

A Ten-Step Guideline to Implementing Knowledge Management in Higher Education

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Abstract: The value of knowledge management (KM) in today's fast-paced world cannot be emphasised. It is a crucial factor that can determine the success or failure of any institution. To guarantee that KM practices are sustainable, institutions must identify and maximise the use of the elements that contribute to KM's success. This identification is especially vital for Higher Education Institutions (HEIs), as effective knowledge sharing is crucial to the institution's growth and development, as well as to enhancing a country's industrial sustainability. This article examines the unique environment of Higher Education Institutions (HEIs) and identifies Critical Success Factors (CSFs) for successful Knowledge Management (KM) implementation, considering external and internal forces and enablers. The research strategy involved a thorough, systematic literature review using academic databases. Key terms related to knowledge management, higher education, strategies, and critical success factors were identified. The search was limited to peer-reviewed journal articles, conference papers, and books published between 1994 and 2025. The study was limited to articles published between 1994 and 2025 to ensure relevance, with 47 of the 96 studies evaluated and deemed significant for the research. The study emphasises the importance of KM in HEIs, highlighting the need for a comprehensive institutionalisation strategy where organisations seek synergy between the management of critical political, economic, technological, legal and social forces and factors such as leadership, governance, technology, infrastructure, trust, people, structure, strategy, finance and culture. The ten-step guideline for institutionalising KM is intended for use by HEIs. While helpful, this guideline oversimplifies the complex nature of KM, particularly concerning KM CSFs in other organisations. Further research is needed to explore variances in KM success factors across industries and the practical implementation of KM in diverse sectors. The research offers a ten-step guideline for the effective institutionalisation of KM in HEI, focusing on resource allocation, collaboration, trust, alignment, and prioritising investments. The research highlights the significance of a holistic perspective to KM institutionalisation in HEIs.

Keywords: Knowledge, Knowledge management, Critical success factors, Higher education, Higher educational institutions, Developed and developing countries

1. Introduction

In today's fast-paced world, the importance of Knowledge Management (KM) cannot be overstated. It is a critical aspect that can determine the success or failure of any institution. To ensure that KM practices are sustainable, institutions must identify and maximise the utilisation of the factors critical to KM's success. This recognition is crucial for higher education institutions (HEIs), as effective knowledge sharing is essential to the institution's growth and development, and enhances sustainability in a nation's industry.

Wamundila and Ngulube (2011) argued that universities have a crucial role in addressing societal challenges by developing, managing, and sharing knowledge. As knowledge management (KM) becomes increasingly vital to the success of the global economy, Kanwal, Nunes, and Arif (2019) argue that for higher education institutions (HEIs), this means harnessing the collective intelligence of students, faculty, and staff to lay a strong foundation for societal sustainability. The argument is that the management of knowledge within universities must not only enable the optimisation of student retention, improve graduation rates, modernise existing transaction-based systems, improve teaching and learning processes, and support research and development activities but, more importantly, universities intellectual capital must be leveraged for sustainable development initiatives with a focus on ensuring, and promoting national and international competitiveness.

Despite KM's success in other industries, faculty members at a university tend to emphasise accomplishments more than the achievement of common institutional aims and goals. Primarily, the individualism of professors and the exclusivity of faculties hinder knowledge exchange, making it inefficient and non-systematic, which in turn leads to a decrease in the willingness to pursue common knowledge management (KM) goals (Iqbal et al., 2011). As Kabilwa (2018) explain, for the most part, KM in higher education highlights the importance of knowledge retention in supporting the development of professors and researchers and meeting students' expectations. As discussions around KM in higher education gain momentum, sustainable KM practices must be explored beyond the individual and faculty. KM within the context of HEIs must focus on creating a culture of continued education and improvement, ensuring that knowledge is efficiently utilised and applied for the

benefit of all society (Shahbudin, Nejati, and Amran, 2011; Kabilwa, 2018; Kordab, Raudeliuniene, and Meidute-Kavaliauskiene, 2020).

