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DOI : 10.32734/lwsa.v9i2.2868
Electronic ISSN : 2654-7066
Print ISSN : 2654-7058

Volume 9 Issue 2 – 2026 TALENTA Conference Series: Local Wisdom, Social, and Arts (LWSA)



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Implementation of the *Knowledge Management System* On Portal DAPENBUN Within the Environment of Dana Pensiun Perkebunan

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Abstract

This study aims to evaluate the implementation of the DAPENBUN Portal as a Knowledge Management System (KMS) within Dana Pensiun Perkebunan, a non-bank financial institution managing pension funds. The organization faces challenges in disseminating and internalizing procedural knowledge, despite having a digital portal designed to centralize key documents and regulations. Using a mixed-method approach and the System Development Life Cycle (SDLC) framework, this research involved surveys of 135 employees, interviews with key stakeholders, and analysis of internal documents. The findings reveal that the portal has contributed to improved access to organizational knowledge, reduced procedural violations, and enhanced collaboration across departments. However, usage levels vary across units, and some resistance remains due to a lack of digital literacy and system notifications. The study contributes to the literature on knowledge systems in the public pension sector and offers practical recommendations for system enhancement, including feature development, KPI integration, and user training. The results emphasize that successful KMS adoption relies not only on technology, but also on cultural and organizational readiness.

Keywords: Knowledge Management System; Compliance; Portal DAPENBUN; Organizational Efficiency; Public Pension Fund

1. Introduction

Amidst the rapid advancement of digitalization and the increasing complexity of modern organizations, knowledge management (KM) has become a strategic element in managing an organization, including non-bank financial institutions such as Dana Pensiun. The Knowledge Management System (KMS) is not merely a tool for documentation, it is also a solid foundation for organizations to improve efficiency, obedience, and adaptive capabilities in data-based decision making.

Dana Pensiun Perkebunan, as the manager of Program Pensiun Manfaat Pasti (PPMP), faces many significant challenges in managing and distributing internal knowledge. Despite having developed Portal DAPENBUN since the year 2020, internal audits still discovered violations against operational procedures that should have been available digitally and easily accessible. This problem shows that the existence of a system does not necessarily guarantee the utilization and internalization of knowledge in the work process.

Theoretically, various studies have emphasized the importance of integrated information systems and KMS in increasing productivity and compliance (Nonaka & Takeuchi, 1995; Alavi & Leidner, 2001; Davenport, 1998). However, most of the studies focus on the private sector or manufacturing-based companies. Research on the implementation of KMS in the public sector or non-profit institutions such as Dana Pensiun, notably in Indonesia, is still limited (Prasad & Junni, 2020; Setiawan, 2023).

The lack of these studies is noteworthy, considering how organizations such as DAPENBUN have regulatory complexities, bureaucratic structures, and a need for long-term information management. Therefore, evaluating the effectiveness of KMS implementation in environments such as this one is crucial to provide us with a new understanding of information technology adoption in the context of non-commercial organizations.

This research aims to:

1. Evaluate the effectiveness of Portal DAPENBUN as a KMS system in supporting work efficiency and procedural compliance.
2. Identify challenges and obstacles in the implementation process.
3. Provide strategic recommendations to strengthen the system to be more adaptive to user and organizational needs.

The contribution from this research is twofold: Practically, it provides concrete input for DAPENBUN management in strengthening internal systems; theoretically, it expands the scope of KM literature with the context of implementation in the Dana Pensiun institution as a part of the public financial center.

2. Theoretical Framework

This study builds upon classical and contemporary theories in Knowledge Management (KM) and Information Systems (IS) to understand the behavioral and organizational dynamics of KMS adoption.

The foundation of KM theory is the SECI model developed by Nonaka and Takeuchi (1995), which describes knowledge creation through four processes: Socialization, Externalization, Combination, and Internalization. The DAPENBUN Portal, in this context, functions as a digital medium that facilitates the transformation of tacit knowledge (held by employees) into explicit knowledge (documents, SOPs, and records) and supports organizational learning through digital documentation.

To analyze user behavior, the Technology Acceptance Model (TAM) proposed by Davis (1989) is applied. TAM posits that perceived usefulness (PU) and perceived ease of use (PEOU) directly affect users' intention to adopt new technology. In DAPENBUN's case, employees' perception that the portal makes their work easier and more productive becomes a key success factor for adoption.

