A Systematic Review on Enhancing Knowledge Management Capability Model For Lecturers Based on Digital Technology

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***Abstract**.*

Rapid technological advances demand innovation in teaching while simultaneously creating challenges in adapting and utilizing digital tools. This study, using the PRISMA-based Systematic Literature Review (SLR) method, explores a model for strengthening Knowledge Management (KM) through digital literacy. The study's findings highlight that strengthening KM with digital technology is key to creating an efficient and innovative academic ecosystem. Utilizing online learning platforms and digital collaboration tools makes knowledge sharing more effective. Furthermore, ongoing training and adequate infrastructure support encourage a more collaborative learning environment. Universities need to design and implement a Knowledge Management integration model that aligns with technological advancements and academic needs. A holistic approach, encompassing technology, processes, and organizational culture, enhances digital literacy and the culture of knowledge sharing among lecturers, ultimately enhancing the effectiveness of knowledge management and academic competitiveness in the digital era.

Keywords: *Digital literacy; digital technology; higher education; knowledge management and systematic literature review.*

I.   INTRODUCTION

The challenges of higher education in the era of revolution and social society require knowledge management to optimize the Tri Dharma of higher education. The Annual Report of the Ministry of Education, Culture, Research, and Technology (2021) shows that the number of scientific publications by lecturers in Indonesia is still relatively low compared to neighboring countries in Southeast Asia due to the minimal involvement of lecturers in the knowledge management process in terms of knowledge acquisition, sharing, and application of knowledge. The World Bank report entitled "Indonesia's Higher Education System: Improving Efficiency and Effectiveness" (2018), shows that research conducted by lecturers in higher education is relatively low in knowledge management and collaborative learning and does not implement knowledge sharing properly, thus affecting scientific productivity. Knowledge management has an impact on organizational operations, management support and incentives have a significant positive relationship to knowledge implementation, allowing rapid adaptation to changing environments, validated positive impacts on working conditions, service quality, and support change management practices, and have an impact on organizational operations [1], [2], [3]. Knowledge management practices in universities are at a high level, with knowledge storage as the highest practice, and knowledge application as the lowest. Organizational learning practices in universities are also at a high level, with informal learning as the most frequent practice [2].

Educational planning includes the preparation of learning plans with an active student-centered model with a mentoring pattern that combines academic, career, and personal-social guidance. Educational services enhance lecturers' capabilities in research, publication, and community service [4]. On the other hand, most lecturers have basic technical skills to teach online but require strategic solutions to ensure learning objectives are achieved [5]. The active role of lecturers in higher education is very important in developing educational competence and leadership. To realize effective educational transformation, a shift is

needed from mere discourse to real action, involving the involvement and commitment of lecturers as leaders of change. Lecturers are expected not only to play a role in transferring knowledge but also in leading the process of sustainable change, both in the classroom and in educational policy more broadly [6]. The low digital competence of lecturers indicates the need for training in technology and pedagogy [7]. In the era of digital transformation of education, lecturers need to be given digital literacy training to improve the quality of learning in the digital era [8].The role of lecturers continues to evolve from knowledge holders to digital learning facilitators [9]. Teachers have an intermediate level of digital competence and require continuous training to optimally utilize technology [5].

Lecturers have an intermediate level of digital competence and require continuous training to optimally utilize technology [10]. Knowledge management does not have a significant effect on organizational culture and performance [11]. The importance of continuous learning for lecturers is strongly emphasized in this study, which also highlights the need for artificial intelligence (AI) literacy and the development of adaptive curriculum strategies in digital assessment practices [12]. Most lecturers utilize digital technology in teaching, with digital competence supporting collaborative learning and knowledge building [13].Most academics recognize the benefits of using technology in education and support its implementation in teaching practice to maximize the effectiveness of technology integration in the teaching and learning process [14]. The importance of developing human capacity with technology [15]. The dependence of the assessment of the quality of education on attitudes towards academic mobility: the higher the students evaluate the experience of participating in academic mobility, the higher they assess the quality of education [16].Universities that have begun to adopt digital technology but lack training and limited infrastructure are major factors in the failure of implementing knowledge management [17]. Countries tend to buy complex skills if there is a need domestically and local education programs are inadequate, potentially increasing by utilizing high-tech transfer, thus helping universities develop effective strategies to export continuing education services to international markets [18].

