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## MANAGEMENT | REVIEW ARTICLE

# Understanding knowledge management strategies in institutions of higher learning and the corporate world: A systematic review

Nasir Koranteng Asiedu<sup>1</sup>, Mercy Abah<sup>2</sup> and De-Graft Johnson Dei<sup>3</sup>

**Abstract:** Knowledge management is a popular concept among many disciplines in higher learning institutions. Notwithstanding, reviewed literature shows that, the concept is highly practiced by corporate entities as compared to institutions of higher learning. A systematic review was done to specifically examine the various knowledge management strategies that are used by higher learning institutions considering the popularity of the concept coupled with the fact that it is taught widely across institutions of higher learning. The review was done with over 40 publications of varied topics on knowledge management. These were retrieved from various academic search engines and databases. The study found that, there is inadequate literature on knowledge management strategies in higher learning institutions; however, codification and personalization were generally identified in most of the studies as the main strategies of knowledge management. Strategies like, communities of practice, knowledge partnering and knowledge harvesting were suggested by this study. Higher learning institutions are therefore encouraged to start practicing what they teach by conducting more empirical studies on the concept.



Nasir Koranteng Asiedu

### ABOUT THE AUTHORS

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### PUBLIC INTEREST STATEMENT

Organizations or institutions thrive on the wheels of knowledge therefore considering the era the world finds itself, it would always be prudent for organizations or institutions to develop strategies that will enhance the flow, exchange and retention of knowledge. Knowledge is an important and valuable asset that requires good and efficient strategies to ensure and facilitate its effectual management in organizations. This study examined relevant and numerous empirical studies as well as literature reviews that have been conducted on strategies in managing knowledge in higher learning institutions and the corporate world. The aim was to bring to the fore, a better understanding of strategies in managing knowledge in the corporate and higher learning institutions. The study found that, although knowledge management is taught by higher learning institutions, practically the concept is highly utilized by the corporate world.

**Subjects: Teaching & Learning – Education; Business, Management and Accounting; Higher Education; School Leadership, Management & Administration; Behaviour; Academic Librarianship; Research Librarianship; Teaching Librarianship**

**Keywords: Knowledge management; higher learning institutions; knowledge management strategies; communities of practice; knowledge partnering; corporate world; systematic review**

## 1. Introduction

Knowledge is an asset which is needed urgently in all facets of life. The total development and progression of the world depends on how knowledgeable its inhabitants are. The acquisition of knowledge without managing it, creates a big vacuum within an entity and prevents future generations from getting to know what was in existence. The management of knowledge therefore provides the basis for others to get something to learn from and possibly develop and add new ideas to it or build upon the available knowledge. Dating back to antiquity; the older generations from the stone age period to the renaissance era strived to manage knowledge using indigenous methods and practices. These knowledge that were managed by them, are being presently referred to when the need arises; this goes to show the essence of managing knowledge (Dhamdhere, 2015; Mba et al., 2015).

The popularity of the concept has resulted in several definitions. The commonest definition sees it as a set of skills or techniques that are acquired through learning and experience. The application of knowledge in our daily operations or activities cannot be over-emphasized (Mohajan, 2017). To this effect, it is always prudent to manage knowledge in a way that could easily be accessed and used to accomplish the needed task. Knowledge management is a concept that has gained popularity since its discovery (Kimile & Bulitia, 2020; Mba et al., 2015; Zack et al., 2009). It is the practice of organizing, capturing, using and analyzing the possible effect or impact of the collective knowledge of a group of people. This is done to ensure easy storing and access to the knowledge base of an entity in order to maximize efficiency and increase productivity whilst putting in efforts to retain every information or knowledge in the organization (Bhusry et al., 2011).

To ensure continuity and effective management of an entity, there is the need for steps to be taken towards knowledge creation and knowledge retention. These two steps are very important in one's quest to manage knowledge in an organization or institution. Managing knowledge in organizations or institutions of higher learning is very relevant and deserves the needed attention as captured in literature (Charles & Nawe, 2017; Quarchioni et al., 2022). There are differing arguments on whether knowledge can be managed in the first place, but the short and long of these arguments point to a conclusion that knowledge can be managed and should be managed irrespective of the type or form it takes, that is, whether tacit or explicit (Sutton, 2001). Every entity thrives on the wheels of knowledge because of its importance in ensuring the needed development and growth, therefore strategies must always be put in place to manage the knowledge we produce as entities.

