digital transformation and ASN management within the Padang Panjang City Government.

2. RESEARCH METHODS

This study uses a qualitative approach with a case study method to gain an in-depth understanding of the effectiveness of the implementation of the Civil Servant Management Information System (SIMAK) in supporting the management of ASN human resources. The study was conducted at the Padang Panjang City BKPSDM and regional apparatus within the Padang Panjang City Government that use SIMAK services, from April–September 2026. Research informants were determined purposively based on their involvement and knowledge of SIMAK implementation, including BKPSDM leaders, SIMAK managers, operators, and SIMAK users in regional apparatus. Data were collected through structured interviews, participant observation, and documentation studies to obtain information on the implementation, utilization, obstacles, and effectiveness of SIMAK in supporting personnel work.

Data analysis used the interactive model of Miles and Huberman (2014) which includes data collection, data reduction, data presentation, and conclusion drawing. Data from interviews, observations, and documentation were selected and categorized based on the research focus, then presented narratively to identify patterns, relationships, and key findings regarding the effectiveness of SIMAK implementation. Data validity was achieved through triangulation of sources and techniques by comparing information from various informants and matching the results of interviews, observations, and documentation to obtain credible and accountable findings.

3. RESULTS AND DISCUSSION

The Implementation of the Personnel Information System (SIMAK) at the Padang Panjang City BKPSDM

The results of the study indicate that the implementation of the Personnel Information System (SIMAK) at the Padang Panjang City BKPSDM has been running and has brought changes to the personnel administration management process. SIMAK has been used to assist in the management, search, update, and provision of personnel data, thus making the service process for ASN more effective and efficient. However, the implementation of SIMAK has not

been fully optimized because several obstacles are still found in the form of system disruptions, internet network, delays in data updates, changes in features, and differences in ASN digital capabilities.

These findings indicate that SIMAK implementation is not only about the availability of the application, but also about organizational readiness, human resources, communications, infrastructure, division of authority, and users' ability to adapt to technological changes. Therefore, the success of SIMAK implementation is greatly influenced by the integration of technological and organizational aspects.

These findings are in line with research Dharmawan et al., (2019) regarding the implementation of web-based SIMPEG at the BKPSDM of Badung Regency. The study shows that SIMPEG has been implemented to improve personnel management and administration quickly, precisely, and accurately, but its implementation has not achieved optimal results.

These similarities show that the implementation of personnel information systems in government agencies has basically provided positive changes to personnel administration, but system optimization still requires support from resources, infrastructure, data management and user capabilities.

Communication

Based on the research results, communication in the implementation of SIMAK at the Padang Panjang City BKPSDM is carried out through socialization, coordination, and communication between management officials, operators, and ASN users. The Head of BKPSDM explained that information regarding SIMAK usage has been conveyed through officials handling personnel, operators, and socialization activities as well as internal meetings. However, the level of ASN understanding of SIMAK is not yet completely uniform. Operators tend to have a better understanding because they interact directly with the system, while ASN users have a better understanding of the features based on their respective service needs.

These findings indicate that communication in the SIMAK implementation is ongoing, but has not yet fully achieved a shared understanding among all users. Communication is not sufficient only when the system is introduced; it needs to be ongoing, especially when there are changes to features, procedures, or service mechanisms.

This condition is in line with research Tomonob & Apriani (2022) regarding the implementation of SIMPEG in Sintang Regency. The study found that SIMPEG implementation has been running well, but there is still a need for improved management and technical guidance for operators to ensure data integration between regional government agencies (SKPD).

Thus, the results of the study at the Padang Panjang City Human Resources Development Agency (BKPSDM) reinforce previous research that communication and knowledge transfer are crucial factors in the successful implementation of a personnel information system. The difference is that in this study, communication was already taking place through various channels, but the issue lay in ensuring equitable understanding and sustainable support, particularly during system updates.

Resource

The research results show that SIMAK implementation is supported by management and operator officials. However, the digital capabilities of civil servants are not evenly distributed. In addition to human resources, the availability of computers, internet networks, servers, and supporting facilities are also crucial factors in SIMAK implementation. The Head of the Human Resources Development Agency (BKPSDM) stated that each employee's technological proficiency varies, and the information system cannot function optimally if the infrastructure is not supportive.

