Article https://dx.doi.org/10.4314/iijikm.v8i3.3

Knowledge Management: Processes and Systems

Magnus O. Igbinovia

University of Ibadan, Nigeria

### Iguehi J. Ikenwe

Ambrose Alli University, Nigeria.

#### Abstract

Information Impact

**Information Impact:** Journal of Information and Knowledge Management 2017, Vol. 8 (3) Pg 26 - 38 ISSN: 2141 – 4297 (print) ISSN: 2360 – 994X (e-version) www.informationimpact.org

The paper examines the concept of knowledge and knowledge management; nature and lifecycle of knowledge management. It also review the various processes involved in knowledge acquisition and generation, knowledge capture, knowledge storage, knowledge sharing and knowledge application. The paper also discusses the various forms of knowledge elicitation to include questionnaire, interview, observation, role reversal technique, and discussion forums as well as the forms of knowledge representation to include report writing, database management system and institutional repositories. The paper shield light on the various technologies that aids knowledge management practice chief among which are groupware, electronic mail, database management system, data mart, data warehouse among others.

#### Keywords: knowledge, knowledge management, knowledge sharing, knowledge application,

#### Introduction

During the last decade, the business world began to view and use knowledge as a weapon for competitive advantage. It was then the concept of knowledge management (KM) gained popularity. However, in the 21st century, Knowledge and by extension, knowledge management has been an electromotive force for social, economic and educational advancement to any nation.

Over the years, diverse definitions of knowledge abounds. In this light, Ikenwe and Igbinovia (2015) defined knowledge as information that has been improved on, and a mixture of experience, insights, reading and imaginations. It evolves in people's mind by a combination of data, information and experience, (Kucza, 2001). Knowledge is information that has undergone a sort of distillation process which makes it context based and applicable in handling real life situations. According to Aguolu and Aguolu (2002), it is information that has been interpreted and processed according to a point of view, preparing the receiver for appropriate actions. From the various definitions given above, knowledge by implication exists in a DIKW (Data-information-knowledge-wisdom) chain, also referred to as the information continuum. While data is a discrete element, information is a linked data, knowledge is organized information and wisdom is an applied knowledge.

However, Liew (2007) opines that data are recorded (captured and stored) symbols and signal readings, while information is a message that contains relevant meaning, implication, or input for decision and/or action, and knowledge is the (1) cognition or recognition (know-what),

(2) capacity to act (know-how), and (3) understanding (know-why) that resides or is contained within the mind or in the brain. This further show the link between data, information and knowledge; and the relationship occurs in preceding order.

Within the field of knowledge management, two types of knowledge are widely accepted - tacit and explicit knowledge. Tacit knowledge is knowledge that is hard to encode and communicate. It is personal, context-specific and hard to formalize (Nonaka & Takeuchi, 1995). Tacit knowledge is un-codified and resides in people's mind which can be expertise, technical know-how, experience and skills. This can be transferred and shared via mentoring, face-to-face communication, training, group project/task execution among other forms of elicitation. While, explicit knowledge are codified and easy-to-transfer knowledge usually embedded in physical formats such as books, memos, database, electronic media among others, which can easily be acquired, captured, communicated, shared, leveraged or stored.

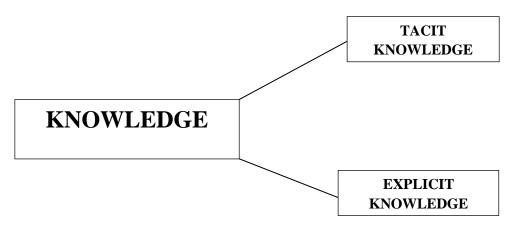


Figure 1: Types of Knowledge

#### Conceptual nature of Knowledge Management (KM)

Knowledge management is a discipline (branch of knowledge) that has been defined in various ways by scholars globally over the years. Ghani (2009) asserts that KM is essentially defined by the need to manage knowledge in an organization like an asset. Mutula and Mooko (2008) quoting Groff and Jones (2003), refer to KM as the tools, techniques and strategies to retain, analyze, organize, improve and share business expertise. kucza (2001), defines KM as the overall task of managing the process of knowledge creation, storage and sharing as well as the related activities. In light of this, KM is the process of identifying capturing, leveraging, sharing and effective utilization of organizations intellectual assets to enhance its performance and competitiveness.