In the view of Quarchioni et al. (2022), there are several studies on the merits of knowledge management to institutions or organizations. However, studies on knowledge management in higher learning institutions are somehow "loosely focused" due to the multidisciplinary nature of the concept. Comprehensively, knowledge management in higher learning institutions should encompass all knowledge related activities of the whole university community (Baptista Nunes et al., 2017). A successful knowledge management strategy implementation could only be achieved if organizations or institutions understand the roles and functions of knowledge. Implementing the strategies appropriately ensures good outcome and provide the utmost result in firms or institutions (Ngoc-Tan & Gregar, 2018; Thakur, 2017).

In the view of Olubunmi (2015), knowledge gathering, knowledge storing and knowledge sharing are the focal areas of knowledge management. The act of managing knowledge is a conscious

effort by institutions or organizations. This is done with the intention of creating the awareness among staff or workers for them to understand the need to consciously assist in the storing and sharing of knowledge (Ridzuan & Sam, 2008). Knowledge management has so many benefits. It helps in improving decision making in an organization and also improves communication and sharing (Asrar-ul-Haq et al., 2016).

Literature abounds on knowledge management, however, what is found on higher learning institutions per the preliminary searches conducted is scanty and so gives the impression that, not all universities or colleges have fully understood the concept hence lack of more studies on the topic. As a result of this discovery, this study is going to systematically review the available literature on knowledge management strategies in higher learning institutions with the aim of adding to literature and also creating the awareness on the need for those in Ghana and the world as a whole to fully embrace and conduct more empirical studies on the concept.

## **2. Knowledge gathering, storing and sharing for purposes of knowledge management**

“Gathering” in knowledge management is crucial towards the success of the whole knowledge management system. Knowledge management on the other hand seeks to purposely assist in lessening information overload and making sure that, the right information gets to the right people at the right time and in the appropriate form. It must be noted that, gathering knowledge is not an easy task to perform in an institution or organization especially if the knowledge being received is in the form of tacit. Notwithstanding, this exercise has to go on for storing and sharing to take place (Haas, 2006; Kimile & Bulitia, 2020).

Gathering the right knowledge from individuals or group of people for total consumption by the entire institution also implies that, the institution or organization reserves the right to store this gathered knowledge to ensure continuous usage by later generations. The emergence of technology has made the practice of storing knowledge easier. Knowledge has to be stored to ensure easy referencing and inferencing by knowledge creators or workers in an institution. This helps in contributing to quick problem-solving decisions. The emergence of information technology has made it simpler for knowledge to be gathered, stored and shared. The development of repositories and databases as central points of accessing saved or stored knowledge have also enhanced the whole knowledge management system (Coakes & Smith, 2006).

This invention has also come to enhance interactions and communication among knowledge creators. Knowledge sharing has become much easier among teaching staff and their students in higher learning institutions with the emergence of information technology. Knowledge sharing ensures and leads to social interactions among knowledge creators. When this happens, it creates the avenue for knowledge creators to share more which also has the potential of bringing new ideas into existence. Managing knowledge very well and sharing it, is important for continued survival or sustainability of organizations. The advent of social media tools on the other hand have also come to boost knowledge sharing across all spheres of working environment (Rusuli & Tasmin, 2010; Yigzaw, 2021).

Jasimuddin (2008), posits that, clearly there are two main approaches to knowledge sharing and these are, the soft approach and the hard approach. The soft mechanism or approach is heavily connected to tacit knowledge, therefore face-to-face interaction is preferred and seen as the best form of knowledge sharing. The hard approach on the other hand, is also linked to explicit knowledge whereby information communication technology is proposed as the means through which an entity can share vast knowledge. This is the practice that is highly encouraged in organizations (Dei, 2019).

### **2.1. Knowledge management strategies**

Literature on knowledge management strategies indicate that, although there are many strategies organizations use to manage knowledge, the commonest among such strategies are the

codification strategy and the personalization strategy (Bordeianu, 2015). The codification deals with the gathering of explicit knowledge and storing them in the form of databases or repositories for easy accessibility and use. The personalization strategy also aims at assisting people to effectively use information technology to efficiently communicate knowledge. This strategy in a sharp contrast is not interested in the storing and saving of knowledge but rather the exchanging or transferring of knowledge from one person to the other in an organization. The expertise of individuals is highly taken into consideration under this strategy (Greiner et al., 2007).