The application of the learning inquiry model in universities, especially in the digital environment, drives the transformation towards personal education logistics, utilizing technology for personalized education, increasing student engagement, and creating a more flexible and adaptive education system [19]. The existence of ChatGPT can transform higher education, especially in the assessment and management of knowledge, but ethical challenges and technological dependency need to be overcome so that lecturers must increase digital technology literacy to use it effectively [20]. Digitalization drives the transformation of higher education institutions to adapt to new challenges and technologies and provides insights for governments and academics to innovate in higher education [21]. The integration of flipped learning models with ICT increases student collaboration, independence, and motivation, with the selection of the right information technology as the key to success [22]. Digitalization widens the gap in students' understanding, especially in digitalization, so a long-term transition to digital education is recommended [23].The construct of knowledge management, consisting of knowledge sharing, knowledge conversion, and knowledge storage, has a significant positive effect on innovation and mediates the relationship between organizational factors [24]. The overall knowledge management process creates an organizational environment that generates innovative thinking supported by sharing knowledge and experiences and finding solutions to problems together, improving the organization's innovative performance through practices facilitated by interactions between individuals in the organization [25].

Universities can improve the quality of education, strengthen institutional competitiveness, and contribute to the development of a knowledge-based society as key priorities in sustainable university management. Evaluation of the management of the educational process and the development of managerial decisions to set standards and measures of training and graduation of specialists according to the specified results contribute to the development of a learning management system with a focus on graduation outcomes [26]. Knowledge management has drawn insights, ideas, theories, metaphors, and approaches from a variety of diverse disciplinary sources. The application of knowledge management improves innovation and performance in higher education institutions [27]. In addition, knowledge management (KM) helps organizations save time and costs, increase knowledge assets, and improve decision-making, efficiency, and

innovation. The readiness of teachers in personal safety in innovative educational environments is still low; concerns related to self-esteem and self-sensitivity must involve openness to culture, innovation, and safe interactions with the surrounding environment [28]. Previous studies have shown that the implementation of Knowledge Management (KM) in higher education still faces various challenges, especially in terms of knowledge acquisition, sharing, and application.

The annual report of the Ministry of Education, Culture, Research, and Technology (2021) revealed that scientific publications by lecturers in Indonesia are still low compared to neighboring countries in Southeast Asia. The importance of digital assessment in the educational process is increasingly emphasized, particularly in identifying opportunities to improve learning effectiveness and challenges to optimize implementation [29]. It is crucial for higher education to take the lead in addressing barriers to the Sustainable Development Goals (SDGs) with a multidisciplinary and collaborative approach [10]. Digital skills training should be part of university training plans to prepare social workers for the challenges of the digital age [30]. Organizing the learning process using technical tools can be beneficial for developers and teachers in designing internet-based educational materials (ASI) and educational accessibility, but presents challenges for technological adaptation. Strategic recommendations are provided to enhance culturally responsive digital learning [9]. The development of university integration complexes is beneficial for government and academic institutions studying educational integration processes [31]. Digital technology literacy is one of the keys to knowledge management in universities. The integration of digital transformation in organizations involves processes, practices, procedures, competencies, systems, and models that are strategically transformed to take advantage of technological advances and their social impacts.

Higher education institutions need to grow holistically to stay relevant to industry changes and not lose attention (Alenezi, 2021). Digital literacy is closely related to digital competence, requiring more didactic proposals than government policies [32]. Digital learning enhances innovation organizing the learning process using technical tools can be useful for developers and teachers in designing internet-based educational materials and accessibility but presents challenges for technological adaptation. Strategic recommendations are provided to enhance culturally responsive digital learning [9]. Technology-based knowledge management systems, such as research databases, online learning platforms, and digital collaboration tools, play a vital role in accessing and sharing relevant information easily and quickly. The main factor of acceptance of the digital educational environment in Russia and Belarus is activity-related experience, not personality traits, with the experience of enjoyment and persistence as important elements supporting the reliability of the results and recommendations for the development of the digital educational environment [33].The implementation of knowledge management has a positive effect on organizational performance, and training programs have a positive and significant effect on innovation [34]. The digitalization model with two basic patterns, namely digital transformation strategy and digital innovation strategy, highlights institutional reactions to efforts to adapt digital strategies to educational practices ([35]. Teachers have a moderate level of digital competence in the informational field in dimensions related to storage and retrieval. The level of digital competence in the information field affects the degree of knowledge about Big Data [36].

The selection of effective, didactic, and resource criteria to assess the effectiveness of blended learning technologies has been proven, with students preferring didactic criteria and teachers prioritizing resource criteria [37].Improving technological infrastructure and seminars, and encouraging the use of LMS should be mandatory policies [38]. The use of digital technologies in education encourages students to develop 21st-century skills through independent research, information selection, and projects. Open online resources support learning, from individual assignments to comprehensive courses. The virtual education process is enriched with software that facilitates the creation of courses from various sources of information [39]. The balanced development of students' technological skills in higher education is essential for their personal, social, and professional future for the quality of life, with the integration of relevant digital technologies in the changing organization of academic work, in the relationship between learners, teachers, and institutions, and in new ways of teaching and learning [40].Lecturers play a key role in the

implementation of knowledge management because they are not only teachers but also creators, managers, and leaders in sharing knowledge that can support the learning process and curriculum development. Knowledge management among lecturers is not yet supported by conditions in the field.