According to Mutula and Mooko (2008) KM entails (i) capturing the knowledge that the employees and customers need at a central repository; (ii) Identification of the categories of Information Impact | Journal of Information and Knowledge Management

knowledge needed to support the overall business strategy; (iii) Process of collecting, classifying and disseminating information throughout the organization; (iv) Employment of information technology to help organize and store information; and (v) Provision of access tools.

#### **Importance of Knowledge Management**

Knowledge management (KM) has become a priority for organizational competitiveness and advantage because of the benefits it accrues. Jelenic (2011) on the importance of knowledge management in organizations avers that KM support innovation, encourages free flow of ideas, increases revenues, and reduces cost, increases efficiency and effectiveness. Dhamdhere (2015a) on why knowledge management was of the opinion that "Knowledge Management can transform organizational new levels of effectiveness, efficiency, and scope of operation, using advanced technology, data and information are made available to users for effective productivity". Knowledge management is thus crucial to the progress of organizations, institutions and systems for harnessing its knowledge for possible gains.

Knowledge management improves organization's performance through increased efficiency, productivity, quality and innovation. It enhances better decision-making, streamline process time, reduces re-work, ensures high data integrity and greater collaboration (CIO Council in Ali & Ahmad, 2006). Also, knowledge management increases the worth or financial value of an organization by treating the knowledge of organizational members as an asset similar to capital facilities, (U.S. Department of Navy in Ali & Ahmad, 2006). Therefore, knowledge management is a vital element for the continuous existence and progression of organizations.

While knowledge is identified as a key factor in production and/or service processes, knowledge management according to Nickols (2000) leverages the knowledge for organization's advantage. In like manner, KM leverages intellectual assets for the enhancement of organizational performance, (Stankosky 2008). Krstić and Petrović (2012) review the role of knowledge management in increasing enterprise's innovation among several other things assert that KM promotes and encourages knowledge-driven culture in which innovations are stimulated, as well as improves growth willingness, which has a positive influence on innovation capability of an enterprise. Such innovation will enable enterprise secure and retain their competitive positions in the marketplace, (Desouza, 2011). They (Krstić & Petrović, 2012) conclusively state that Knowledge management in enterprise provides a better use of knowledge and reduces the complexity of innovation process.

Moreover, Omotayo (2015) concludes that knowledge management is critical for organizations that seek to ensure sustainable strategic competitive advantage. This corroborates the assertion of Dzunic, Boljanovic and Subotic (2012) that "to achieve a sustainable competitive advantage today means to achieve primacy in knowledge... while knowledge management helps generate the value of knowledge-based assets, an imperative of modern business". Knowledge management is thus important to individuals and organizations in the knowledge economy where

knowledge is treated as a factor of production. The organization that best manage her knowledge (people, technology and process) will record sustainable growth and development.

#### Nature of Knowledge Management (KM)

The effectiveness of any knowledge management practice will depend on the effective utilization of people, processes and systems (technologies). These are the three fundamental focuses, facets, elements or components of knowledge management which works in relation to one another to achieve any knowledge management objective(s). Every knowledge management practice must therefore put these elements in place to achieve a successful outcome; hence they are referred to the tripartite nature of knowledge management for the purpose of this paper.

People also known as human resources are key in knowledge management and as such must be given consideration in any knowledge management practice. As already stated, knowledge is the basis of knowledge management, and people are the primary conveyor of this knowledge in the form of tacit knowledge, even in explicit knowledge, people are needed to ensure codification. In line with this, Aziri, Veseli and Ibraimi (2013) note that organizational knowledge and knowledge management is dependent on human resources. Also, Armstrong (2006) asserts that people influence knowledge management by promoting an open culture that values/inspires sharing of knowledge; promote a climate of commitment and trust; develop systems and policies for knowledge management among others.