Choi and Lee (2002), indicated similar strategies for managing knowledge in firms. These are, the codified mechanism and the sharing mechanism. These two are broadly captured under human strategy and system strategy. The human strategy in the view of the authors refer to the situation whereby in order for effective management of knowledge to take place there should be more interactions among people within organizations. This will pave way for sharing to take place formally and informally. Socialization is also encouraged under this strategy since it brings people together to share and exchange ideas on issues of the working environment. It must also be noted that, the main focus of this strategy is to enhance and facilitate physical interactions among workers with the objective that people can learn and share with one another.

According to Schulz and Jobe (2001) some organizations are likely to encourage this type of strategy as opposed to its counterpart to prevent other entities from having access to their codified knowledge and imitating them as a result. Such organizations believe this will grant them the competitive edge or advantage over others.

The system strategy as indicated by Choi and Lee (2002), deals with the use of technology to codify explicit knowledge and transfer to members within an organization. This strategy as explained by the authors can also support the managing of tacit knowledge. This could be done with the assistance of information technology where meetings or discussions could be held through virtual means (video conference) and other online networking platforms that allow workers to interact and share knowledge among themselves by seeing one another.

Promoting and encouraging Communities of practice as a knowledge management strategy can enhance knowledge capturing and sharing among experts in organizations as opined by Serrat, (2017). Communities of practice as indicated by the author should form the integral part of knowledge management strategies in any organization. Unconsciously, this has been going on among people in organizations but not in a formalized manner. It should be done in a formalized manner to allow people to easily meet in groups and share their challenges and experiences at the work place so that fellow colleague experts can proffer solutions and suggestions.

The other knowledge management strategy that has received less attention as compared to the codification and personalization strategies is the integrated strategy. This deals with mixing the two popular strategies to achieve a specific task. Organizations have not given this approach the necessary consideration and so prefer to use only one strategy as the main approach to knowledge management. With the integrated approach, an organization need to strike a balance in the usage of the two strategies. This approach has been acknowledged to be effective in ensuring efficiency in the performance of organizations (Ng et al., 2012).

## **2.2. Knowledge management strategies in institutions of higher learning**

Institutions of higher learning are one of the few places that knowledge is highly utilized among staff and students or the entire university community, therefore, it is a place that deserves the needed attention with regards to managing and using knowledge effectually. Managing knowledge in institutions of such nature require some strategies since this will help in ensuring that the whole university community understand the objectives of the exercise and are therefore willing to work towards its success (Ramanigopal, 2012; Srivichai et al., 2011). Strategy is needed in all

human endeavours to ensure that a required target or task is achieved to satisfaction. Managing knowledge, generally, calls for some strategies.

The core business of institutions of higher learning is to create, use and disseminate knowledge, therefore, higher learning institutions should be much concerned with knowledge management strategies. Knowledge is created in all facets of every institution of higher learning; from administration to teaching/research section.

Knowledge management as a whole has now gained popularity among higher learning institutions; notwithstanding there is more to be done in terms of “fishing out” and implementing the needed and effective strategies to help ensure that the concept becomes widely acceptable. It should be pointed out that, for every knowledge management initiative to be successful, the following is needed; “people, technology and processes” (Trivella & Dimitrios, 2015). With regards to people, faculty and other staff must be encouraged to engage in both cross-collaboration and internal collaboration. The cross-collaboration will help with the exchange of ideas and exposure to new skills or techniques which one can impart or share with other colleagues with the intent of gradually advancing and building the knowledge-base of the institution. The kind of environment within which knowledge is to be managed is also important to look at. The environment should be interactive and friendly to allow faculty to have the zeal to easily create and share knowledge (Mavodza & Ngulube, 2012; Trivella & Dimitrios, 2015).