Assessment of foreign students' satisfaction with distance learning at Russian universities resulted in practical recommendations for improving digital, technological, and resource competencies in distance education [41]. Emphasize the importance of collaboration and informal learning, but there is no model that focuses on developing lecturers' capabilities in managing knowledge based on digital technology [2], [42]. In addition, the Directorate General of Higher Education (2020) highlighted the low involvement of lecturers in international research and global collaboration. The practice of storing knowledge is at a high level; the application of knowledge is still a major challenge. Management support, appropriate incentives, and readiness to adapt to environmental changes are needed to improve the implementation of knowledge management.

II.   METHODS

2.1   Research Design

This study uses a systematic review and meta-analysis (PRISMA) with a qualitative approach. The PRISMA method presents a clear flowchart of all studies found, with excluded measures and exclusions included in the systematic review [43]. The Systematic Literature Review (SLR) method with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) approach was chosen to systematically synthesize relevant knowledge and identify key elements in strengthening knowledge management and digital literacy.In addition, this study also uses the thematic analysis aggregation method to identify key themes from the literature reviewed to explore patterns that emerge from the qualitative data collected, so as to provide an understanding of the factors that influence the strengthening of knowledge management and digital literacy.

2.2   Search Criteria and Data Collection

The PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method is a guideline designed to improve the quality and transparency in reporting systematic reviews and meta-analyses. In the discussion, researchers are expected to discuss the implications of their findings, as well as compare the results with previous studies. Researchers can ensure that their systematic review and meta-analysis reports meet international standards, thereby increasing the credibility and readability of the research, including additional guidelines for specific types of analysis, such as individual data meta-analysis and network analysis, demonstrating the flexibility and adaptability of these guidelines in the context of evolving research [44].

2.3   Data Screening

Data screening follows the four steps of the PRISMA guidelines: identification, screening, eligibility, and inclusion. These four steps are visualized by the article criteria, including 1. published in a Scopus-indexed journal; 2. studies published between 2015 and 2024; and 3. studies published only in English. Figure 1.
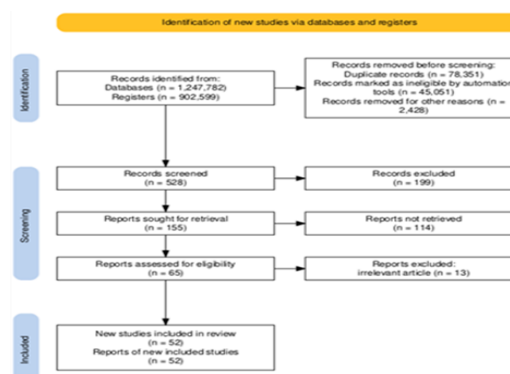

Fig 1. PRISMA Diagram of The Article Selection Process

In the first phase, the SCOPUS database was used for the search. This search strategy was used to identify the search string that produced the most precise results based on the following terms: Knowledge management AND, OR, Higher education AND Universities AND Digital Technology, 2024 or 2023 or 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015, 39 Education or 3902 Education Policy, Sociology and Philosophy, 4 Quality Education or 9 Industry, Innovation and Infrastructure, Article, Education and Information Technologies or Education Sciences. Knowledge management is concerned with how knowledge is created, stored, and applied in an organization, including higher education institutions. Higher education and universities were used to ensure that the research analyzed focused on higher education, rather than primary or secondary education. The use of the keyword digital technology aimed to identify studies that discussed the role of technology in supporting knowledge management systems in academic environments.

The search process in the SCOPUS database applies a combination of keywords using Boolean operators such as AND and OR to expand or narrow the search scope. AND in searches such as "Knowledge Management" AND "Higher Education" AND "Universities" AND "Digital Technology" ensures that the results found cover all of these concepts, making them more specific and in accordance with research needs. OR, as in the search for "Knowledge Management" OR "Digital Technology," is used to obtain broader results, including articles discussing either of the two concepts. The search is filtered by publication year from 2015 to 2024 so that only the most recent and relevant articles are retrieved. Restrictions in categories such as Education (39), Education Policy, Sociology and Philosophy (3902), Quality Education (4), and Industry, Innovation, and Infrastructure (9) are applied so that the search results are in accordance with the fields of education and innovation. The type of document selected is an article, so only scientific publications that have gone through a peer review process are analyzed, ensuring the credibility and validity of the information. This search strategy is expected to produce data that is more focused, comprehensive, and in accordance with research objectives. Systematic search through discussion and preliminary research, search terms were identified in Table 1.

Table 1. Inclusion/exclusion criteria

Inclusion	Exclusion
1. Focus on digital technology integration in higher education.	1. General knowledge management frameworks without focus on higher education.
2. Address knowledge management capability models.	2. Studies not directly addressing digital transformation.
3. Discuss the role of lecturers or educators in adopting digital tools.	3. Articles with outdated or irrelevant methodologies.