Kruger and Johnson (2013) have highlighted the challenges HEIs in developing nations face when institutionalising KM practices. According to a survey conducted by these authors, educational institutions in South Africa had the lowest KM maturity compared to other industries in the country. In developing countries like South Africa, language barriers and intolerance are often the significant obstacles that university staff and students face, rather than technology.

While Haryani and Suryasari (2020) advocate for a comprehensive strategy for KM in HEIs and the cultivation of a culture of knowledge-sharing, development, and training among stakeholders, authors such as Abu Naser et al. (2016), Rohman (2019), and Kordab et al. (2020) caution that to create such a conducive culture, effective leadership at all levels is necessary. Considering the rapidly evolving landscape, Kordab et al. (2020) emphasise the need for a unified KM strategy across industries to promote sustainability. Ojo (2016), Alshahrani (2018), and Kordab et al. (2020) thus propose that when pooling knowledge from diverse sources and co-creating it with stakeholders, KM concepts must be integrated into daily operations.

Recognising the vital role that Higher Education Institutions (HEIs) play in promoting Knowledge Management (KM) within society, this article presents the findings of an investigation aimed at identifying the key factors that facilitate effective KM in HEIs. Through a systematic literature review of KM practices in higher education from 1994 to 2025, the study seeks to explore the essential components for successful Knowledge Management and to propose guidelines for implementing a ten-step plan that aligns KM initiatives within higher education institutions.

2. Methodology

Conducting a systematic literature review involves a structured process for identifying and evaluating relevant materials to provide insightful, evidence-based responses to research inquiries. By adopting this approach, researchers can effectively assess the suitability and effectiveness of interventions or activities concerning society and institutions, as emphasised in Biggam's research (2011).

With reference to Figure 1 below, this study employed a systematic approach for a comprehensive literature search, focusing on academic databases such as Scopus, Web of Science, and Google Scholar, which were selected for their extensive coverage and relevance. Initially, a collection of keywords and search terms related to "knowledge management," "higher education," "strategies," and "critical success factors" was established to determine the strengths and weaknesses of knowledge management (KM) practices in higher education institutions (HEIs). All data captured were analysed through four procedural steps: identification, screening, eligibility, and inclusion (Page et al., 2021). By adhering to these steps, thoroughness and impartiality were ensured, incorporating only the most relevant and high-quality sources for analysis. As such, the research was restricted to peer-reviewed journal articles, conference papers, and books, with a focus on articles that examined the enabling role of higher education in facilitating the dissemination of knowledge into industry. The study was limited to articles published between 1994 and 2025 to ensure relevance, with 47 of the 96 sources consulted deemed significant for the research.