Communities of practice is a concept that needs much attention and formalization in higher education institutions. It is a practice that has to be encouraged by every institution of higher learning because it is one of the best strategies to managing knowledge in universities, colleges and other higher tertiary institutions (Dei & van der Walt, 2020). It is a practice that people may already be engaged in, in an informal way but for the purposes of it becoming a strategy in knowledge management, steps must be taken by universities who are yet to see the need to do so to act and even enshrine it in their institutions’ policies.

Mentoring is one of the few strategies that can be used to manage knowledge in higher learning institutions. Faculty should be encouraged to coach or mentor new and young scholars who may find themselves in academia. This is a surest way of retaining some if not all the acquired skills and knowledge of professors who are due to leave the system. It should therefore be incumbent on institutions of higher learning to put policies in place which will force knowledgeable professors in their areas of expertise to train young and inexperienced staff (Srivichai et al., 2011). To add to this, is the need for universities or colleges to take succession planning seriously. It is one of the ways that could be used to retain and transfer knowledge among staff of higher learning institutions. There should be the deliberate effort of universities or colleges to execute such strategy (Wamundil & Ngulube, 2011).

### **3. Theoretical framework**

Knowledge is a great asset that is needed in every organization or institution to ensure smooth operations and coordination among workers. To this effect, it is relevant that the necessary strategies are taken towards its management in the area of creation, sharing and retention especially for the sake of posterity. There are several theories and models of knowledge management. Among the models are; Wigg KM Model, Von Krogh and Roos Model, Knowledge Spiral Model, Choo Sense-Making KM model, Boisot I-Space model, Zack KM Model and Complex Adaptive System model. The following are the main theories of knowledge management; Organizational knowledge management theory, Ecological knowledge management theory and Techno-centric theory. These models and theories help to provide sound and better explanations to the proper comprehension of managing knowledge in an organization but for the purposes of this study, the Ecological knowledge management theory and the Knowledge Spiral model were used to guide the work because they have the potential to contribute to the understanding of knowledge management strategies. Moreover, the ideas or constructs in both the model and the theory fit into the study.

Knowledge management has always been in practice since evolution but Knowledge ecology as interchangeably used with Ecological knowledge management was a term coined by George Por in 1991. This theory in entirety, postulates that organizations have a duty to ensure co-existence and promote interactions so that knowledge sharing, collaborations and retaining of knowledge can occur. The theory also argues that other factors like the use of technology should ably be used as a strategy to capture, store and disseminate knowledge (Chen et al., 2010).

The Knowledge Spiral Model on the other hand was developed in 1995. It was developed by two Japanese called Nonaka and Takeuchi. The inspiration behind their model stems from their experiences with how Japanese work, create and manage knowledge leading the country to become the third largest economy in the world after USA and China especially through automobile production. The Knowledge Spiral Model is based on four key components and it is believed that proper execution of these components to the brim will definitely inspire and turn things around in an organization. The components are Socialization, Externalization, Combination and Internalization (Dalkir & Liebowitz, 2011).

Socialization as explained by the model deals with the process of sharing tacit knowledge or conversion of “tacit knowledge to tacit knowledge” in a more natural way through trainings (formal) and other informal activities that lead to a lot of social interactions. This particular component can help stimulate and manage innovation in an organization by motivating staff to share knowledge they acquire through other means like workshops or seminars with fellow colleagues. Sharing is a very important aspect of knowledge management because it is one of the ways of letting others know what you know that they do not have any idea about. The second component of the theory which is referred to as externalization deals with the sharing of knowledge through the process of documenting what is privy to only the bearer of that knowledge so that it will forever be available to others (tacit to explicit). An institution or organization can achieve this by making it compulsory for all staff who attend workshops, seminars or conferences outside the institution or organization to write a report on what they personally learnt. Such reports could be shared to the benefit of colleague staff so that in a way they also have first-hand knowledge of what that person knows. Combination and internalization are the last two components of the model. Combination refers to the process of gathering explicit knowledge from many sources with the aim of accumulating new explicit knowledge (explicit to explicit). Internalization on the other hand deals with the transfer of explicit knowledge into tacit knowledge in an organization. This is believed to encourage the idea of “learning by doing”, which is much needed in institutions or organizations to ensure active participation in activities (Farnese et al., 2019).