Another component is the knowledge management processes, which connote the methods and steps by which knowledge management practices are achieved. Edwards (2011) model connotes implementing new ways to work or to build in what you want to achieve, in both cases to achieve knowledge management objectives. He further opines that people help design and then operate Processes, while Processes define the roles of, and the knowledge needed by People. Meanwhile, systems or technologies which is the third component of this system, refers to all devices that supports the practice and implementation of knowledge management. Knowledge Management requires technologies to support people and processes involved in knowledge management. Subsequent part of this paper will pay attention to the processes and systems (technologies) in knowledge management as suggested by the title of the work.

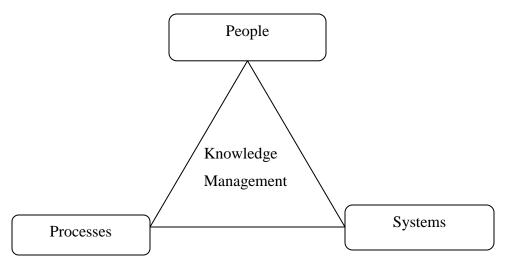


Figure 2: Tripartite nature of knowledge management

# KNOWLEGDE MANAGEMENT PROCESSES (KMP)

Knowledge management processes are series of activities an organization put in place for the facilitation and use of knowledge. The management of knowledge is a continuous process in which one form of knowledge is transformed into the other. Knowledge management processes support the conversion of tacit knowledge to explicit knowledge and explicit to tacit. Many scholars such as; Dhamdhere (2015b), Alegbeleye (2010), Mutula and Mooko (2008) amongst others have identified some processes of knowledge management to involve:

# • Knowledge Acquisition and Generation

Acquisition in Knowledge management deals primarily with tacit knowledge although it also acquires explicit knowledge. The tacit knowledge can be transferred to explicit knowledge through externalization, that is, the tacit knowledge is converted to recorded form, in documents or databases for reference by others (Alegbeleye, 2010). However, before knowledge is acquired, it is essential to identify the knowledge an organization has and needs to achieve its objective which is called "knowledge identification"

. Knowledge generation focuses on knowledge creation for exploration and knowledge exploitation. Knowledge can be generated through:

a. Writing both formal and informal.

b. Research: the whole essence of research (which is a systematic investigation) is to generate knowledge. Examples are: Research institution, tertiary institution etc

c. Shared problem solving: This can be referred to as brainstorming. This has to do with knowledgeable persons in a particulars area coming together to share their view about a problem in order to proffer solutions. Examples are; seminars, conferences, workshop etc

# • Knowledge Capture

Knowledge capturing is another important aspect or component of knowledge management in knowledge based organizations. Knowledge capturing involves:

**a. Technology**: Several technologies exist for facilitating the creation and sharing of knowledge. Information technology is a useful instrument in knowledge management and use for effective services in an organization.

**b. Knowledge Mapping**: Knowledge mapping is a method used to identify where knowledge resides within an organization. Knowledge mapping requires the techniques of questionnaire, interview and sometimes observations. The questionnaire should identify persons within the organization with special knowledge or expertise. Mutula and Mooko (2008) described Knowledge mapping as a navigation aid to codify information and tacit knowledge, showing the importance and the relationship between knowledge stores.

### • Knowledge Organization

The knowledge acquired generated or created needs to be properly organized for easy access and retrieval which is the essence of organization of knowledge. Librarians as information practitioners organize knowledge in documented form called information resources through cataloguing and classification. Nwalo (2003) defined cataloguing as the process of writing descriptive information of a book and non-book material on a catalogue card and classification as assigning a class number to a book that corresponds with a subject heading following a chosen classification scheme. In addition, Alegbeleye (2010) identified a number of aspects involved in organization of knowledge as: Identification of messages, identification of texts, and description of content. Tools for such organization of knowledge include indexing, abstracting and cataloguing technique.

### Knowledge Storage

The knowledge created and acquired needs to be properly stored and preserved for subsequent access and use, and for the sake of posterity. Alavi and Leidner, (2001) pointed knowledge storage as a process in knowledge management involves capturing, transcribing, and coding knowledge. While, Alegbeleye (2010) asserted that the ideas of knowledge storage, which he also called knowledge "repository" as used in knowledge management is to take documents with knowledge embedded in them and store them so that they can be easily retrieved in the future.