Journals relevant to the research model for improving lecturers' knowledge management capabilities based on digital technology. This research is very important. It examines the use of digital technology in higher education, which is increasingly crucial amidst the global push for distance learning and technological advancements. Unlike previous studies that focused on general knowledge management frameworks. This research focuses on the unique challenges and opportunities in higher education environments; lecturers adapt to digital tools. This research contributes to understanding the real impact of technology integration on teaching and knowledge management.

III.   RESULT AND DISCUSSION
3.1   Developing a Knowledge Management Strengthening Model with Digital Technology Adaptation

In the current era of digital transformation, strengthening the knowledge management (KM) model in the higher education sector is becoming increasingly important. Various studies show that the use of digital technology in knowledge management plays a major role in increasing the efficiency of the academic process [21]. The presence of digital technology can accelerate the process of collecting, storing, and disseminating knowledge among lecturers and students and can create a more effective flow of information [45]. Digital technology has been implemented in many higher education institutions; there are still various challenges. The most common obstacles faced include limited infrastructure and the digital capability gap

among lecturers [17]. In the context of developing a knowledge management model, it is not only necessary to integrate digital technology, but it is also necessary to pay attention to aspects of training and mentoring to improve digital literacy among lecturers. Previous studies have confirmed that the implementation of a technology-based knowledge management system in the form of the use of online learning platforms and digital collaboration tools has great potential to encourage knowledge sharing in higher education environments [40].

The knowledge management strengthening model also needs to include the use of information technology that can increase the capacity of lecturers in research activities, publications, and collaborative learning to be more effective [14]. In addition, the adoption of appropriate digital technology can accelerate the organization's adaptability to change, increase operational efficiency, and trigger innovation in the higher education environment [3].Strengthening the Knowledge Management (KM) model based on digital technology in higher education environments can increase the efficiency of academic processes and accelerate the collection, storage, and dissemination of knowledge among lecturers. The implementation of online learning platforms and digital collaboration tools has proven effective in encouraging a culture of knowledge sharing and increasing the capacity of lecturers in research and scientific publications. In addition, it is known that there are limitations in technological infrastructure and digital literacy gaps among teachers. A holistic approach that includes strengthening infrastructure, improving digital skills through training, and adopting the right technology is the key to creating a more innovative and adaptive academic ecosystem. Another finding in the research analysis is that it is said that the integration of digital technology not only focuses on technical aspects but also on developing human capacity to encourage sustainable innovation in the world of higher education.

3.2 Analyzing Knowledge Management Elements to Improve Digital Literacy

Digital literacy is a crucial component in strengthening knowledge management in higher education environments. Low literacy rates among teaching staff are still one of the obstacles in implementing technology-based knowledge management systems [10]. The constraint of low literacy rates requires a comprehensive and sustainable approach in efforts to improve digital literacy among lecturers. The approach can be carried out through the implementation of ongoing training programs, improving technological infrastructure, and formulating policies that support the use of digital technology in the academic process [15].Based on the results of the studies that have been conducted, there are factors of ability in using technological devices, mental readiness to adapt to digital developments, and institutional support in the form of adequate policies and infrastructure [5]. In addition, factors of positive attitudes towards technology, experience using digital devices, and skills in managing digital information also play an important role in the development of a person's digital literacy [36]. When teaching staff have adequate digital literacy, they are able to utilize technology to create an interactive, innovative, and collaborative learning environment [33]. In the context of knowledge management, digital literacy is not only limited to the ability to use technological devices but also includes skills in managing, processing, and utilizing digital information effectively.

Universities need to develop digital literacy training programs that are specifically designed to meet the needs of lecturers and students in an effort to optimize the potential of learning process technology [8]. Digital literacy plays an important role in improving the effectiveness of the Knowledge Management system in the university environment. This study successfully identified three main factors that contribute to improving digital literacy among lecturers, namely technological factors, psychological and mental factors, policy factors, and institutional support. Technological factors include the ability to operate hardware and software, as well as the use of digital platforms for collaboration and information management. In addition, psychological factors involve mental readiness to adapt to technological developments and a positive attitude towards digital innovation. On the other hand, institutional support is needed, such as ongoing training programs and policies that support technology integration, which are also important foundations for creating a conducive digital ecosystem.   Policies that support technology integration, ongoing training programs, and adequate technology facilities are determining factors in creating a conducive digital ecosystem. One of the important findings of this study is that digital literacy can help lecturers manage digital information more effectively, process data, and produce new knowledge that is useful in the learning process.