This situation demonstrates that resources are a crucial factor in the success of SIMAK implementation. A good information system will not deliver optimal service without the support of competent operators, users who understand the system, and adequate technological infrastructure.

The results of this study have similarities with previous research. Para et al., (2020) regarding the implementation of the SIMPEG policy in Ambon City. The study showed that SIMPEG implementation has not been running well because there are still issues with the resources involved, requiring the procurement of facilities and infrastructure, and leadership monitoring.

Study Susanti & Murjani (2023) The Tabalong Regency Human Resources Development Agency (BKPSDM) also places resources as a critical factor in SIMPEG implementation. The study explains that SIMPEG is necessary to produce fast, accurate, accountable, and up-to-date employee data through the conversion of manual data into digital data. Meanwhile, the study Sunarya & Gaol (2021) found that the implementation of the personnel information system contributed to the centralization of personnel data and documents in one system, but there were still obstacles in the form of completeness of documents and the need for supporting facilities for data management.

Thus, the research results at the Padang Panjang City BKPSDM strengthen previous research that the quality of human resources and technological infrastructure are important prerequisites for the success of the personnel information system.

Disposition

The results of the study indicate that the attitudes of implementers and civil servants toward SIMAK tend to be positive. Civil servants are beginning to understand that digitizing personnel services is necessary to accelerate service delivery and reduce manual administrative work. However, some civil servants still need time to adapt, having previously been accustomed to manual procedures. Disposition in SIMAK implementation can be seen from the implementers' acceptance, commitment, and readiness to use the system. A positive attitude is crucial because information systems require users' willingness to shift from manual to digital procedures.

However, the research also shows that SIMAK acceptance is not entirely uniform. Some civil servants still consider using the system to be additional work, especially when it comes to inputting or updating data. This is influenced by digital literacy levels, civil servant age, and workload. These findings align with research. Zulkifli (2018) This study examined the effectiveness of the implementation of the personnel information system in Bungo Regency. The study found that the system's implementation was running according to standards, but was not optimal because some employees had not yet entered their personnel data into the system.

Thus, this study shows that user acceptance is one of the factors determining the success of SIMAK implementation. The system must not only be technically available but also accepted and used consistently by ASN.

Bureaucratic Structure

The research results show that SIMAK implementation requires a clear division of tasks between the Head of BKPSDM, management officials, operators, and civil servant users. Operators play a crucial role in assisting users and addressing technical issues. However, potential challenges remain if SIMAK management is combined with other administrative tasks.

The bureaucratic structure in SIMAK implementation is also related to inter-unit coordination mechanisms. Research shows that the BKPSDM's internal structure still faces inter-unit coordination issues, which can impact data integration. This is crucial because the primary goal of the personnel information system is to produce integrated and readily usable data.

The results of this study are in line with research Denaya & Djumiarti (2018) This study examines the effectiveness of SIMPEG in the Central Java Provincial Regional Personnel Agency (BKD), which places organizational and system implementation aspects as crucial to

SIMPEG effectiveness. The study demonstrates the importance of supporting system components, from data collection to information processing and presentation.

Thus, the results of research at the Padang Panjang City BKPSDM show that a clear bureaucratic structure and cross-unit coordination are important factors in realizing SIMAK integration.

SIMAK Effectiveness Based on DeLone and McLean

In your research, the effectiveness of SIMAK was also analyzed based on DeLone and McLean's six dimensions of information system success: system quality, information quality, service quality, usage, satisfaction/intensity of use, and benefits. Your manuscript has used these six dimensions.

System Quality

The research results show that SIMAK provides BKPSDM and related departments with easy access to manage personnel data. The system helps reduce reliance on manual documents and increases data management efficiency.

This finding is in line with research Albadri et al., (2024) regarding web-based SIMPEG. The study explains that the personnel information system can be an integrated platform for collecting, storing, and processing personnel data, resulting in fast, precise, and accurate information.

However, the quality of the system at SIMAK Padang Panjang still needs to be improved because your research found system disruptions, the need for server upgrades and the need for feature development.

Information Quality

The research results show that SIMAK and SIASN integrate to support the coordination of ASN data management. Access is granted according to authority, allowing each department to obtain the necessary data without having to manually request data from other departments.