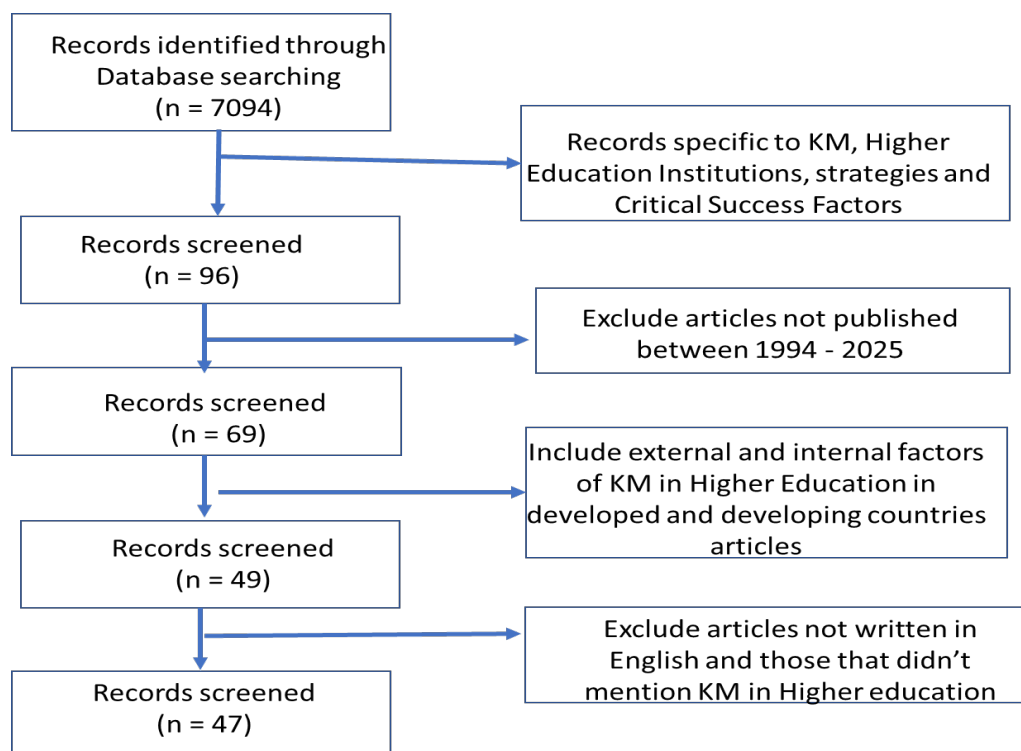


Figure 1: The PRISMA selection process of relevant literature

What was found was that the effectiveness of knowledge management in HEIs is strongly dependent on a range of critical factors that must be strategically addressed.

3. Factors Critical to KM Success in HEIs

The success of knowledge management in HEIs relies on a comprehensive approach that integrates essential internal assets and resources, including technology, people, and processes. These factors, which contribute to practical ways of working, are further supported by several influential organisational elements, such as culture, trust, structures, strategy, governance, leadership, and finance. Beginning with external influences, the subsequent sections will explore the literature surrounding these topics in greater depth to determine the most influential organisational elements on knowledge management (KM) within higher education institutions (HEIs).

3.1 External Forces

On a strategic level, sharing knowledge between HEIs and industry is crucial for economic, social, and environmental sustainability and essential for promoting entrepreneurship and national growth. Any nation's political considerations should prioritise the need for skills development, especially regarding environmental concerns, where the importance of knowledge for sustainable development and economic stability cannot be underscored. On a Macro level, governments should lead by harmonising ICT infrastructures with KM systems. Similarly, HEIs should lead by widening access to knowledge and innovation through exchanging experience with industry, cultivating adaptability, evaluating successful practices, and incorporating improvement in learning and curriculum to promote sustainability (Basu & Sengupta, 2007; Bimbe, Brownlee, Gregson, and Playforth, 2015; Modebelu & Duvie, 2015).

3.2 Strategy

Effective KM requires careful consideration of goal and strategy-related factors. HEIs must recognise the importance of KM in developing effective strategies for managing the academic environment. HEIs must have knowledge-based operations aligned with the institution's vision, mission, and competitive strategy. HEIs can optimise efficiency, streamline activities, and balance knowledge sharing and expertise retention by implementing a holistic strategy prioritising processes. Ultimately, by prioritising knowledge-enabling strategic factors, HEIs can foster collaboration, enhance operational efficiency, and facilitate effective KM practices. Individual HEIs must therefore constantly change and tailor their strategic approach to address unique

challenges in different contexts (Maponya, 2005; Metcalfe, 2006; Heisi, 2009; Omona, Van der Weide, and Lubega, 2010; Abu Naser et al., 2016; North & Kumta, 2018).

3.3 Leadership

Effective leadership plays a pivotal role in the successful implementation of KM within HEIs. Leaders in higher education environments should thus actively engage in orchestrating team-building activities that foster camaraderie and mutual respect among faculty and staff. By fostering a culture of collaboration, leaders can cultivate a vibrant and inclusive environment where knowledge sharing flourishes. Such a supportive environment fosters cooperation and enhances the overall learning experience, allowing individuals to freely exchange insights, ideas, and expertise. Ultimately, such leadership styles cultivate a sense of community that is instrumental in driving innovation and academic excellence. As such, HEIs' leadership should aim to optimise training and innovation programs while recognising the vital role that academia plays in societal knowledge management. By promoting experiential learning, HEIs' leadership in support of knowledge sharing not only enhances the educational experience but also empowers employees to actively engage in knowledge-sharing practices, fostering a more efficient and collaborative institutional environment. (Kandadi, 2006; Ojo, 2016; Alshahrani, 2018).