The ideas of the Knowledge Spiral model and the Ecological knowledge management theory on the whole shows that tacit and explicit knowledge are inseparable and it is through their understanding and applications that organizations can really stimulate and manage innovation. On the other hand, the elements or variables that describe the Nonaka and Takeuchi’s Knowledge Spiral model and the Ecological knowledge management theory provide some clear strategies (socialization/interaction, collaboration/sharing, technology application) of managing knowledge in any organization or institution and these are very applicable in higher learning institutions as well as corporate organizations.

#### **4. Methodology**

This study reviewed literature on knowledge management with specific interest in knowledge management strategies in institutions of higher learning. The study did not restrict itself to a particular journal on knowledge management because the study wanted to broadly search for information on knowledge management strategies in higher learning institutions. The searches resulted in the retrieval of several peer-reviewed articles on knowledge and knowledge management strategies. The aspect on knowledge management strategies that were retrieved were mostly written on corporate institutions or organizations.

#### **4.1. Keywords searching and formation of search queries**

Keywords related to “knowledge management” and “higher learning institutions” that were used to perform search queries included, “knowledge management”; “knowledge sharing”, “knowledge retention”; “knowledge management practices”; “knowledge management strategies”; “higher educational institutions”; “universities”; “colleges”; “academia”, “knowledge management approaches”. The following search queries were formed with these related keywords; “knowledge management strategies in education”; “knowledge management approaches in institutions of higher learning”; “knowledge management strategies in universities/colleges”. These search queries were used to find relevant and related literature on the topic. Academic search engines that were used were, google scholar, core.ac.uk and eric.ed.gov. Additionally, some documents on the topic were also retrieved from the Emerald Insight database and Wiley online. It must be noted that, the advanced features like the Boolean operators of these consulted databases were not used to generate the search queries because the normal keyword searching and phrase searching that were performed yielded significant results. The peer-reviewed articles that were retrieved were made up of both quantitative and qualitative studies. As already indicated, there are vast amount of literature on knowledge management and its related areas but only 40 of the retrieved articles were relevant to the topic. In actuality an uncountable number of articles on knowledge management were retrieved but the ones that were found to be appropriate (40) for this study based on the screening of the titles and their abstracts were used.

Although the focus of this study was to examine the various findings on knowledge management strategies in higher learning institutions, articles that were retrieved on knowledge management strategies in the corporate sector, knowledge sharing, knowledge gathering and knowledge storing were included with the aim of getting information on knowledge management strategies from such topics. Table 1 provides a summary of the findings

#### **5. Discussion**

The main purpose of this paper was to systematically review literature on knowledge management strategies in higher education institutions. The other aim was to use this review to create the awareness on the available strategies based on the findings from literature and also indicate the need for higher learning institutions to take the concept seriously in their management of knowledge.

Strategy is a master plan or set of plans needed for the total achievement of an organization or institution’s objective. It is important for organizations to put managerial and other strategies in place and also ensure full compliance by members or staff so that they can all work efficaciously towards achieving the mission and vision of the institution.

Knowledge management strategy as a concept is highly associated with the corporate environment or the business world (Shannak & Masa’deh, 2012). Higher learning institutions are gradually beginning to understand and appreciate the concept, notwithstanding there are still inadequate studies on the concept within the realm of higher learning institutions (Quarchioni et al., 2022).

Throughout the review, two main strategies for managing knowledge were identified, namely; codification and personalization approaches (Greiner et al., 2007; Jasimuddin, 2008; Oluikpe, 2012). These mechanisms according to literature are effective in managing explicit and tacit knowledge respectively (Jasimuddin, 2008). They are highly used methods in the business world to ensure the smooth and continuous flow of information or knowledge. Notwithstanding, these methods to a large extent are also applied in higher learning institutions to preserve and ensure access to internally generated knowledge especially with the use of the codification method (Serrat, 2017). Another strategy that was identified in the review was the combination of the two main approaches in managing knowledge which is known as the “integrative approach”. It has been explained in literature that the two can be used simultaneously as an effective policy or plan to manage knowledge in institutions instead of the traditional practice of highly relying on one method which is mostly