Information quality is crucial because personnel data is the basis for various administrative processes and decision-making. This finding aligns with research. Jonar (2017) This study examines the acceptance of SIMPEG at the Statistics Indonesia (BPS) of West Sumatra Province. The study positions the development of a sophisticated and integrated SIMPEG database as a crucial component in supporting e-government, personnel data management, and leadership decision-making. Nazhira & Candradewini (2025) At the BKPSDM of Cirebon City, it was also found that SIMPEG had made it easier to manage employee data, transfers and promotions, but data synchronization and coordination between SKPDs were still a challenge.

Thus, the findings in Padang Panjang reinforce that data integration and updating are key factors in determining the quality of personnel system information.

Quality of Service

The research results show that SIMAK has a high level of responsiveness, particularly in the civil servant pension service process. The system's use speeds up the service process compared to procedures that still rely heavily on manual documentation.

These findings are in line with research Sunarya & Gaol, (2021), which found that the personnel information system makes it easier for employees to access data and documents and contributes to employee development and performance assessment. Furthermore, a systematic review Lubis & Veri, (2025) shows that the implementation of SIMPEG has the potential to improve the quality of personnel administration services through efficiency of administrative processes, data accuracy, ease of access, transparency and support for decision making.

Thus, SIMAK at the Padang Panjang City BKPSDM can be said to have made a positive contribution to the quality of personnel administration services, although its responsiveness still depends heavily on system stability and data quality.

Use

Research results show that SIMAK is routinely used by operators to access, manage, and update personnel data. Document digitization also allows some services to be performed without requiring users to come to the office in person.

These findings demonstrate that SIMAK is not only available as an application, but is also used in daily work activities. This is an important indicator because the success of an information system is measured not only by the existence of the application, but also by the extent to which the system is used in work processes. Tomonob & Apriani (2022) also shows that the implementation of SIMPEG has been running, but increasing operator capacity through technical guidance is still needed to realize data integration between SKPDs.

User Satisfaction

User satisfaction is an important indicator in assessing the success of an information system because it reflects users' assessment after gaining experience in using the system. Based on the results of observations and interviews, it can be concluded that user satisfaction with SIMAK at BKPSDM Padang Panjang City is relatively positive, which is indicated by the ease of obtaining personnel information, time savings, reduced use of physical documents, reduced repetitive work, and accelerated service. Thus, the effectiveness of SIMAK is not only determined by the existence of the system, but also by its ability to meet user needs and provide real benefits in carrying out work.

This finding is in line with (Syarifa & Susilawaty, 2021), which shows that system quality, information quality, and service quality influence user satisfaction and provide benefits to users.(Nadiansyah & Sitohang, 2024), in the personnel information system, content, accuracy, format, ease of use, and timeliness are also important aspects in measuring user satisfaction.

Benefit

The research results show that the most significant benefits of SIMAK are time savings, reduced use of physical documents, easier access to information, and increased service efficiency. Civil servants (ASN) users stated that digital documents make reporting and service processes more practical.

This finding is consistent with research Syafriyani & Zaituna (2019) This study examines the implementation of e-government in personnel administration services at the Sumenep Regency Human Resources Development Agency (BKPSDM). The study positions the implementation of information systems as part of efforts to improve personnel administration services through the use of government technology.Lubis & Veri (2025)This also reinforces the finding that SIMPEG can improve the efficiency, accuracy, ease of access, and quality of personnel administration services. Therefore, it can be said that the primary benefits of SIMAK at the Padang Panjang City BKPSDM have been directly felt by organizations and ASN users, particularly in terms of time efficiency and ease of data access.

4. CONCLUSION AND SUGGESTIONS

Based on the research results, it can be concluded that the implementation of the Personnel Management Information System (SIMAK) at the BKPSDM of Padang Panjang City has contributed to supporting the management of ASN human resources through ease of searching, updating, and providing personnel data, accelerating services, saving time, reducing the use of physical documents, and increasing work efficiency. This effectiveness is supported by system quality, information quality, service quality, intensity of use, user satisfaction, and perceived benefits, although its implementation still faces obstacles in the form of system disruptions, limited internet networks, delays in data updates, changes in features, and differences in user digital capabilities.

It is recommended that the Padang Panjang City BKPSDM strengthen the infrastructure and system stability, improve the quality and discipline of data updates, carry out continuous training and mentoring for operators and users, and strengthen communication and

coordination between work units so that the use of SIMAK is increasingly optimal, integrated, and able to support the management of ASN personnel effectively and sustainably.

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