# • Knowledge Sharing

Knowledge sharing is a key component in knowledge management. Ikenwe and Igbinovia (2015) described knowledge sharing as a fundamental priority of knowledge management and defined it as an act through which, acquired information, knowledge, ideas, skills, and experiences are exchanged and shared among people, organizations and institutions. Knowledge sharing allows Information Impact | Journal of Information and Knowledge Management

for leveraging the knowledge gained by an organization (Alegbeleye, 2010), and the main reason of sharing individual knowledge to entire organization is that knowledge should not disappear if that employee leaves the organization (Dhamdhere, 2015b). An organization must put certain measures (incentives) in place to ensure knowledge is shared and to discourage knowledge hoarding.

### • Knowledge Application

Once knowledge is shared among people in the organizations, the shared knowledge should be applied to solve a problem. According to Dhamdhere (2015b) if the gathered, stored, created and shared knowledge will not be applied properly the whole process would be in vain and for proper knowledge application, knowledge management process should be communicated to users. That is, knowledge should be put to affective and efficient utilization to fill a gap or need.

### **Knowledge Management Systems (KMS)**

KMS has been defined by different scholars in diverse dimension. Gallupe (2000) refers to KMS as a tool or technologies that support knowledge management. Abdullabi, et.al (2005) extensively defined KMS as phrase used to describe the creation of knowledge repositories, improvement of knowledge access and sharing, as well as communication through collaboration, enhancing the knowledge environment and managing knowledge as an asset for an organization. In this light, KMS can be defined as tool or Information and Communication Technologies (ICTs) that can be used to store, disseminate, collaborate, identify sources of knowledge to support the generation, capture, sharing, retrieval and use of knowledge to enhance access to source of information and knowledge by individuals, organizations, and nations as a whole.

Utilization of technology in knowledge management in this 21<sup>st</sup> century is of utmost importance which offers new opportunities, provides enabling environments for knowledge sharing, communication of knowledge via technology such as video conferencing, web2.0 amongst others. Technology can be used to facilitate knowledge management all through its lifecycle. According to Egbu (2003), knowledge management systems or technologies which aid the implementation of KM, consist of a combination of hardware and software. Furthermore, Hardware technologies are very important for knowledge management system as they form the platform for software technologies to perform and the medium for storage and transfer of knowledge.

However, some technologies available for facilitating the creation, collaboration, sharing and dissemination of knowledge are;

### • Knowledge Portals:

Portals as KM technology are web-based applications or websites that provides information across an entire organization or among some group of persons. Whereas, knowledge portals are dedicated websites that provides a single point of access to the tacit and explicit knowledge that supports members of an organization in meeting corporate goals. The knowledge portal fosters Information Impact | Journal of Information and Knowledge Management

collaboration both asynchronous and synchronous between knowledge producers and users. In differentiating between asynchronous and synchronous collaboration, Yao, et.al., (n.d) opine that synchronous collaboration allows geographically dispersed users to collaborate in real-time over the internet to jointly search, retrieve, filter, partition, and organize the information available on the web; whereas, asynchronous collaboration collaborators do not need to co-exist, they exchange information perhaps over a long period of time.

Knowledge portal enables multiple users to work together in a coordinated fashion over time (and space) in other to ensure organizational success by gathering, categorization, distributing, publishing and to personalize relevant knowledge required to solve problems.

### • Database management system (DBMS):

Database (DB) is a collection of related files used to store and maintain data of an organization. DB is related data stored collectively in direct access storage on a computer using software such as Database Management Systems (DBMs). DBMS provides users and programmers with a systematic way to create, retrieve, update and manage data.

### • E-Mail:

This is far the most commonly used collaborative tool for communication which expedites dissemination and sharing of information among individuals and organization. It helps to facilitate knowledge gathering, sharing and collaboration within members of an organization.

### • Group Wares:

These are powerful collaboration software use to facilitate collaboration or cooperation, sharing knowledge and promotion of communication among group of individuals working together in an organization. This technology provides means to exchange ideas on a network to collaborate and communicate effectively and promote co-operation such as interactive conferencing, video conferencing, intranets, internet, E-mail e.t.c. According to Tsui (2002) in Egbu (2013), it is useful for group decision-making support distributed and virtual project teams where team members are from multiple organizations and in geographically dispersed locations.