**Table 1. Summary of findings of consulted publications**

<b>Author(s)</b>	<b>Year</b>	<b>Title</b>	<b>Key Findings</b>
Lamprini Trivella, Nasiopoulus K. Dimitrios	2015	Knowledge Management Strategy within Higher Education. The case of Greece	Knowledge management strategies are needed in universities and requires effective implementation
Muhammad Kashif Imran, Ahmad Raza Bilal, Usman Aslam and Ubaid-Ur-Rahman	2016	Knowledge Management Strategy: An Organizational Change Prospective	The study discovered that, the two management strategies (codification and personalization) have a positive impact on change implementation in institutions.
Michael Earl	2001	Knowledge management strategies: Toward a Taxonomy	Knowledge Management strategies are needed to increase the performance of organizations
Muhammad Kashif Imran Chaudhry Abdul Rehman Usman Aslam & Ahmad Raza Bilal	2016	What's organization knowledge management strategy for successful change implementation?	Knowledge Management strategies have remarkable impact on organizations
Rifat O. Shannak & Ra'ed M. Masa'deh	2012	Knowledge Management Strategy Building: Literature Review	Knowledge Management Strategies are important in building organizations therefore the strategies must be in conformity with an organization's vision
Byounggu Choi & Heeseok Lee	2002	Knowledge Management Strategy and its link to knowledge creation process	Human strategy and system strategy were found to be effective knowledge management strategies
Wilson Charles & Julita Nawe	2017	Knowledge Management (KM) Practices in Institutions of Higher Learning in Tanzania with Reference to Mbeya University of Science and Technology	Knowledge Management activities were nonexistent in the university. In addition, little or no Knowledge Management approaches or strategies were used
Nishad M. Nawaz & Anjali Mary Gomes	2014	Review of Knowledge management in Higher Education Institutions.	Strategic knowledge and Innovation knowledge are important and needed for a holistic managing of knowledge in HEIs
Degraft Johnson Dei & Thomas Bingle van der Walt	2020	Strategies for managing knowledge in organizations: A conceptual study	Strategies like coaching, apprenticeship, e-learning and communities of practice were identified as effective approaches that can be used in managing knowledge in universities
Otilia-Maria Bordeianu	2015	The role of Knowledge Management and Knowledge Management Strategies within learning organizations.	System strategy and human strategy were identified as the strategies that could be used by organizations to manage knowledge

(Continued)

Author(s)	Year	Title	Key Findings
Sajjad M. Jasimuddin	2008	A Holistic View of Knowledge Management Strategy	Soft and hard approaches or mechanisms were identified as the main strategies to managing knowledge
Martina E. Greiner, Tilo Bohmann & Helmut Krömer	2007	A strategy for knowledge management	Codification strategy was strongly emphasized by the study as an important strategy to managing knowledge in an organization
Muhammad Asrar-ul-haq & Sadia Anwar	2016	A Systematic Review of Knowledge Management and Knowledge Sharing: Trends, Issues and challenges.	Cooperation partiality has been the most common constraint to knowledge sharing and Knowledge management as a whole.
Abang Ahmad Ridzuan & Hong Kian Sam	2008	Knowledge Management practices in Higher Learning Institutions in Sarawak	Faculty at higher education institutions revealed that knowledge management was significant and that their institutions' knowledge management implementation levels were average.
Martin Schulz & Lloyd A. Jobe	2001	Codification and Tacitness as Knowledge Management Strategies. An empirical exploration.	Codification strategy, tacitness strategy and focused knowledge management strategies were identified as knowledge management strategies
Alex Hou Hong Ng, Mum Wai Yip, Sabariyah binti Din & Nooh Abu Bakar	2012	Integrated Knowledge Management Strategy; A preliminary literature Review	Codification and personalization strategies were identified as knowledge management strategies
De-Graft Johnson Dei	2019	Developing an Integrated Framework for Knowledge Management Practices in organizations.	Comprehensive knowledge management framework is needed to help organizations implement and promote knowledge management practices.
De-Graft Johnson Dei	2020	Knowledge management practices in universities: the role of communities of practice	Communities of practice was identified as a good knowledge management strategy
Sonia Quarchioni, Sergio Paternostro & Francesca Trovarelli	2022	Knowledge Management in higher education: a literature review and further research avenues.	Knowledge management research in higher education institutions is still in its infancy stage, with significant levels of variability and lack of broad conceptual frameworks.