3.4 Governance

Several ways to enhance governance and ensure organisational success have been identified, including mitigating risk and ensuring compliance. By focusing on knowledge governance, HEIs establish a robust foundation for fostering an environment of creativity, cooperation, and continuous development. To overcome resource limitations, cultural barriers, and obstacles to successful KM implementation, KM governance should include instituting governance models that grant authority over KM strategy and formulate an all-encompassing framework to enable KM in HEIs. This would entail integrating the KM strategy with broader HEI objectives, increasing KM-related decision-making, and creating mechanisms to evaluate and fulfil the knowledge requirements of all stakeholders in HEIs (Metcalfe, 2006; Bimbe et al., 2015; Alshahrani, 2018)

3.5 Process

Successful and sustainable KM processes mainly depend on resource availability, infrastructure, and a stable organisational culture. The primary difference between KM practices in developed and developing nations is that developed nations have ample resources and infrastructure and are equipped to foster effective KM practices. In contrast, developing nations face resource constraints, leadership changes, and cultural barriers that hinder the collection, storage, application, and distribution of knowledge. To overcome these challenges, developing countries must recognise the potential of HEIs in distributing knowledge between industry and society. The common thread seems to be that a nation's collective KM processes and practices require sufficient ICT infrastructures, architectures, organisational structures, leadership and collaborative cultures that promote innovation and problem-solving (Nonaka, 1994; Al-Alawi, Al-Marzooqi, and Mohammed, 2007; Ahmad, Madhoushi, & Yusof, 2011; Bhusry & Ranjan, 2011; Belanger & Van Slyke, 2012).

3.6 People

By promoting a culture of knowledge exchange and horizontal communication, universities act as catalysts for cultivating a knowledge-oriented environment essential to innovation and sustainable development. For knowledge transfer and innovation in society, HEIs play a central role in lifelong learning, problem-solving, and knowledge-sharing. The literature suggests that higher education institutions (HEIs) must address challenges beyond merely skill development by providing tailored training programs that promote collaboration and knowledge exchange. While academic skills such as presenting theories, coaching, and mentoring contribute to learning, it has been observed that fostering commitment to horizontal communication with industry and stakeholders is achieved primarily through incentivising knowledge exchange and integrating KM into employee roles. (Smith & Schurink, 2005; Maponya, 2005; Norulkamar & Hatamleh, 2014; Modebelu & Duvie, 2015; Ojo, 2016).

3.7 Technology

A recommended strategy for HEIs is to implement plans that prioritise embracing technology as a catalyst for the seamless integration of IT tools. This involves maximising existing infrastructure or developing a robust technological framework. To achieve this, it is essential to establish a specialised KM group within the HEI that can advise, train, and coach users on effective system utilisation, thereby enhancing stakeholder engagement and communication. Additionally, universities should promote e-learning platforms to standardise learning

experiences and facilitate efficient knowledge transfer. It became apparent that to nurture KM within HEIs, the objective of technological use should be to establish an environment where technology is effectively utilised and disseminated within and beyond HEIs' borders. This aims to promote a culture of knowledge exchange and development among all societal stakeholders. (Omona et al., 2010; Norulkamar & Hatamleh, 2014; Modebelu & Duvie, 2015; Ojo, 2015; Chen & Burstein, 2016; Alshahrani, 2018; Arias-Perez et al., 2019).

3.8 Culture

It was found that barriers such as knowledge hoarding impede cross-functional cooperation. To address this, HEIs established communities of practice that share common goals and promote team learning and open communication. By fostering a culture of collaboration, knowledge sharing, and trust, it was found that HEI can ensure the success of KM initiatives, even amidst busy schedules and beyond the institution's borders. It is, therefore, essential to promote open communication channels, particularly within communities of practice and stakeholders, while also recognising and addressing cultural barriers that may hinder cross-functional cooperation, such as knowledge hoarding (Davenport & Prusak, 1998; Al-Alawi et al., 2007; Schreurs, Sammour, Al-Zoubi, and Vanhoof, 2008; Rohman, 2019).

