JPPIPA 11(12) (2025)

Jurnal Penelitian Pendidikan IPA

http://jppipa.unram.ac.id/index.php/jppipa/index

Integration of Digital Systems and *Sitorem* Method for Strengthening Science Management

Iman Indrati[1*], Henny Suharyati[2], Dian Wulandari[2]

[1] Bunda Mulia University, Serpong, Tangerang, Indonesia
[2] Pakuan University, Bogor, Indonesia.

Received: October 02, 2025
Revised: November 13, 2025
Accepted: December 25, 2025
Published: December 31, 2025

Corresponding Author:
Iman Indrati
aingimanubm@gmail.com

DOI: 10.29303/jppipa.v11i12.13563

Abstract: Effective knowledge management (KM) is pivotal for higher education institutions to maintain competitiveness. This study aims to formulate a targeted strategy for enhancing lecturer KM by identifying critical indicators requiring immediate intervention, based on SITOREM analysis. The research is grounded in the theory of organizational knowledge creation, hypothesizing that a focused improvement on pivotal KM processes and supporting factors will lead to a more effective and sustainable KM system. This quantitative research employed a survey method to collect data from lecturers at a higher education institution. Data were analyzed using the SITOREM method to identify strengths, weaknesses, and key improvement priorities within the KM framework, focusing on the five fundamental KM processes: acquisition, refinement, storage, dissemination, and application. The analysis revealed that knowledge evaluation is an institutional strength to be maintained. However, critical weaknesses were identified in knowledge acquisition and application processes. Supporting factors such as organizational rewards and educator development are potential levers, while challenges persist in team collaboration, leadership empathy, and information technology security and ethics. These findings align with prior research emphasizing that technological infrastructure and a collaborative culture are prerequisites for successful KM implementation, directly impacting the cycle of organizational learning. The study concludes that an optimal KM enhancement strategy requires an integrated approach, simultaneously improving critical KM processes, strengthening collaborative culture, enhancing leadership social skills, and ensuring digital ethics, thereby creating a systematic and sustainable KM system.

Keywords: Higher education; Knowledge management; Lecturer; SITOREM analysis; Strategy improvement.

Introduction

The development of knowledge and technology for society and organizations is rarely questioned even though it has been studied for a long time (Alaimo & Kallinikos, 2022). The role of lecturers in the communication curriculum is very important in the era of globalization accompanied by advances in information technology. Knowledge management (KM) is a systematic process that involves the creation, sharing, use, and management of knowledge and information within an organization. Knowledge management is an essential strategy for achieving educational goals in higher education.

In the context of heavy workloads, strengthening digital literacy is a crucial strategy because it can increase work efficiency, accelerate reference management, facilitate collaborative communication, and facilitate the storage and access of institutional knowledge, which can improve the effectiveness of

How to Cite:
Indrati, I., Suharyati, H., & Wulandari, D. (2025). Integration of Digital Systems and Sitorem Method for Strengthening Science Management. *Jurnal Penelitian Pendidikan IPA*, *11*(12), 473–480. https://doi.org/10.29303/jppipa.v11i12.13563

knowledge management (KM) in higher education (Khan, 2022; Wang & Chu, 2023). Publication pressure, administrative burdens, student assessment, and unclear career paths cause increased academic stress. Research shows that these factors reduce work engagement and teaching quality (Torrano & Refozar, 2023). For higher education institutions, the challenges are compounded by national and international ranking competition, compliance with new accreditation systems, and the integration of AI technology and the digitization of academic services. The limited digital competence of lecturers and quality disparities between faculties are obstacles to achieving institutional quality standards (Saleem & Farid, 2023).