(Continued)

**Table 1. (Continued)**

<b>Author(s)</b>	<b>Year</b>	<b>Title</b>	<b>Key Findings</b>
Jose Miguel Baptisa NuneSaima KanwalMuhammad Arif	2017	Knowledge Management Practices in Higher Education institutions: a systematic literature review	The findings revealed that there is very little research on knowledge management in higher academic institutions both in terms of theory and actual implementation.
Ms. Sangeeta NAMDEV DHAMDHERE	2015	Importance of Knowledge Management in Higher Educational Institutes.	Codification strategy was proposed and must be implemented well in higher educational institutes
Ramanigopal C.	2012	Knowledge Management Strategies in Higher Education	Training and mentoring were identified as knowledge management strategies
Adebowale Ojo	2016	Knowledge Management in Nigerian Universities: A conceptual Model	Knowledge management strategies should be identified and implemented by universities
Mamta Bhusry & Jayanti Ranjan	2011	Implementing Knowledge Management in Higher Educational Institutions in India: A Conceptual framework	A conceptual model for the development and enhancement of knowledge management strategies in Higher Education Institutions must be of concern to all higher learning institutions
Michael Zack, James Mckeen & Satyendra Singh	2009	Knowledge management and organizational performance: an exploratory analysis.	Knowledge management approaches were discovered to be linked to an organization's performance.
Nguyen Ngoc-Tan & Ales Gregar	2018	Impacts of Knowledge Management on Innovation in Higher Education Institutions; An Empirical Evidence from Vietnam	Knowledge management has a widespread effect on technical innovation in academic contexts, but not all aspects of knowledge management are closely attributed to administrative innovation.
Gopal Krishna Thakur	2016	Private Universities and Knowledge Management Strategies	The study strongly emphasizes the need for universities to have robust knowledge management strategies
Paul Oluikpe	2012	Developing a Corporate Knowledge Management Strategy	Codification, personalization and communities of practice were found to be effective knowledge management strategies

(Continued)

Author(s)	Year	Title	Key Findings
Olivier Serrat	2017	Enhancing Knowledge Management Strategies	Strategies like codification, personalization, communities of practice were suggested by this study as some of the effective knowledge management approaches.
Puangpet Srivichai, Komsak Meksamoot, Anchalee Jengjalern & Nopasit Chakpitak	2012	Integrated knowledge management System Based Mentoring for New University Staff Development	Mentoring was identified as a good approach or strategy to managing knowledge in universities
Judith Mavodza & Patrick Ngulube	2012	Knowledge Management Practices at an Institution of higher learning	Knowledge management approaches/strategies at the Metropolitan College of New York were not comprehensible.
Barbara Cowley-Durst	1999	Gathering Knowledge for your knowledge management system	Knowledge management was identified as an important concept which aims to reduce overload of information and increase productivity.
Martine R. Haas	2006	Knowledge Gathering, Team capabilities and project performance in challenging work environments.	The study found that more knowledge accumulation aided teams in performing more efficiently
Laila Naif Marouf & Naresh Kumar Agarwal	2016	Are faculty members ready? Individual factors affecting Knowledge management readiness in universities	Results revealed that, aside from trust, all other elements influence individual readiness which in turn also influences institutional readiness. Results should assist organizations in identifying possibilities and impediments before they can embrace knowledge management.
Elayne Coakes	2016	Storing and Sharing Knowledge Supporting the Management of Knowledge made explicit in transnational organizations.	Successful knowledge management requires a socio-technical strategy that takes into account the social dimensions of knowledge generation, retention and exchange in addition to the technical.
Muhamad Saufi che Rusuli & Rosmaini Tasmin	2010	Knowledge Sharing Practice in Organization	Information sharing is an important and helpful technique that should be done in organizations to aid information exchange and as well assist managers and knowledge management experts in their line of duty.