3.9 Trust

It was found that establishing a culture of open knowledge-sharing is essential for effective KM initiatives. Trust, particularly interpersonal, was found to be crucial in fostering effective communication and knowledge sharing in academic and corporate settings. The literature proposes that HEIs cultivate interpersonal trust within and beyond their educational community to promote a positive culture that encourages knowledge sharing. As such, literature supports the idea that HEIs prioritise honesty as the foundation for effective knowledge-sharing among students, staff, and faculty. Furthermore, universities should take the initiative to create platforms that foster social networking within the academic community, emphasising the essential role of trust in promoting effective communication and knowledge exchange among all societal stakeholders. (Al-Alawi et al., 2007; Modebelu & Duvie, 2015; Ojo, 2016; Alkatheeri, 2018).

3.10 Structure

Organisations with flat structures and low hierarchies promote knowledge sharing, whereas highly formalised institutions hinder adaptability and spontaneity. In HEIs, particularly in developing countries, a balanced organisational structure is critical to support effective KM and create an environment that fosters knowledge sharing, creation, and innovation. HEI leadership promotes flat organisational structures with low hierarchies, encouraging and facilitating knowledge sharing among personnel while balancing formalisation to ensure organisational stability without compromising adaptability and spontaneity in knowledge-related activities. The goal is to introduce or strengthen decentralised structures over time that promote an environment conducive to successful knowledge creation and innovation, fostering creative problem-solving that aligns with the needs of knowledge-intensive activities (Bhusry & Ranjan, 2011; Abu Naser et al., 2016; Alshahrani, 2018).

A solid financial foundation appears crucial for providing a climate conducive to research, innovation, and knowledge transfer. While universities in developed nations have more resources to invest in advanced technologies and support research, innovation, and knowledge dissemination, HEIs in developing countries face challenges such as limited financial resources, inadequate infrastructure, and competing priorities. To address these challenges, it is essential in developing countries that leadership allocate funds for KM initiatives in operating and capital budgets to establish frameworks, purchasing tools, and incentive programs to motivate knowledge workers (Benson, Bugnitz, & Walton, 2004; Modebelu & Duvie, 2015; Lategan, 2017; Alkatheeri, 2018).

Unlocking the full potential of institutional knowledge requires a strategic approach; the following ten-step guideline provides a roadmap for implementing successful knowledge management in higher education.

4. Guidelines for Implementing Knowledge Management in Higher Education

From the literature reviewed, and regarding Figure 2 below, the literature supports the notion that several Critical Success Factors (CSFs) are crucial to KM success in HEI. Somewhat similar to Du Toit and Kruger's IT Alignment Model, which deals with the management of data, information, and intelligence, it became evident that managing knowledge within Higher Education Institutions is an extension of data, information and intelligence management. This complex process involves multiple stakeholders and factors operating at both macro and micro levels. These factors encompass national and institutional strategies, leadership dynamics at various levels, cultural nuances, technological integration, and financial investments. As society evolves, the

literature suggests that higher education institutions must assume a significantly more prominent role in shaping a nation's sustainable development through knowledge transfer and innovation. Regarding the arguments proposed in Section 3, it was reported that people (Smith & Schurink, 2005; Maponya, 2005; Norulkamar & Hatamleh, 2014; Modebelu & Duvie, 2015; Ojo, 2016), institutionalise KM through processes (Nonaka, 1994; Al-Alawi, Al-Marzooqi, and Mohammed, 2007; Ahmad, Madhoushi, & Yusof, 2011; Bhusry & Ranjan, 2011; Belanger & Van Slyke, 2012), supported by technology (Omona et al., 2010; Norulkamar & Hatamleh, 2014; Modebelu & Duvie, 2015; Ojo, 2015; Chen & Burstein, 2016; Alshahrani, 2018; Arias-Perez et al., 2019), as represented by the green triangle in the model's centre. A deeper analysis revealed that the KM processes, which encompass acquiring, storing, distributing, reusing, and sharing knowledge, must be supported by architectural structures and technology infrastructure that facilitate management. It was found that such technologies must be at hand through supportive infrastructures for use by knowledge workers (Bhusry & Ranjan, 2011; Abu Naser et al., 2016; Alshahrani, 2018), and that the most challenging part of the KM work triangle is building organisational structures to identify, nurture and reward people with the right skills to do the work and share the knowledge (Nonaka, 1994; Al-Alawi, Al-Marzooqi, and Mohammed, 2007; Ahmad, Madhoushi, & Yusof, 2011; Bhusry & Ranjan, 2011; Belanger & Van Slyke, 2012).