Additionally, faculty digital literacy levels remain uneven, despite accelerated digital transformation since the pandemic. Many lecturers face difficulties in adapting to the latest learning technologies, Learning Management Systems (LMS), and new standards of digital-based quality assurance. This has an impact on the effectiveness of teaching and academic collaboration (Wang & Chu, 2023). Low digital literacy also hinders lecturers' ability to search for literature, manage references, utilize AI, and manage knowledge. The issue of limited digital literacy among lecturers is also a major obstacle. Ineffective knowledge transfer is another hindering factor. In addition, digital literacy is one of the keys to knowledge management in higher education. Technology facilitates the collection, storage, and dissemination of knowledge among lecturers and students. Technology-based knowledge management systems, such as research databases, online learning platforms, and digital collaboration tools, play an important role in accessing and sharing relevant information easily and quickly. Lecturers and students can share resources, discuss the latest topics, and keep up with the latest developments in the humanities field using digital technology platforms. New information and communication technology is seen as a tool that facilitates knowledge management, which plays a role in knowledge creation. Organizational factors, knowledge resources, and individual factors are the most dominant, while technological factors have a minimal impact (Sari et al., 2017).

Based on the survey, there are a number of knowledge management activities that need to be improved immediately among lecturers. Information technology is used, but not optimally because training is still lacking, organizations still rely on face-to-face meetings and social interactions for knowledge transfer, demonstrating the value of traditional methods in knowledge management (Egbu & Botterill, 2003). On the other hand, social software in KM is important in facing challenges in knowledge management in the global workforce, big data, security, and the dynamics of human-technology interactions (Sarka et al., 2019). The ability to access, share, and utilize digital information is key to the successful implementation of knowledge management in today's technological era. Organizational learning plays a significant mediating role between knowledge management, digital technology literacy, and performance (Razzaghi et al., 2022). Knowledge management evaluation helps create a culture of innovation in higher education institutions and interactions between organizational support, responsive leadership, emotional intelligence, interpersonal communication, and digital technology literacy. Agile leadership is significant in facilitating structural and functional changes, increasing dynamic capabilities, and strategic flexibility (Delioglu & Uysal, 2023).

Technology helps lecturers facilitate the flow of information, and knowledge becomes more integrated and less fragmented with the help of technology, organizational structures that support the foundations of knowledge management, and a work culture of knowledge sharing, thereby enhancing learning and the implementation of knowledge among lecturers to be more innovative and of higher quality. New information and communication technology is seen as a tool that facilitates knowledge management, which plays a role in knowledge creation. Knowledge management and training programs have a positive and significant effect on innovation (Taurusyanti et al., 2023). On the other hand, digitization has changed the way lecturers work, communicate, and manage knowledge. Meanwhile, organizational support has been shown to influence lecturer motivation and performance (Rahmawati et al., 2022). Research on digital literacy has so far been partial and tends to place this variable as a direct predictor of learning effectiveness or technology adoption (Arifin, 2025). In the context of contemporary academic work, digital literacy does not only play a role as a technical skill, but as a strategic competency that bridges the relationship between organizational factors, leadership, and the collaborative capacity of lecturers. To date, there has been no research model that positions digital literacy as a mediating variable linking organizational support and leadership with knowledge sharing practices and lecturer performance, indicating a substantial theoretical gap in the study of higher education digitization.

The purpose of this study is to identify priority variables that need to be improved in an effort to enhance knowledge management strategy based on the results of a strength–weakness–opportunities–recommendation (SITOREM) analysis. Based on previous research findings and gaps, this study is expected to provide a more comprehensive

understanding of how agile leadership and organizational support contribute to strengthening knowledge management strategies, both directly and through increased digital literacy. In addition, this study is also expected to produce a data-based priority improvement map through IPMA analysis and formulate a more targeted improvement strategy using the SITOREM approach. Thus, this study not only enriches theoretical studies but also provides practical recommendations that organizations can apply to optimize knowledge management strategies in the era of digital transformation.

Methods

This study uses an explanatory quantitative approach with a survey method to test the causal relationship between variables (Creswell & Creswell, 2022). The research location is a university in Bogor City, with a population covering all permanent lecturers registered with PD-Dikti in that region. The sample size in this study was set at 177 respondents. The sample size was determined using the Slovin formula because the research population was quite large and the exact number was unknown. Given the constraints of time, cost, and geographical reach, and referring to common practice in social research that limits the sample to a maximum of around 200 respondents for data analysis feasibility (Hair et al., 2022), the researcher made adjustments. A number of empirical studies have proven that a sample of 177 respondents is sufficient for analysis using the Structural Equation Modeling (SEM) statistical technique. After considering Slovin's theoretical calculations, practical limitations in the field, and statistical analysis feasibility, the final sample size determined in this study was 177 people. This number is considered to have fulfilled the principle of population representation and is adequate for conducting significant hypothesis testing. The sampling technique applied was simple random sampling to provide equal opportunity for each member of the population to be selected as a respondent (Huber, 2021).