(Continued)

**Table 1. (Continued)**

Author(s)	Year	Title	Key Findings
Ayman Bassam Nassoura	2011	Knowledge Sharing in Institutions of Higher Learning	Knowledge management should be important in academic institutions. It is influenced by both the external and internal experiences gathered in these institutions. Knowledge sharing is the foundation of knowledge management.
Paavo Ritala, Kenneth Husted, Heidi Olander & Snežina Michailova	2017	External Knowledge sharing and radical innovation: the downsides of uncontrolled openness	Unregulated external information sharing leads to unintended knowledge leakage and reduce radical innovation performance.
Samuel T. Yigzaw, Ilkka Jormanainen, Markku Tukiainen	2021	Knowledge Sharing in Higher Education Environment of Developing Economies—the case of Eritrea	The findings demonstrate that, higher educational institutions have a significant number of unused digital tools in the community, as well as institutional standards to encourage collaboration.
Sitali Wamundila & Patrick Ngulube	2011	Enhancing Knowledge Retention in higher education; A case of University of Zambia	The study's findings revealed that university of Zambia was lacking key knowledge retention methods that would allow it to store appropriate information, therefore, the university should incorporate a knowledge retention strategy into its Knowledge Management policy.

the codification approach and then using its counterpart as a backup (Imran et al., 2016). Dei and van der Walt (2020), also indicated the following strategies for managing knowledge in universities; coaching, communities of practice, apprenticeship and e-learning.

Communities of practice was also identified as one of the strategies institutions can use to manage knowledge efficiently. Much attention has to be paid to this concept in universities and colleges around the globe. Although, it is being practiced to an extent by some people in academia, steps must be taken to make it a norm among faculty and other administrative staff in higher education institutions because it facilitates sharing among staff and create cordial and unique atmosphere both within and outside university campus. It also has the potential of creating an enabling, easy flow and sharing of knowledge environment where people can identify and easily fit in (Arthur, 2016; Wilson et al., 2020). Tacit knowledge which is found to be innate and difficult to capture and store could conveniently be captured and shared under communities of practice, therefore, this concept needs to be institutionalized in higher learning institutions globally especially among those who are yet to see the need to do so and also those who have heard the concept for the first time. Advantage should also be taken on the advent of social media to establish online communities of practice in order to ensure the sustainability of the concept in the situation where people cannot meet face-to-face (Lewis & Rush, 2013). There is literature on implementation of this concept in higher learning institutions (Cater-steele & McDonald, 2017; Dei & van der Walt, 2020). This goes to show the importance of the concept and the need for higher learning institutions to incorporate it in their knowledge management strategies.

## 6. Future directions

There is the need for every institution to map up strategies that will enhance and facilitate the sharing of knowledge. Libraries in higher learning institutions have a big role to play in this realization. Libraries have to enforce and ensure the establishment of knowledge or institutional repositories to collect the scholarly communications of the university or college staff in a form that can easily be accessed and shared. However, sensitization must take place to help staff understand the importance of the exercise so that they can easily share the knowledge they have created to build the repository.

As one of the strategies, there is also the need for higher learning institutions to take into account knowledge partnering. Higher learning institutions can partner each other or businesses/firms for the purposes of knowledge management. This will help them to benefit and learn something new from one another. Institutions should embrace this and should be willing to partner each other or those in the corporate world for long term purposes.

Another strategy worth considering is the need for higher learning institutions to harvest knowledge (Knowledge harvesting) as a means of managing an organization's knowledge. This concept is good in capturing tacit knowledge from experts and passing them off in the form of explicit knowledge.

This study has showed that there are gaps that need to be addressed by higher learning institutions in their quest to manage knowledge to the fullest. Higher learning institutions are full of intellectuals who understand how the system works therefore good policies and strategies which will help in ensuring that knowledge is adequately managed should be encouraged and if possible, must be enforced on those who are unwilling to share knowledge but are always eager to tap into the knowledge of others and use it for their own personal benefit. The study at this stage will call for more empirical studies to be conducted in the area of knowledge management strategies and its implementation in institutions of higher learning.

## 7. Conclusion

The impression that has been created is that, knowledge management strategy as a concept is seen to be of utmost importance to the corporate world as compared to institutions of higher learning and this is seen in the number of literature that are available online. A lot of studies therefore need to be conducted to bring out the effective and appropriate strategies needed for managing knowledge in institutions of higher learning. In as much as the reviewed literature revealed that some institutions like (University of Athens, Universiti Malaysia Sarawak, MARA University of Technology Sarawak, Swinburne University of Technology Sarawak, University of Zambia) have some measures in place, little was found on African higher learning institutions. This goes to show that, the concept is yet to receive extensive publications from the African domain and perspective. Notwithstanding, the concept in entirety needs exhaustive research to be conducted on it in the field of academia globally.

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