Moreover, the study integrates Diffusion of Innovation (DOI) theory by Rogers (2003), which emphasizes five innovation attributes—relative advantage, compatibility, complexity, trialability, and observability—as drivers for technology diffusion in organizations. These elements explain the variance in portal usage among departments and age groups, particularly the slower adoption among senior employees with lower digital confidence.

Combining these three frameworks—SECI, TAM, and DOI—provides a holistic theoretical lens for analyzing not only the technical system but also the socio-organizational factors influencing adoption and effectiveness of the KMS in the public pension context.

3. Methodology

This study employs a mixed-method approach supported by the System Development Life Cycle (SDLC) model. The SDLC was chosen because it aligns with the real-world development of the DAPENBUN Portal, which followed stages of planning, design, testing, and refinement. The combination of qualitative and quantitative methods enhances the validity and richness of findings, especially in organizational case studies.

3.1 Quantitative Method

Structured questionnaire was distributed to 135 DAPENBUN employees from various divisions, using a Likert scale to measure perception of usefulness, ease of use, frequency of access, and perceived organizational impact. Descriptive statistical analysis was performed using SPSS to identify trends and correlations in responses.

3.2 Qualitative Method

To supplement survey data, 48 semi-structured interviews were conducted with users, IT developers, compliance officers, and division heads. This provided insight into behavioral patterns, usability issues, and organizational readiness. Thematic analysis was conducted using NVivo software to extract recurring themes related to adoption challenges, user experience, and system utility.

3.3 Document Review

Supporting materials such as internal SOPs, audit reports, and system log data were reviewed to cross-validate responses. Notably, SPI audit records from before and after the portal's implementation were compared to assess impact on procedural compliance.

3.4 Triangulation Strategy

The combination of three data sources—survey, interview, and documents—ensures data triangulation, enhancing the credibility and generalizability of findings (Denzin, 2012).

3.5 Research Site and Period

The research was conducted at DAPENBUN's central office in Jakarta from January 2020 to March 2024, covering both the development and operational phases of the KMS.

4. Result And Discussion

According to the survey results of 135 DAPENBUN employee respondents, as well as the data from interviews with 48 individuals, including the Heads of Divisions, Heads of Affairs, and Heads of DAPENBUN Service Offices, several main findings were obtained as follows:

4.1. Increased Operational Efficiency

Before implementing Portal DAPENBUN, the distribution process of documents was conducted manually through emails or circular letters, which often caused delays, ignorance of technical staff, and a potential for document duplication. After the implementation of the portal, access to the documents can be done in real-time, and 73% of respondents stated that the time used to locate SOPs and SKs decreased significantly.

This phenomenon is in line with the opinion of Laudon & Laudon (2018), which emphasized that the integrated information system is able to accelerate the flow of information and reduce internal transactional costs.

4.2. Improvement of Compliance Levels With Procedures

Data obtained from the Internal Audit Unit (SPI) shows a decrease in the number of findings related to procedural non-compliance from year to year since the portal was actively used. This indicates that the availability of easily accessible digital documents directly contributes to the increase in compliance.

Per the theory of Nonaka & Takeuchi (1995), stored knowledge should be able to be distributed effectively, so that it is truly internalized by users, not just stored.

4.3. Collaboration and Organizational Learning

Portal DAPENBUN is equipped with document sharing features, an internal helpdesk, and document monitoring dashboards between units. The survey results show that 68% of employees found it easier to coordinate across work units. This indicates that the system supports a collaborative learning process that strengthens organizational cohesion.

Davenport (1998) stated that an organization with a culture of sharing knowledge has a higher capacity for responding to environmental changes. This research shows that Portal DAPENBUN has become an enabler for this culture.

4.4. Limitations in Implementation

Nevertheless, the implementation did not run without obstacles. There are still work units with low utilization rates (below 50% of the total of the portal usage frequency), especially from the age group above 50 years. The identified main obstacles were the lack of further training and the absence of an automated notification system regarding document updates.

These findings reinforce Katz & Khan's view in the open system theory, where the success of the system doesn't depend only on technology, but also on cultural preparedness and support with human resources. The organization's approach towards digital transformation becomes a determinant for long-term success.