Primary data were collected through a closed questionnaire consisting of three types of measurement scales: (1) a 1-5 Likert scale for the main research variables, (2) an ordinal scale to measure frequency and intensity levels, and (3) a nominal scale for respondent demographic data. The research instrument was first validated through expert judgment by three professors in the field of management and tested for reliability using Cronbach's Alpha coefficient, which showed a value of $\alpha > 0.7$, meeting the recommended reliability standards (Hair et al., 2022). Data analysis was conducted in stages using a Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) approach. The stages of analysis included: (1) evaluation of the measurement model (outer model) to ensure the validity and reliability of the indicators, (2) evaluation of the structural model (inner model) to test the relationship between variables, and (3) hypothesis testing through path analysis with a t-statistic value criterion > 1.96. This procedure allows for comprehensive testing of direct and indirect relationships between variables. The research instruments were developed based on a comprehensive theoretical review.

Data analysis used Partial Least Squares (PLS)-based Structural Equation Modeling (SEM) with the following stages: 1) evaluation of the measurement model (outer model) through convergent and discriminant validity tests; second, 2) structural model (inner model) by looking at the R-square and predictive relevance values; third, hypothesis testing through bootstrapping with 5000 subsamples (Hair et al., 2022). The analysis was supplemented with Importance-Performance Map Analysis (IPMA) to identify priorities for improvement based on total effects and latent variable scores (Ringle & Sarstedt, 2016). The researchers analyzed the data using Importance-Performance Map Analysis (IPMA) to identify priorities for improvement based on total effects and latent variable scores (Ringle & Sarstedt, 2016).

Result and Discussion

Priorities for Improving Knowledge Management Strategies Based on SITOREM

The priorities for improving KM strategies formulated based on the synthesis of SITOREM analysis results aim to maximize the improvement of lecturers' knowledge management in a systematic and sustainable manner. Setting priorities in formulating strategies for improving knowledge management (KM) is a necessity to ensure optimal resource allocation and measurable impact. A systematic approach such as SITOREM (Strength, Threat, Opportunity, Result, Weakness, and Method) provides a comprehensive analytical framework for identifying the most critical areas of intervention. Organizations that implement strategic priority analysis show up to a 40% higher improvement in KM performance.

Based on the integration of the average score and weight, the indicators are classified into two main groups: those that require intensive improvement and those that need to be maintained and developed as best practices. Classification is a crucial step to avoid wasting resources and ensure the sustainability of KM initiatives. Preliminary analysis in this context reveals disparities in achievement between KM indicators, with the

knowledge evaluation aspect recording the highest score, while key indicators such as knowledge acquisition, dissemination, and use are below the optimal threshold. The maturity level of KM indicators in the academic environment is uneven. An in-depth analysis that considers the weight of each indicator based on the dimensions of cost, benefit, urgency, and importance confirms the need for an appropriate strategic focus. Indicators with low scores and high strategic weight, such as empathy in emotional intelligence and security and ethics in technological literacy, were identified as critical points that determine the overall success of the KM system (Gupta et al., 2023).

The results of the research on each indicator and weight (%) were analyzed to determine the classification of the research variable indicators, namely: a group of indicators that need to be improved with an indicator average < 4, while indicators with an average ≥ 4 need to be maintained or improved. The group of indicators that only need to be maintained or developed are those with an indicator average ≥ 4. Based on the SITOREM analysis, an optimal solution for improving lecturer knowledge management was developed, as seen from the highest path coefficient of the variables prioritized for improvement with an average score < 4.0. Improvements were ranked starting from the highest weight on the indicators of each variable. The optimal solution for improving lecturer knowledge management was ranked from the indicators that were improved and maintained/developed.