In sections 3.8 and 3.9, it was argued that trust and culture are the forces driving knowledge sharing and that developing an organisational culture conducive to KM is crucial to KM and business competitiveness in a constantly changing environment (Davenport & Prusak, 1998; Al-Alawi et al., 2007; Schreurs, Sammour, Al-Zoubi, and Vanhoof, 2008; Modebelu & Duvie, 2015; Ojo, 2016; Alkatheeri, 2018; Rohman, 2019). Furthermore, in section 3.2 to 3.4, it was argued that it is through organisational strategies, governance, policies and planning (Maponya, 2005; Metcalfe, 2006; Basu & Sengupta, 2007; 2009; Omona, Van der Weide, and Lubega, 2010; Bimbe, Brownlee, Gregson, and Playforth, 2015; Modebelu & Duvie, 2015; Heisi, 2009; Abu Naser et al., 2016; North & Kumta, 2018), that external Macro (PESTEL) and micro (Industry) threats and opportunities addressed in 3.1 are mitigated and, as such, it is policies and planning that set the stage for the structuring of people (section 3.6), processes (section 3.5) and technology (section 3.7) through leadership (section 3.3), trust and culture (Davenport & Prusak, 1998; Al-Alawi et al., 2007; Schreurs, Sammour, Al-Zoubi, and Vanhoof, 2008; Rohman, 2019). Finally, it was argued that, over time, KM structures must mature - thus not only be evaluated and maintained, but also enhanced and changed through services and innovation.

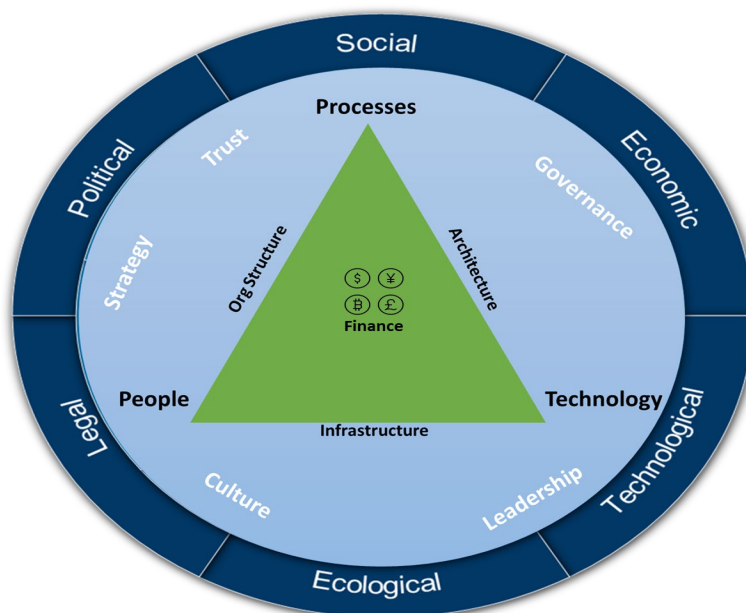


Figure 2: KM Alignment model

In summary, what was found was that KM can be defined as the collaboration between skilled people, strategy, governance, structure, culture, policy, maturity, maintenance and services to adequately integrate and exploit organisational knowledge into an often-hostile environment where Industry and Macro Forces dictate economic reality. A knowledge-oriented strategy and governance thus set the stage for developing industry-specific infrastructure and architecture to facilitate skilled individuals in acquiring, creating, and

sharing knowledge through supportive organisational structures. Over time, this improved individual and organisational maturity, innovation, profitability and performance (Rus, Lindvall, & Sinha, 2001).