Lecturers' abilities in the field of technology can create a more interactive, innovative, and collaborative learning environment that can improve the quality of education in universities. Another finding is that a holistic and sustainable approach is needed to improve digital literacy. This study not only emphasizes the technical aspects but also pays attention to mental readiness and institutional support, which have previously been rarely discussed in depth. In addition, this study also proposes a digital literacy development model that focuses on the needs of lecturers through a training program specifically designed to improve their ability to utilize digital technology. Increasing digital literacy can be a strong foundation in supporting a more effective knowledge management system in the university environment. In addition, increasing digital literacy is expected to encourage the creation of a sustainable learning culture and produce innovations that are beneficial for the development of science and technology in the university environment.

3.3   Designing a Knowledge Management Integration Model with Digital Technology

In the ever-evolving world of higher education, the integration of knowledge management with digital technology is a necessity that cannot be ignored. This process requires a comprehensive strategic approach, including designing a model that can improve the effectiveness of knowledge management in the higher education environment. Based on the literature review that has been conducted, there are three elements, namely, aspects of technology, processes, and organizational culture   [34]. In addition, the proposed model needs to consider aspects of training and mentoring for lecturers to improve their digital literacy. As part of the academic community, especially lecturers, they need to have a good understanding of how to use digital technology effectively in knowledge management. This training is not only technical but also utilizes technology to strengthen the learning process, research, and scientific development and effective knowledge management process must involve the collection, storage, and dissemination of knowledge by utilizing digital means because technology alone is not enough. The knowledge management process needs to run continuously and be well integrated into daily activities in educational institutions [39]. In addition, it is important to note that an organizational culture that is able to foster knowledge-sharing habits that support collaboration between individuals will accelerate innovation and strengthen the learning ecosystem in higher education [24]. In the digital era, the use of technology-based learning platforms, online collaboration tools, and cloud-based knowledge management systems has proven effective in increasing the involvement of lecturers and students. The use of digital devices can facilitate the flow of information and knowledge that is more integrated.

Technology can strengthen the organizational structure of knowledge sharing more systematically and consistently. The use of appropriate technology will encourage innovation among academics, especially lecturers, so as to produce scientific works and practical solutions to face current educational challenges [25]. The Knowledge Management (KM) integration model with digital technology in higher education provides very valuable findings. This study successfully identified three key elements that are the main foundations of KM integration, namely aspects of technology, processes, and organizational culture [34]. In addition, this study also emphasizes the importance of developing digital literacy for lecturers to improve their ability to utilize technology effectively in knowledge management [41].It is important for lecturers to understand technology technically and be able to use it to strengthen the learning process, research, and scientific development. In addition, the results of the study also show that the use of digital technology, such as technology-based learning platforms, online collaboration tools, and cloud-based knowledge management systems, has been proven to facilitate the flow of information and increase the involvement of lecturers and students. The existence of technology, collaboration, and innovation in the academic environment becomes more structured and efficient, which can increase academic productivity and research quality [20].

Universities need to take concrete steps to develop a knowledge management integration model by paying attention to aspects of technology, processes, and organizational culture to face challenges in the era of digital transformation. The integration of knowledge management with digital technology in the higher education environment requires an approach that includes aspects of technology, processes, organizational culture, and the development of digital literacy. Universities can increase the effectiveness of knowledge management, encourage innovation, and strengthen competitiveness in the global arena. The novelty of this study lies in the holistic approach that combines technology, processes, and organizational culture

comprehensively. In addition, the proposed model is also designed to improve the competitiveness of higher education institutions at the global level by providing strategic solutions that are able to answer challenges in the era of digital transformation [13].This study makes a significant contribution to improving the effectiveness of knowledge management in higher education institutions through the integration of digital technology. The approach that emphasizes the development of lecturers' digital literacy, strengthens the culture of knowledge sharing, and utilizes appropriate technology is expected to be able to create an innovative and highly competitive academic ecosystem in the digital era.

IV.   CONCLUSION

To strengthen the digital technology-based knowledge management model in the era of digital transformation, the integration of technology into knowledge management in higher education has proven effective in increasing the efficiency of academic processes and accelerating the collection, storage, and distribution of information. The successful implementation of this technology depends not only on adequate infrastructure but also on improving the digital literacy of lecturers.The crucial role of digital literacy in knowledge management is a key factor in increasing the effectiveness of knowledge management systems. Lecturers with strong digital skills are able to utilize technology to create interactive and innovative learning, as well as increase research productivity and scientific publications. A holistic approach, involving the development of technological skills, mental readiness, and institutional support, is needed to address the digital divide that remains a challenge in many higher education institutions. The success of this integration depends heavily on lecturers' readiness to adopt technology. With the right training and infrastructure support, lecturers can utilize various digital platforms and tools to create interactive and collaborative learning environments. An integrated model of knowledge management and digitalization in higher education can strengthen competitiveness in the increasingly competitive digital era. Lecturers can optimally utilize technology in the learning and research process to improve educational quality and institutional competitiveness with the support of higher education infrastructure.