The indicators that are prioritized to be strengthened and maintained/developed show that there are 10 indicators that need to be improved in order to optimize solutions for improving lecturer knowledge management, namely: 1) knowledge management in the indicator of knowledge evaluation, 2) organizational/university support in the indicators of lecturer welfare, appreciation and recognition, lecturer development and empowerment, fair treatment of employees, and working conditions, 3) agile leadership in the indicators of flexibility and responsiveness, 4) organizational support in the indicators of organizational support and development, and 5) organizational support in the indicators of organizational support and development. faculty welfare, rewards and recognition, faculty development and empowerment, fair treatment of employees, and working conditions, 3) agile leadership, on the indicators of flexibility and responsiveness, 4) digital technology literacy, on the indicators of technology use and problem solving with technology.

SITOREM analysis was used to identify the strengths and weaknesses of each indicator in the research variables through the stages of contribution analysis, weight assessment, and indicator classification, showing the priority of indicators that need to be maintained or improved. The results of this process show the indicators that are maintained and improved in designing a knowledge management improvement strategy. Based on the SITOREM results, it is explained as follows: Knowledge management (Y), organizational support shows a strong foundation for evaluating and verifying knowledge as the most prominent aspect in improving knowledge management. Information used for strategic decision-making has undergone a rigorous assessment process, ensuring high accuracy and relevance (Kusumawardani et al., 2023). Mechanisms for updating and storing knowledge are also quite effective, forming the backbone of continuous learning and innovation within the organization (Anshari et al., 2023). On the other hand, there are opportunities to improve the effectiveness of knowledge acquisition, distribution, and application so that it can be absorbed and utilized by members of the organization more quickly and optimally (Haris, 2025; Nadason et al., 2017). Overall, organizations do not merely collect information, but actively ensure the quality and strategic value of knowledge to support the improvement of organizational capabilities (Abbas, 2024).

Organizational support (X1), aspects of faculty development and empowerment are considered the strongest. Systematic investment in competency development is a key driver for increasing the motivation and professionalism of teaching staff (Ghasemi et al., 2023). In addition, a culture of reward and recognition contributes to job satisfaction and the desire to remain at the institution (Borrego et al., 2025). Special attention needs to be paid to the aspect of welfare, which, despite being in the good category, still has the lowest score. Recent literature confirms that remuneration packages and work-life balance are fundamental factors that influence long-term employee commitment (Hutagalung et al., 2020).

Agile leadership (X2), characterized by the most prominent flexibility in organizations, demonstrates a good capacity to adapt to the dynamics of change. Adaptability is crucial in an increasingly dynamic and hybrid work environment, with flexibility often associated with increased productivity and innovation. Innovation can be hampered if a strong culture and structure of collaboration are not established (El Khatib et al., 2025). Future strategies can be implemented by maintaining agility and actively building more solid bridges of collaboration between various parties within higher education organizations.

Emotional intelligence (X3), the dimension of internal motivation and the ability to utilize emotions in decision-making, demonstrates the power of emotional

intelligence in organizations, illustrating strong drive and self-awareness among individuals. However, relatively low levels of empathy reveal challenges in feeling and understanding other people's perspectives. In the context of higher education, empathy from leaders and colleagues has been shown to have a significant influence on engagement and harmonious working relationships (Asmamaw & Semela, 2023). The components of empathy and social skills are important pillars in the emotional intelligence model that determine the effectiveness of teamwork (Antonopoulou, 2024). The main key to creating a healthier and more supportive interpersonal environment can be done by training sensitivity and empathy.

Digital technology literacy (X5) in higher education institutions demonstrates strong competence in the use of everyday technology to solve problems. This is a valuable asset in the digital age. On the other hand, attention to security and ethical aspects in the use of technology still needs to be improved, as reflected in the relatively lower scores on these indicators. Neglecting security and ethics can potentially erode user trust and jeopardize the sustainability of an organization's digital transformation (Dalal, 2020). Higher education institutions need training in cybersecurity awareness and the development of robust data governance policies to ensure the responsible use of smart technology.