### • Data Warehouse:

This is an organization central repository which houses and store pivotal data. This constitutes combined data from one or more inherently different sources. However, emphasis is on the capture of data from different sources for easy accessibility.

# • Content Management Systems (CMS)

CMS is a computer application that supports the creation and modification of digital content. It is often used to support multiple users working in a collaborative environment, (Rockley, Kostur, Manning, 2003). CMS is responsible for the creation, management, and distribution of content on the intranet, extranet, or a website. It also Improve the quality of explicit knowledge and, provide (though limited) support to tacit knowledge transfer by identifying content authors (i.e experts) and supporting collaborative projects.

#### **Barriers to Knowledge management**

Abdolshaha and Abdolshahb (2011) carried out a study on the barriers to the implementation of knowledge management in Iranian institutions and opine that unawareness of senior managers about knowledge management concepts, lack of proper competition among institution for attracting customers, lack of formation of knowledge management team and lack of proper information interchange among institutions could hinder KM in implementation in an institution. Bartczak (2012) on identifying barriers to knowledge management in the United States military include leadership education and commitment, lack of resources, among others as barriers faced in KM implementation. Moreover, lack of monitoring or managing KM systems and focusing on an individual rather than a team approach are also some barriers to the implementation of knowledge management as proposed by Dooley (2013).

On what could be the major limitations to the implementations of knowledge management, Dzunic, Boljanovic and Subotic (2012) found out that respondents for their study indicated insufficient training, unwillingness of employees to share knowledge with other employees, too complex system, failure to recognize personal benefits that employees would have of sharing and managing knowledge and lack of trust among employees, respectively are major barriers to the introduction of knowledge management. Ujwary-Gil (2017) in her study aimed at analyzing the barriers to knowledge management notes that lack of reward and motivation for seeking and sharing knowledge, unawareness of where the knowledge-base of the institution is, organizational culture promoting individual results to knowledge sharing, limited resource, unfriendly nature of technology system among others are some factors that hinders knowledge sharing in organizations.

Frost (2012) gave some knowledge management casual failures which could be a barrier to the successful implementation of knowledge management to include:

- Lack of performance indicators and measurable benefits
- Inadequate management support
- Improper planning, design, coordination, and evaluation
- Inadequate skill of knowledge managers and workers
- Problems with organizational culture
- Improper organizational structure

Moreover, on the barriers to knowledge management, it is pertinent to consider the work of Disterer (2001) who stated the individual and social barriers to knowledge transfer. The individual factors include loss of knowledge power, poor revelation on knowledge sharing, uncertainty of the value of knowledge to be shared and lack of motivation. Moreover, the social factors include lack of a common language to communicate knowledge and special language features like analogies and metaphors to externalize tacit knowledge hidden in individual mental models; conflict avoidance and some conservative habits; bureaucratic and administrative

organizations With strict formal procedures, which prevent the transfer of knowledge and new ideas; and, lack of coherence between the personal intents of the individuals and the paradigms of the organization (which cover strategic intent, vision, mission, strategies, values etc).

Conclusively, from the literature reviewed, the implementation of KM can be hindered by several reasons as seen above to include management unawareness or unfamiliarity with the concept; poor knowledge sharing culture; poor management of people as knowledge-base, systems or tools and KM processes; lack of commitment from leaders; inadequate resources and will-power; lack of or poor motivation; unfavourable organizational culture, and unskilled personnel to man complex technologies.

#### **Conclusion and Recommendations**

The practice of knowledge management (KM) is trendy in organizations where productivity, efficiency and innovation are the watchwords. KM is basically made up of three components of processes, people and systems, which must be effectively managed to meet the objective of any knowledge management practice. This paper examined the various processes necessary to achieve the goal of knowledge management as well as the systems or technologies required to support these processes. In view of which the following recommendations are made:

- i. Organizations should encourage the creation of knowledge by supporting research activities, encouraging collaborations and team work.
- ii. Organizations should set up reward systems through which members will be motivated to acquire as well as share knowledge for common good.
- iii. Organizations should carryout knowledge mapping to identify best practices related to their areas of operations and inculcate such practice into their organizational activities.
- iv. Organizations should create knowledge repositories that are accessible with user friendly interface.
- v. Organizations should ensure that generated knowledge is applied in solving real-time problems and ensuring innovations.
- vi. Organizations should endeavor to acquire tools and technologies necessary to support people and processes involved in knowledge management.