Regarding the factors critical to KM success in HEIs, as identified in Section 3 above, as opposed to data and information management, it is proposed that HEIs first acknowledge their role as knowledge custodians and their potential to disseminate knowledge to industry and society. They also need to envision establishing dedicated structures and forums to share expertise and knowledge with stakeholders (Dneprovskaya & Shevtsova, 2023). As the *second step*, HEIs must focus in-house and address KM hierarchical barriers by strategically managing knowledge as an enabler within the broader academic environment. As such, KM strategies must support business activities, and business strategies must be conducive to sharing knowledge and retaining expertise (Ehms & Langen, 2002). To achieve this, as a *third step*, HEIs must actively empower knowledge-sharing operations and acknowledge the crucial role of skilled leadership. As such, HEIs must encourage academic leaders to promote experiential learning through internal team-building exercises, thereby fostering teamwork among students, staff, and faculty members (Paulzen & Perc, 2002; Pee & Kankanhalli, 2009).

As the *fourth step*, to aid leaders in tackling resource constraints, cultural barriers, and challenges in implementing KM successfully, HEIs must implement governance models. This involves delegating control over planning, strategy, and KM execution. Higher Education Institutions should also develop mechanisms within their governance frameworks to assess and meet the knowledge needs of all stakeholders. For instance, establishing a comprehensive framework for KM governance could strengthen decision-making authority within the HEI (Paulzen & Perc, 2002; Gottschalk, 2002; Thornley et al., 2016). Therefore, as the *fifth step*, KM processes should be integrated with organisational objectives and formalised into job roles, where processes that promote cooperation and collective achievement are strategically promoted. As argued, it is cardinal that HEI leaders raise awareness about the importance of knowledge sharing, addressing cultural attitudes, and enhancing commitment to KM processes (Pee & Kankanhalli, 2009; Paulzen & Perc, 2002; Gottschalk, 2002; Thornley et al., 2016).

To ensure that knowledge workers are equipped with the necessary skills and knowledge for effective KM, it is recommended that HEIs implement customised training programs as a *sixth step*. A focus should accompany this on promoting collaboration, open communication, and teamwork to facilitate knowledge exchange (Thornley et al., 2016). Additionally, incentive systems that recognise and reward collective achievements in knowledge exchange and communication should be established. HEIs should address people- and skill-related challenges in developing nations by prioritising customised training programs, fostering collaboration, establishing incentive systems encouraging expertise and experience exchange, recognising individuals' knowledge exploration and exploitation, and promoting collective achievements (Abu Naser et al., 2016; Omona, Van der Weide, and Lubega, 2010).

As the *seventh step* to effectively promote KM within HEIs, the ICT infrastructure must support and enhance KM processes. HEIs must address obstacles such as information infrastructure issues and competing priorities. This can be achieved through the development and maintenance of reliable technological infrastructure for seamless KM processes, the use of technology as a catalyst for the integration of IT tools, and the promotion of knowledge sharing by creating a specialised KM group to advise, train, and coach users on practical system usage for increased engagement and communication. Incorporating eLearning platforms to standardise learning experiences and facilitate efficient knowledge transfer is also recommended, along with developing strategies to overcome resource limitations (Gottschalk, 2002; Kulkarni & Freeze, 2004).

One of the most crucial advice for HEIs is cultivating a culture that supports KM. Considering this, the *eighth step* to successful KM in HEIs is to establish and nurture communities of practice within the organisation, promoting a culture of cooperation, knowledge sharing, and trust among knowledge workers (Paulzen & Perc, 2002; Pee & Kankanhalli, 2009; Mehner, Rothenbusch & Kauffeld, 2025). This involves providing ample time and space during work hours for collaboration, fostering an environment that encourages KM projects, prioritising a culture of sharing within the institution, and underscoring the importance of knowledge sharing despite busy schedules to boost the success of KM initiatives. KM Strategies should thus focus on overcoming cultural barriers, such as knowledge hoarding, and promoting open communication channels within the institution, particularly within communities of practice, to facilitate knowledge exchange and team learning as integral components of KM. Building interpersonal trust within the academic community is crucial for fostering a positive corporate culture and promoting knowledge sharing. Therefore, HEIs should implement measures to foster and maintain trust in higher education settings, emphasising honesty as a foundation for effective

knowledge sharing among faculty, staff, and students. Finally, initiatives and platforms that facilitate social networking among university community members, thus including industry and government, should be created, recognising the role of trust in promoting effective communication and knowledge sharing (Paulzen & Perc, 2002; Pee & Kankanhalli, 2009).