Based on the results of the SITOREM analysis, it was concluded that the strategy for improving knowledge management (KM) was formulated using a differentiation approach that separates indicators that need to be improved from those that must be maintained. In the KM variable itself, the knowledge evaluation (KE) indicator, which has the highest score (4.26), is classified as an aspect that must be maintained and further developed to ensure the quality and accuracy of knowledge for strategic decision-making (Kusumawardani et al., 2023). Conversely, the other five indicators in the KM variable, namely Knowledge Acquisition (KA), Knowledge Refinement (KR), Knowledge Storing (KS), Knowledge Dissemination (KD), and Knowledge Application (KAP), which have scores below 4.00, are set as priorities for improvement. The improvement strategy focuses on strengthening the acquisition mechanism through a structured knowledge sharing system, refining the storage and documentation process, accelerating distribution through collaborative channels, and encouraging the application of knowledge in research and innovation activities. Knowledge management is highly dependent on the smooth running of the entire knowledge cycle (Anshari & Hamdan, 2022). Strategies for supporting variables are also developed based on similar classifications. Organizational Support, with all indicators ranging from 3.99 to 4.28, needs to be maintained by strengthening welfare programs, rewards, competency development, and the creation of fair working conditions, given its role as the foundation of lecturer motivation and commitment (Salova et al., 2024). Agile Leadership, demonstrated by flexibility and responsiveness (scores of 3.99–4.17), must be maintained while actively improving collaboration and sustainable innovation, which still need improvement. On the other hand, the aspect of Emotional Intelligence, particularly empathy and social skills, which had the lowest score (3.74–3.79), should be the focus of improvement through soft skills training and interpersonal coaching, given the key role of empathy in creating a supportive knowledge-sharing environment (Antonopoulou, 2024). Digital Technology Literacy, competence in technology use and problem solving (score 4.03–4.14), must be maintained, while seriously improving aspects of technology security and ethics that are still vulnerable, as negligence in these aspects can erode trust and jeopardize the sustainability of digital transformation (Dalal, 2020). The integration of all strategies can enhance knowledge management in a systematic and sustainable manner.

Conclusion

Based on the SITOREM analysis, strategies for improving knowledge management in higher education institutions need to be formulated in a targeted manner, prioritizing critical indicators that require immediate intervention. The findings reveal that the main strength of the institution lies in its well-established knowledge evaluation capabilities, which need to be maintained and optimized as the foundation for strategic decision-making. There are important areas that still require special attention. The aspects of information acquisition and knowledge application show a relatively low level of effectiveness, making them a top priority in the formulation of improvement strategies. Weaknesses in these two critical stages have the potential to hamper the entire knowledge management cycle in supporting organizational learning and sustainable innovation. A comprehensive improvement strategy needs to consider organizational and leadership support factors. Organizational support in the development of educators and reward systems can be used as a lever to build a culture of knowledge sharing. On the other hand, there are challenges in the aspects of team collaboration and the level of empathy in leadership that need serious attention, given that these two factors are key elements in creating an environment conducive to knowledge exchange. In addition, the aspects of security and ethics in the use of information technology require systemic

strengthening, given that this is an important prerequisite in building trust and a secure infrastructure for knowledge management. Thus, an effective improvement strategy must simultaneously integrate improvements in the knowledge management process, strengthening of a collaborative culture, enhancement of leadership capacity, and assurance of digital ethics to create a sustainable and adaptive knowledge management system. The priorities for improving faculty knowledge management will achieve optimal effectiveness through the implementation of structured strategies that focus on critical indicators. The main priority is to improve the five fundamental aspects of knowledge management: acquisition, refinement, storage, dissemination, and application of knowledge, which consistently score below the optimal threshold (<4.00). In parallel, strengthening empathy and social skills in Emotional Intelligence, as well as improving digital technology security and ethics, have proven to be determining factors that can accelerate the overall effectiveness of the Knowledge Management system. This strategic approach, which integrates the improvement of critical points with the maintenance of existing leading indicators, not only provides a clear roadmap for higher education institutions but also ensures a systematic, measurable, and sustainable improvement in knowledge management capabilities, ultimately strengthening the competitiveness of institutions in the knowledge economy era.

Acknowledgments

We express our sincere gratitude to all parties who participated and dedicated their time to supporting this research. All forms of assistance and support provided were invaluable in ensuring the smooth implementation of the research and achieving optimal results.