Continuous training and supportive policies can create a collaborative and innovative academic ecosystem. The development of an effective knowledge management model in higher education relies heavily on improving lecturers' digital literacy. Limited digital literacy is a major obstacle to the implementation of technology-based knowledge management systems.An integrated model of knowledge management with digital technology in higher education requires a strategy that encompasses three key elements: technology, processes, and an organizational culture that supports technology utilization. With this integration, involving technology, processes, and organizational culture, universities can create innovative and responsive learning ecosystems to face competition in the education industry. The use of online learning platforms, digital collaboration tools, and cloud-based systems has been proven to facilitate the flow of information and strengthen collaboration among academics. By strengthening lecturers' digital literacy and fostering a culture of knowledge sharing, universities can increase global competitiveness and foster sustainable innovation. The integration model of Knowledge Management with digital technology can improve knowledge management effectiveness, encourage innovation, and strengthen university competitiveness in the era of digital globalization. The novelty of this research lies in its holistic approach, encompassing technology, processes, organizational culture, and the development of lecturers' digital literacy. Integrating knowledge management with digital technology is key to improving the efficiency and effectiveness of academic processes in higher education institutions.

REFERENCES

[1]   S. Colnar and V. Dimovski, "Knowledge Management in Social Work: Management Support, Incentives, Knowledge Implementation, and Employee Empowerment," *Econ. Bus. Rev.*, vol. 22, no. 3, 2020.

[2]   R. Ishak and M. Mansor, "The relationship between knowledge management and organizational learning with academic staff readiness for education 4.0," *Eurasian J. Educ. Res.*, vol. 2020, no. 85, pp. 169–184, 2020.

[3]   D. Vallat, C. Bayart, S. Bertezene, and J. Martin, "Knowledge management: an asset for managing change?," *Sinergie Ital. J. Manag.*, no. 104, pp. 71–90, 2018, doi: 10.7433/s104.2017.04.

[4]   T. Rokhmani, B. Sujanto, and M. R. Luddin, "The implementation of academic responsibility in higher education: A case study," *Integr. Educ.*, vol. 23, no. 3, pp. 336–349, 2019, doi: 10.15507/1991-9468.096.023.201903.336-349.

[5]   K. Junus, H. B. Santoso, P. O. H. Putra, A. Gandhi, and T. Siswantining, "Lecturer readiness for online classes during the pandemic: A survey research," *Educ. Sci.*, vol. 11, no. 3, 2021, doi: 10.3390/educsci11030139.

[6]   M. F. C. Martínez, D. J. M. Velazco, M. N. Cejas, and J. P. M. Corozo, "Pedagogical leadership within the framework of human talent management: A comprehensive approach from the perspective of higher education in Ecuador," *Integr. Educ.*, vol. 25, no. 1, pp. 8–21, 2021, doi: 10.15507/1991-9468.102.025.202101.008-021.

[7]   J. M. Fernández-Batanero, P. Román-Gravá, M. Montenegro-Rueda, E. López-Meneses, and J. Fernández-Cerero, "Digital teaching competence in higher education: A systematic review," *Educ. Sci.*, vol. 11, no. 11, 2021, doi: 10.3390/educsci11110689.

[8]   V. Gabarda Méndez, D. Marín-Suelves, M. I. Vidal-Esteve, and J. Ramón-Llin, "Digital Competence of Training Teachers: Results of a Teaching Innovation Project," *Educ. Sci.*, vol. 13, no. 2, 2023, doi: 10.3390/educsci13020162.

[9]   N. Bitar and N. Davidovich, "Transforming Pedagogy: The Digital Revolution in Higher Education," *Educ. Sci.*, vol. 14, no. 8, 2024, doi: 10.3390/educsci14080811.

[10]   A. O. Omotosho, M. Akintolu, K. M. Kimweli, and M. A. Modise, "Assessing the Enactus Global Sustainability Initiative's Alignment with United Nations Sustainable Development Goals: Lessons for Higher Education Institutions," *Educ. Sci.*, vol. 13, no. 9, 2023, doi: 10.3390/educsci13090935.

[11]   S. Darudiato and K. Setiawan, "Knowledge Management : Konsep dan Metodologi," vol. IV, no. 1, pp. 11–17, 2013.

[12]   C. Ndebele and M. Mbodila, "Examining Technology Acceptance in Learning and Teaching at a Historically Disadvantaged University in South Africa through the Technology Acceptance Model," *Educ. Sci.*, vol. 12, no. 1, 2022, doi: 10.3390/educsci12010054.

[13]   G. Kiryakova and D. Kozhuharova, "The Digital Competences Necessary for the Successful Pedagogical Practice of Teachers in the Digital Age," *Educ. Sci.*, vol. 14, no. 5, 2024, doi: 10.3390/educsci14050507.