To cultivate a culture of trust and knowledge-sharing among all stakeholders in HEIs, it is crucial to develop initiatives that encourage creative problem-solving by aligning the organisational structure with the needs of knowledge-intensive activities. HEIs must balance formalising internal and external structures to ensure stability while allowing adaptability and spontaneity in knowledge-related activities. As a recommended *ninth step*, promoting flat organisational structures with minimal hierarchies or strengthening decentralised structures between all stakeholders can create an environment that facilitates successful knowledge creation and innovation (Hubert & Lemons, 2010; Pee & Kankanhalli, 2009; Paulzen & Perc, 2002; Gottschalk, 2002; Thornley et al., 2016).

To successfully implement these recommendations, HEIs, as the *tenth and final step*, secure and maintain sufficient funding in both operational and capital budgets to support KM initiatives. As such, HEIs should prioritise a significant financial investment in information sharing, focusing on establishing frameworks, acquiring tools, and implementing incentive programs. To overcome challenges such as limited financial resources, inadequate infrastructure, and competing priorities, it is recommended that HEIs prioritise technological advancements and allocate resources to invest in cutting-edge technologies that enhance research, innovation, and knowledge dissemination. Higher Education Institutions must strengthen their research and innovation capacity through targeted financial support, enabling them to remain at the forefront of knowledge creation and dissemination (Kruger & Johnson, 2009).

5. Conclusion

The discourse surrounding KM in HEIs underscores its importance in fostering sustainable development and competitiveness in today's rapidly changing world. As demonstrated by research, the journey towards KM maturity differs between nations and organisations, necessitating tailored approaches that maximise factors unique to each context. Ultimately, the sustainability of KM in HEIs lies in recognising and harnessing the collective intelligence of diverse stakeholders, fostering a culture of ongoing learning and collaboration, and continuously adapting strategies, processes, and technologies to meet evolving challenges and opportunities in the knowledge economy.

The article proposes a ten-step guideline designed for knowledge management leaders and practitioners in HEIs. This framework aims to assist them in developing well-defined long-term strategies and KM structures that empower higher education institutions (HEIs) to sustain knowledge within their academic environment effectively. By adhering to these ten steps, effective leadership can streamline KM processes, cultivate a KM culture that enhances leadership effectiveness and team dynamics, and incorporate the latest technological advancements. This comprehensive approach will lay a solid foundation for both the exploration and exploitation of knowledge management, fostering research, innovation, and the achievement of goals both within and beyond higher education institutions.

6. Limitations of the Study

The research examined the significance of knowledge management (KM) in higher education and identified the factors that facilitate knowledge sharing. Additionally, it provided guidelines for implementing KM within academic environments. However, as academic institutions operate under diverse income levels and criteria specific to their countries, this study remains generic. It does not cater to the unique needs of individual institutions based on their economic status. Further research is therefore required to customise these guidelines to suit specific situations.

7. Future Research

This study is limited by its reliance on a systematic literature review. Consequently, the conclusions drawn may not apply to all contexts of academic institutions in different countries. Given that these institutions differ in terms of income groups and other national criteria, there is a need for further investigations to adapt the proposed guidelines. The study also does not address the empirical validation or pilot testing of the findings, nor does it consider the challenges associated with implementation or potential barriers. Additionally, it overlooks various factors, such as institutional size, type, and contextual variations, which oversimplify the complex and interconnected nature of KM implementation. Future research should aim to identify specific

knowledge management frameworks and maturity models that can aid in addressing the unique KM challenges faced by different HEIs in developed versus developing nations. Such a tailored approach will help create models that align with the specific needs of individual institutions or groups of institutions, rather than relying on a one-size-fits-all solution that is likely to fail in the long run.

Ethics Declaration: Ethical clearance was not required for this research, as it is based on a literature review described in the methodology section.

AI Declaration: The authors declare that no AI tools were used to create this research paper.

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