Author Contributions

This article was written by three authors, namely I. I., H. S., and D. W. All authors contributed to each stage of the implementation of the activities until this article was completed.

Funding

This study was not funded by any organization or agency.

Conflicts of Interest

The authors declare no conflict of interest.

References

Abbas, M. (2024). Integrating Knowledge Management into Marketing for Enhanced Decision-Making and Performance. *Advances in Business & Industrial Marketing Research*, *2*(2), 72–82. https://doi.org/10.60079/abim.v2i2.274

Alaimo, C., & Kallinikos, J. (2022). Organizations decentered: Data objects, technology and knowledge. *Organization Science*, *33*(1), 19–37. https://doi.org/10.1287/orsc.2021.1552

Anshari, M., & Hamdan, M. (2022). Understanding knowledge management and upskilling in Fourth Industrial Revolution: transformational shift and SECI model. *VINE Journal of Information and Knowledge Management Systems*, *52*(3), 373–393. https://doi.org/10.1108/VJIKMS-09-2021-0203

Anshari, M., Syafrudin, M., Tan, A., Fitriyani, N. L., & Alas, Y. (2023). Optimisation of knowledge management (KM) with machine learning (ML) enabled. *Information*, *14*(1), 35. https://doi.org/10.3390/info14010035

Antonopoulou, H. (2024). The value of emotional intelligence: Self-awareness, self-regulation, motivation, and empathy as key components. *Technium Education and Humanities*, *8*, 78–92. Retrieved from https://shorturl.asia/Ye3iM

Arifin, N. (2025). *Pendidikan Karakter di Era Digital*. Penerbit Tahta Media.

Asmamaw, A. T., & Semela, T. (2023). Exploring the influence of leader emotional intelligence on faculty engagement in Ethiopian higher education. *Cogent Education*, *10*(2), 2277547. https://doi.org/10.1080/2331186X.2023.2277547

Borrego, M., Chasen, A., Chapman Tripp, H., Landgren, E., & Koolman, E. (2025). A scoping review on US undergraduate students with disabilities in STEM courses and STEM majors. *International Journal of STEM Education*, *12*(1), 2. https://doi.org/10.1186/s40594-024-00522-2

Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches*. SAGE Publications.

Dalal, A. (2020). Cybersecurity and privacy: Balancing security and individual rights in the digital age. *Available at SSRN 5171893*. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5171893

Delioglu, N., & Uysal, D. Ö. Ü. B. (2023). A Review on Agile Leadership and Digital Transformation. *Yildiz Social Science Review*, *8*(2), 121–128. https://doi.org/10.51803/yssr.1188173

Egbu, C., & Botterill, K. (2003). Information technologies for knowledge management : Their usage and effectiveness. *Journal of Information Technology in Construction (ITcon)*, *7*(8), 125–137. Retrieved from https://www.itcon.org/2002/8

El Khatib, M., Alajjal, N., & Alshehhi, A. (2025). Technology Selection in Agile Project Management: Balancing Flexibility, Integration, and Team Capabilities. *International Journal of*

Theory of Organization and Practice (IJTOP), *5*(1), 187–203. Retrieved from https://www.journals.gaftim.com/index.php/ijtop/article/view/515

Ghasemi, S., Bazrafkan, L., Shojaei, A., Rakhshani, T., & Shokrpour, N. (2023). Faculty development strategies to empower university teachers by their educational role: A qualitative study on the faculty members and students' experiences at Iranian universities of medical sciences. *BMC Medical Education*, *23*(1), 260. https://doi.org/10.1186/s12909-023-04209-0

Gupta, J., Rathore, P., & Kashiramka, S. (2023). Impact of intellectual capital on the financial performance of innovation-driven pharmaceutical firms: Empirical evidence from India. *Journal of the Knowledge Economy*, *14*(2), 1052–1076. https://doi.org/10.1007/s13132-022-00927-w

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM*. Sage Publication Inc.

Haris, A. (2025). Marketing Knowledge Management Analysis to Drive Innovation and Effective Decision Making. *Advances in Business & Industrial Marketing Research*, *3*(1), 30–43. https://doi.org/10.60079/abim.v3i1.415

Huber, P. J. (2021). *Robust Statistical Procedures*. Society for Industrial and Applied Mathematics.