[14]   M. Á. García-Delgado, S. Rodríguez-Cano, V. Delgado-Benito, and C. Di Giusto-Valle, "Digital Teaching Competence among Teachers of Different Educational Stages in Spain," *Educ. Sci.*, vol. 13, no. 6, 2023, doi: 10.3390/educsci13060581.

[15]   C. R. Graham *et al.*, "Digital Learning Transformation in Higher Education: International Cases of University Efforts to Evaluate and Improve Blended Teaching Readiness," *Educ. Sci.*, vol. 13, no. 11, 2023, doi: 10.3390/educsci13111143.

[16]   V. Sevostyanov, A. Suetova, and R. Farber, IrinaKildiyarova, "Philosophical and practical understanding of the quality of medical education in the Russian Federation: analysis of the opinions of students and practicing doctors," *Perspect. Sci. Educ.*, 2024, doi: 10.32744/pse.2024.3.1.

[17]   Eka Rachmawati, Ade Rizaldi Hidayatullah, and Mochammad Isa Anshori, "Gaya Kepemimpinan Adaptive Leadership Seorang Pemimpin; Studi Literatur," ***J. Manag. Soc. Sci.,*** vol. 1, no. 3, pp. 195–210, 2023.

[18]   I. A. Korshunov, N. N. Shirkova, and M. S. Miroshnikov, "Export of continuing education programs: Skills and technology (Case study of agricultural universities)," *Integr. Educ.*, vol. 23, no. 4, pp. 518–540, 2019, doi: 10.15507/1991-9468.097.023.201904.518-540.

[19]   P. D. Rabinovich, M. E. Kushnir, K. E. Zavedensky, L. V. Kremneva, and I. S. Tsarkov, "Russian and International Experience of Working with Personality Developing Inquiry," *Integr. Educ.*, vol. 25, no. 4, pp. 629–645, 2021, doi: 10.15507/1991-9468.105.025.202104.629-645.

[20]   L. K. Raitskaya and M. R. Lambovska, "Prospects for ChatGPT Application in Higher Education: A Scoping Review of International Research," *Integr. Educ.*, vol. 28, no. 1, pp. 10–21, 2024.

[21]   W. Strielkowski, E. N. Korneeva, A. A. Sherstobitova, and A. Y. Platitzyn, "Strategic University Management in the Context of Digitalization: The Experience of the World's Leading Universities," *Integr. Educ.*, vol. 26, no. 3, pp. 402–417, 2022, doi: 10.15507/1991-9468.108.026.202203.402-417.

[22]   A. Cueva and E. Inga, "Information and Communication Technologies for Education Considering the Flipped Learning Model," *Educ. Sci.*, vol. 12, no. 3, 2022, doi: 10.3390/educsci12030207.

[23]   G. Grosseck, R. A. Bran, and L. G. Țîru, "Digital Assessment: A Survey of Romanian Higher Education Teachers' Practices and Needs," *Educ. Sci.*, vol. 14, no. 1, 2024, doi: 10.3390/educsci14010032.

[24]   S. A. Erena, O. T., Kalko, M. M., & Debele, "Organizational factors, knowledge management and innovation: Empirical evidence from medium- and large-scale manufacturing firms in Ethiopia.," ***J. Knowl. Manag***. *27(4), 1165-1207.*, 2023.

[25]   C. M. de Lima, F. D. S. P. Filho, E. P. da Silva, T. G. Araujo, and F. A. B. Paim, "Knowledge Management as Support for Innovation of Public Projects," *Int. J. Bus. Adm.*, vol. 12, no. 1, p. 1, 2020, doi: 10.5430/ijba.v12n1p1.

[26]   A. I. Bokarev, E. S. Denisova, I. A. Ignatovich, and A. Y. Kazakov, "Assessing the learning administration of higher education institutions by Graduates' turn-out and learning outcomes: Theory and practice," *Integr. Educ.*, vol. 25, no. 1, pp. 69–90, 2021, doi: 10.15507/1991-9468.102.025.202101.069-090.

[27]   D. Galgotia and N. Lakshmi, "Implementation of Knowledge Management in Higher Education: A Comparative Study of Private and Government Universities in India and Abroad," *Front. Psychol.*, vol. 13, no. June, pp. 1–10, 2022, doi: 10.3389/fpsyg.2022.944153.

[28]   M. G. Lavasani and F. Khandan, "Cypriot Journal of Educational," *Cypriot J. Educ.*, vol.2,no.5,pp. 61–74, 2011.

[29]   A. Jurāne-Brēmane, "Digital Assessment in Technology-Enriched Education: Thematic Review," *Educ. Sci.*, vol. 13, no. 5, 2023, doi: 10.3390/educsci13050522.