#### References

Abdullabi, R., Salemat, M.H., Sahibudin, S.H. & Alias, R.A. (2005). A Framework for Knowledge Management System implementation in collaborative environment for higher learning institutions. *Journal of Knowledge Management Practice*. http://www.tlainc.com/article83.html.

Abdolshaha, M. & Abdolshahb, S. (2011). Barriers to the implementation of knowledge Information Impact | Journal of Information and Knowledge Management

management in Iranian institutions. *International Transaction Journal of Engineering, Management, & Applied Sciences & Technologies, 2(2):173-182.* Available at http://TuEngr.com/V02/173-182.pdf

- Aguolu, I.E., & Aguolu T.A. (2002). Nigerian university libraries: What future? *International Information and Libraries Review*, 28 (3), 261-274.
- Alavi, M. & Leidner, D.E. (2001). Knowledge Management and Knowledge Management Systems: Conceptual Foundations and Research Issues. *MIS Quarterly*, 25(1):107-136.
- Alegbeleye, B. (2010). Old wine in new bottle: A critical analysis of the relationship between knowledge and library and information science. *Paper presented at the 48th National Conference of the Nigeria Library Association*, Abuja, 2010.
- Ali, M. H. & Ahmad, H.N. (2006). Knowledge management in Malaysian banks: a new paradigm. *Journal of Knowledge Management Practice*, 7(3). Available at: http://www.tlainc.com/articl120.htm
- Armstrong, M. (2006). *A handbook of human resource management practice*, Tenth edition, Cogan Page: London.
- Aziri, B., Veseli, N. & Ibraimi, S. (2013). Human resources and knowledge management. Management, knowledge and learning, international conference, 19-21 June 2013. Zadar, Croatia.
- Bartczak, S.E. (2012). *Identifying barriers to knowledge management in the United States military*. PhD dissertation. The Graduate Faculty of Auburn University, Alabama.
- Danijela J. D. (2011). *The importance of knowledge management in organizations with emphasis on the balanced scorecard learning and growth perspective*. Management, knowledge and learning international conference. Available at: https://ideas.repec.org/h/isv/mklp11/33-43.html
- Desouza, K. C. (2011). An introduction to knowledge management. In: K. C. Desouza and S. Paquette (Eds.), *Knowledge Management: An Introduction* (pp. 3-34). New York: NY: Neal-Schuman Publishers, Inc.
- Dhamdhere, S.N. (2015a). Importance of knowledge management in the higher educational institutes. *Turkish Online Journal of Distance Education-TOJDE*, 16(1):162-183
- Dhamdhere, S.N. (2015b). Knowledge Management Strategies and Process in Traditional Colleges: A Study. *International Journal of Information Library and Society*, 4(1)34-42. Available at <u>http://www.i-scholar.in/index.php/ijils/article/view/84859</u>
- Disterer, G. (2001). individual and social barriers to knowledge transfer. *Proceedings of the 34<sup>th</sup> Hawaii International Conference on System Sciences* – 2001, IEEE Available at: <u>https://www.computer.org/csdl/proceedings/hicss/2001/0981/08/09818025.pdf</u>
- Dooley, P.M. (2013). Bridging the barriers to knowledge management. Available at: www.optimalconnections.com/downloads/implementing\_knowledge\_management.pdf