Hutagalung, I., Soelton, M., & Octaviani, A. (2020). The role of work life balance for organizational commitment. *Management Science Letters*, *10*(15), 3693–3700. https://doi.org/10.5267/j.msl.2020.6.024

Khan, S. (2022). Digital Literacy Skills and Knowledge Sharing Behavior among University Faculty. *Education and Information Technologies*, *27*(5), 6513–6534. https://doi.org/10.1007/s10639-022-10985-2

Kusumawardani, N., Permatasari, D., Susanto, R., Lee, C. K., & Kurniawan, Y. (2023). Knowledge Management Evaluation Using Digital Capability Maturity Model in Higher Education Institution. *Electronic Journal of Knowledge Management*, *21*(2), 1. https://doi.org/10.34190/ejkm.21.2.3009

Nadason, S., Saad, R. A.-J., & Ahmi, A. (2017). Knowledge sharing and barriers in organizations: A conceptual paper on knowledge-management strategy. *Indian-Pacific Journal of Accounting and Finance*, *1*(4), 32–41. https://doi.org/10.52962/ipjaf.2017.1.4.26

Rahmawati, L., Juandi, D., & Nurlaelah, E. (2022). Implementasi STEM dalam meningkatkan kemampuan berpikir kritis dan kreatif matematis. *AKSIOMA: Jurnal Program Studi Pendidikan Matematika*, *11*(3), 2002. https://doi.org/10.24127/ajpm.v11i3.5490

Razzaghi, M., Balouch, S., & Mohajeran, B. (2022). The Role of Knowledge Management and Digital Literacy in Job Performance: The Variable Contribution of Organizational Learning. *Sciences and Techniques of Information Management*, *8*(1), 359–392. https://doi.org/10.22091/stim.2020.5816.1423

Ringle, C. M., & Sarstedt, M. (2016). Gain more insight from your PLS-SEM results: The importance-performance map analysis. *Industrial Management & Data Systems*, *116*(9), 1865–1886. https://doi.org/10.1108/IMDS-10-2015-0449

Saleem, M., & Farid, T. (2023). Agile Leadership and Knowledge Sharing Behavior in Universities. *Journal of Workplace Learning*, *35*(4), 298–314. https://doi.org/10.1108/JWL-06-2022-0087

Salova, M. L., Samperoy, J. R., & Llorente, H. M. C. (2024). Organizational Justice and Its Effects on Employee Retention in Banana Companies: A Quantitative Analysis. *Asian Journal of Economics, Business and Accounting*, *24*(6), 328–346. Retrieved from http://insights.sent2promo.com/id/eprint/2851/

Sari, A. M., Hidayanto, A. N., Purwandari, B., Utari, P., & others. (2017). Analysis of internal and external factors influencing user's knowledge sharing behavior on TMC polda metro Jaya's Twitter using theory of planned behavior. *Second International Conference on Informatics and Computing (ICIC)*, 1–6. https://doi.org/10.1109/IAC.2017.8280631

Sarka, P., Heisig, P., Caldwell, N. H. M., Maier, A. M., & Ipsen, C. (2019). Future research on information technology in knowledge management. *Knowledge and Process Management*, *26*(3), 277–296. https://doi.org/10.1002/kpm.1601

Taurusyanti, D., Moeins, A., & Muharam, H. (2023). the Effect of Knowledge Management and Training Programs on Lecturer Innovativeness At Vocational Private Universities in Bogor. *Journal of Entrepreneurship*, *2*(January), 26–40. https://doi.org/10.56943/joe.v2i1.225

Torrano, J. D. D., & Refozar, R. F. G. (2023). Mediating Role of Work Motivation on Individual Job Performance among Teaching and Non-Teaching Personnel of One Higher Educational Institution. *International Journal of Multidisciplinary Research and Publications*, *6*(5), 103–123. Retrieved from https://shorturl.asia/TOZ3i

Wang, X., & Chu, S. (2023). Digital Competency as a Predictor of Knowledge Management Effectiveness in Higher Education. *Journal of Knowledge Management*, *27*(8), 135–152.

https://doi.org/10.1108/JKM-01-2023-0021