[30]   M. J. Gómez-Poyato, A. Eito-Mateo, D. C. Mira-Tamayo, and A. Matías-Solanilla, "Digital Skills, ICTs and Students' Needs: A Case Study in Social Work Degree, University of Zaragoza (Aragón-Spain)," *Educ. Sci.*, vol. 12, no. 7, 2022, doi: 10.3390/educsci12070443.

[31]   L. V. Konstantinova, E. V. Shubenkova, E. A. Smirnova, and N. N. Gagiev, "Theoretical and methodological approaches to assessing efficiency of formation and functioning of the EAEU's integrative complex of universities," *Integr. Educ.*, vol. 25, no. 1, pp. 43–68, 2021, doi: 10.15507/1991-9468.102.025.202101.043-068.

[32]   F. Fernández-Otoya, J. Cabero-Almenara, G. Pérez-Postigo, J. Bravo, M. A. Alcázar-Holguin, and M. Vilca-Rodríguez, "Digital and Information Literacy in Basic-Education Teachers: A Systematic Literature Review," *Educ. Sci.*, vol. 14, no. 2, 2024, doi: 10.3390/educsci14020127.

[33]   L. A. . Radchikova N.P., Odintsova M.A., Sorokova M.G., Kozyreva N.V., "Psychological Factors in Students' Attitudes towards the Digital Educational Environment (Case of Russian and Belarusian Universities).," *ntegration Educ.*, 2023, doi: 10.15507/1991-9468.110.027.202301.033-049.

[34]   D. Taurusyanti, A. Moeins, and H. Muharam, "the Effect of Knowledge Management and Training Programs on Lecturer Innovativeness At Vocational Private Universities in Bogor," *J. Entrep.*, vol. 2, no. January, pp. 26–40, 2023, doi: 10.56943/joe.v2i1.225.

[35]   E. Øvrelid, "Exploring the Alignment between Digital Strategies and Educational Practices in Higher Education Infrastructures," *Educ. Sci.*, vol. 12, no. 10, 2022, doi: 10.3390/educsci12100711.

[36]   J. López-Belmonte, S. Pozo-Sánchez, A. Fuentes-Cabrera, and J. M. Trujillo-Torres, "Analytical competences of teachers in big data in the era of digitalized learning," *Educ. Sci.*, vol. 9, no. 3, 2019, doi: 10.3390/educsci9030177.

[37]   N. Bordovskaia, E. Koshkina, L. Melkaya, and M. Tikhomirova, "Criteria for Assessing the Effectiveness of Blended Learning Technologies Used at the University," *Integr. Educ.*, 2023, doi: 10.15507/1991-9468.110.027.202301.064-081.

[38]   K. K. Sahoo, P. C. Mishra, and R. V. Reddy, "Utilization of moodle in teaching undergraduate students in West Africa," *Integr. Educ.*, vol. 24, no. 4, pp. 552–560, 2020, doi: 10.15507/1991-9468.101.024.202004.552-560.

[39]   M. Alenezi, "Digital Learning and Digital Institution in Higher Education," *Educ. Sci.*, vol. 13, no. 1, 2023.:

[40]   A. L. Rodrigues, L. Cerdeira, M. de L. Machado-Taylor, and H. Alves, "Technological skills in higher education—different needs and different uses," *Educ. Sci.*, vol. 11, no. 7, 2021, doi: 10.3390/educsci11070326.

[41]   Y. V. A. Bondarenko V.V., Polutin S.V., Tanina M.A., "Post-Effects of the COVID-19 Pandemic: Satisfaction of Foreign Students with Telelearning in Russian Universities. Integration of Education.," *Integr. Educ.*, 2022, doi: 10.15507/1991-9468.109.026.202204.671-687.

[42]   C. S. de Almeida *et al.*, *Mastering Organizational Knowledge Flow How to Make Knowledge Sharing Work*, vol. 5, no. 1. 2016. [Online]. Available: https://revistas.ufrj.br/index.php/rce/article/download/1659/1508%0Ahttp://hipatiapress.com/hpjournals/index.php/qre/article/view/1348%5Cnhttp://www.tandfonline.com/doi/abs/10.1080/09500799708666915%5Cnhttps://mckinseyonsociety.com/downloads/reports/Educa

[43]   T. L. Charrois, "Systematic reviews: What do you need to know to get started?," *Can. J. Hosp. Pharm.*, vol. 68, no. 2, pp. 144–148, 2015, doi: 10.4212/cjhp.v68i2.1440.

[44]   M. J. Page *et al.*, "The PRISMA 2020 statement: An updated guideline for reporting systematic reviews," *J. Clin. Epidemiol.*, vol. 134, no. xxxx, pp. 178–189, 2021, doi: 10.1016/j.jclinepi.2021.03.001.

[45]   M. Alenezi, "Deep dive into digital transformation in higher education institutions," *Educ. Sci.*, vol. 11, no. 12, 2021, doi: 10.3390/educsci11120770.