4.5. Critical Interpretation

The author believes that the existence of Portal DAPENBUN brings a multitude of actual positive impacts, but it is still short-term and technical in nature. A new systemic transformation will only be achieved if this system is integrated into the employee's Key Performance Indicator (KPI) and becomes a part of the organization's work culture. Only then can it be categorized as a true knowledge infrastructure, and not just a digital archiving system.

These findings align with TAM and DOI theories. Successful adoption depends on user readiness, digital literacy, and integration into organizational culture

1. Comparative Analysis with Similar Studies

The implementation of knowledge management systems (KMS) in pension institutions remains underexplored in the Southeast Asian context. However, comparative studies from other countries, such as Japan and South Korea, show that well-integrated KMS platforms significantly enhance operational efficiency and reduce internal compliance issues (Kim et al., 2021). A study by Zhang and Zhao (2020) on Chinese state-owned enterprises also indicates that digital knowledge repositories improve knowledge transfer and mitigate regulatory violations when aligned with internal audit mechanisms.

Compared to these studies, DAPENBUN's experience shows parallel benefits, particularly in improving access to SOPs and reducing audit findings. However, unlike its counterparts, DAPENBUN still lacks a formal digital literacy program and KPI linkage, which are cited as success factors in peer institutions.

2. Organizational Readiness for Digital Transformation

The successful implementation of KMS requires not only technology but also a shift in organizational mindset and culture. Organizational readiness, as defined by Weiner (2020), includes leadership commitment, employee engagement, and adaptive infrastructure. In the case of DAPENBUN, while the technical deployment was executed properly, the cultural adoption remains partial. This is consistent with findings from Baporikar (2022), who emphasized that in government institutions, digital transformation often lags due to hierarchical resistance and lack of incentive structures.

To address this, DAPENBUN must adopt a holistic change management approach. Strategies such as peer mentoring, reward-based usage tracking, and structured onboarding for digital tools have proven effective in similar institutional settings

(Alshahrani & Stewart, 2023).

3. The Role of KMS in Compliance and Risk Reduction

Beyond efficiency, one of the critical roles of KMS in public institutions is supporting compliance and mitigating institutional risk. As highlighted by Carrillo et al. (2021), knowledge centralization helps reduce procedural ambiguity, increases accountability, and ensures consistency in regulation implementation. In DAPENBUN's case, the audit committee reported a significant decline in SOP-related violations following the portal's deployment—an indication that digital KMS plays a preventive role in internal control systems.

Furthermore, the availability of up-to-date regulatory documentation through the portal enables timely dissemination of financial and legal updates, which is essential in the highly regulated pension industry. Future development of the system should therefore include compliance alert features and auto-logging of regulation changes to reinforce risk governance.

5. Conclusion

This research concludes that the implementation of Portal DAPENBUN as a Knowledge Management System (KMS) has provided real contributions in improving operational efficiency, compliance with procedures, and internal collaborations in the environment of Dana Pensiun Perkebunan. This system allows faster and more structured access to information, supporting data-based decision making, as well as helping to decrease the amount of procedural violations that previously often occurred due to the limitations of manual document distribution. The survey and interview results also show that most users feel direct benefits from the usage of this portal in day-to-day work activities.

The implications of this research indicate that the success of the knowledge management system implementation is not only determined by the existence of that technology itself, but also by the readiness of the organization as a whole. Factors such as a work culture that supports collaboration, proactive leadership, and the digital capabilities of the employees play a critical role in system adoption. Therefore, strengthening non-technical aspects such as training, socialization, and system integration into performance indicators is crucial in maximizing the benefits of the system sustainably.

The limitations in this research lies in the scope of respondents, which only covers the internal environment of DAPENBUN, so that the research results cannot be generalized widely to other pension fund organizations. In addition, this research has not evaluated the long-term impacts of using Portal DAPENBUN, including its influence on the organization's strategic achievements over a longer period of time.

For the next research, it is recommended that the study be expanded to similar institutions in the public and private sectors to strengthen external validity. Furthermore, the longitudinal evaluation of the influence of knowledge management systems on overall organizational performance is also needed. Further research can also explore how the integration of digital systems and organizational culture can form a knowledge infrastructure that is both sustainable and adaptive to change.

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