- Dzunic, M., Boljanovic, J.D. & Subotic, J. (2012). The importance of concepts of knowledge management and learning organization in managing the knowledge flow in organizations. *Management, knowledge and learning international conference*. Available at: projeuni.ir/wp-content/uploads/2014/02/THE-IMPORTANCE\_sad56f41.pdf
- Edwards, J. (2011). A Process View of Knowledge Management: It Ain't What you do, it's the way That you do it. *Electronic Journal of Knowledge Management* 9(4),297-306
- Egbu, C. (2003). Techniques and technologies for knowledge management work package 3interim report. www. Knowl.mamagement.vk.net
- Frost, A. (2012). A synthesis of knowledge management failure factors. Available at: www.knowledge-management-tools.net/failure.html
- Gallupe, R.B. (2000). Knowledge Management Systems: Surveying the Landscape. Queen's School of Business. Framework paper 00-04. Available at <u>http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.104.7777&rep=rep1&type=p</u> <u>df</u>.
- Ghani, S.R (2009). Knowledge management: Tools and techniques. DESIDOC. Journal of library and information Technology, 29(6):33-38.
- Groff, T. & Jones, T. 2003. Introduction to knowledge management: KM in business. Burlington, MA : Butterworth-Heineman.
- Ikenwe & Igbinovia (2015). Influence of knowledge sharing in reducing the spread of "HIV/AIDS" among adolescents in rural areas in Delta State, Nigeria. Kuwait chapter of *Arabian Journal of Business & Management review*. 4(12).
- Krstić, B. & Bojan Petrović, B. (2012). The role of knowledge management in increasing enterprise's innovativeness. *Economics and Organization*, 9(1):93-110
- Kucza, T. (2001). Knowledge Management process Model. Technical Research Centre of Finland VTT Publications.
- Liew, A. (2007). Understanding Data, Information, Knowledge and their Inter-Relationships. Journal of Knowledge Management Practice, 8(2)
- Mutula & Mooko(2008). Knowledge Management. In Aina, L.O,Mutula, S.M & Tiamiyu, M.A.. Information and Knowledge management in the digital age.Concepts, technologies & African perspectives.
- Nickols, F. (2000). KM overview, http://home.att.net/~discon/KM/KM\_Overview\_Context.htm
- Nonaka, I. & Takeuchi, H. (1995). *The knowledge-creating company*, New York, Oxford, Oxford University Press.
- Nwalo, K.I. (2003). Subject cataloguing and computerisation: current Trends. In Current trends in Information and Communication Technology Application to Technical Services: Proceedings of Selected Seminar Papers of the Cataloguing, Classification and Indexing Section of the Nigeria Library Association, 2003:28-36.

Omotayo, F. O. (2014). Knowledge management as an important tool in organisational

# Knowledge Management: Processes and Systems

management: a review of literature. *Library Philosophy and Practice (e-journal)* paper 1238. Available at: http://digitalcommons.unl.edu/libphilprac/1238

- Polanyi, M. (1962): Personal knowledge: towards a post-critical philosophy. Chicago: University of Chicago Press.
- Rockley, A., Kostur, P. & Manning, S. (2003) *Managing Enterprise Content: A Unified Content Strategy*, New Riders.
- Stankosky, M. 2008. Keynote address to ICICKM (International Conference on Intellectual Capital, Knowledge Management and Organisational Learning), 9 10.
- The American Heritage New Dictionary of Cultural Literacy (2005)
- Ujwary-Gil, A. (2012). The analysis of barriers to knowledge management. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2215058
- Yao, K., Neches, R., In-Young Ko, Eleish, R. & Abhinkar, S. (n.d). Synchronous and Asynchronous Collaborative Information Space Analysis Tools. International Workshop on Collaboration and Mobile Computing (IWCMC '99). Available www.isi.edu/tbassco/publications/cmc99%20workshop.pdf

#### About the authors

**Igbinovia, O. Magnus,** is a PhD student at the department of Library, Archival and Information Studies, University of Ibadan, Nigeria. He is a researcher, library advocate and certified librarian of Nigeria. He has published more than ten (10) scholarly articles in learned journals and presented several papers at conferences with research areas to include knowledge management, sustainable development, organizational psychology, users' studies and library management. He can be contacted with <u>infor.migbinovia@gmail.com</u>

**Ikenwe, I. Joy**, is a Lecturer 2 with the department of Library and Information Science, Ambrose Alli University, Ekpoma, Nigeria. She has published several research articles with both national and international journals, and presented paper at conferences. Her areas of research interest include knowledge management, information literacy and digital libraries. She can be contacted with <u>ikenweiguehi@yahoo.com</u>