

STRENGTHENING KNOWLEDGE MANAGEMENT IN SELECTED NIGERIAN ACADEMIC LIBRARIES

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Abstract: Knowledge management plays a crucial role in the growth and success of individuals and organizations, with libraries serving as essential repositories of knowledge. Inefficient knowledge management can lead to the wastage of resources, both financial and human. Librarians are well-positioned to ensure that institutional knowledge repositories are effectively managed and transformed into valuable assets for sustainable utilization. This paper explores the concept of Knowledge Management (KM) and its significance in organizations. KM involves identifying, capturing, disseminating, and leveraging knowledge for the benefit of staff, employers, and clients. To excel in this role, individuals need to acquire high levels of skill and competence, particularly in the context of the information age. Knowledge is dynamic and represents a key to achieving organizational goals. As Nonaka (1991) observed, knowledge is a source of lasting competitive advantage. In today's global community, institutions responsible for gathering, preserving, and disseminating knowledge must possess the capacity to manage knowledge effectively.

Keywords: Knowledge Management, Librarians, Organizational Effectiveness, Knowledge Repository, Skill and Competence

1.0 Introduction

Over the decades, knowledge has remained a pivotal agent and a determinant for the growth and success of man and a stronghold for organizational effectiveness of which the library is not left out. Lack of effective and efficient management of accumulated knowledge amounts to waste of financial, material and human resources. Therefore, librarians are trained best positioned to help manage and ensure that institutions' knowledge repository are converted into meaningful assets that will be sustained for optimal utilization. In this view, Munn (2001) sees Knowledge Management (KM) as pointing towards the "idea that an organization seeks to identify, capture, disseminate and exploit the knowledge it possesses for the benefit of her staff, employers and clients/users".

In achieving this, high level of skill and competence is required in the face of the developmental challenges of the information age. In this regard, various institutions are engaged in building their staff capacity because it equips them to enhance their performance. Knowledge is dynamic and a key to

achieving organizational goal. Serrat, (2010) observed that: knowledge is the true organ of sight, not the eyes. Nonaka (1991) also asserted that: “knowledge is the one source of lasting competitive advantage”. In a global community such as we have today, institutions charged with the responsibility of assembling, preserving and disseminating this knowledge should be able to have the capacity to carry out the task of managing knowledge.

From the library service perspective, Noah and Brickman (2004) sees capacity building to mean any service or activities that strengthens or supports the ability of libraries to provide high quality, accessible and sustainable services to their communities. In line with this, Ifidon and Ifidon (2007) asserts that capacity building involves activities which strengthen the knowledge, abilities and behaviour of individuals (library staff and users) and improve institutional structures and process such that the library can effectively and efficiently meet its mission and goals in a sustainable way. Knowledge Management (KM) is crucial. Therefore KM is the combination of procedures that generate and share knowledge across an organization. The aim of KM is to enhance the use of already existing knowledge in the realization of an organization’s mission, vision and goals (Deolia, 2017).

2.0 Statement of the Problem

The adequacy of use of library information resources is an indication of the availability of the infrastructure for knowledge management. The quantum and nature of the way knowledge is presented is challenged by the level of complications, advancements in technology, social, political, economic, educational, cultural, information and telecommunications and others. Yet enormous demands are placed on the libraries particularly the academic libraries by their clientele, who expects utmost and just-in-time knowledge delivery. This study therefore attempts to identify whether factors such as infrastructure, the source of energy supply, internet access, computers, access to databases and staffing could be responsible for the inadequacy in the way knowledge is being managed and accessed in the institutions studied. Hence, need for this study on “Capacity Building for Knowledge Management in selected Academic Libraries in Nigeria.”

3.0 Purpose of the Study

The purpose of this study is to investigate the state of basic infrastructure for achieving effective knowledge delivery in the identified academic institutions in Nigeria. The specific objectives are to:

- a) determine the availability and source of energy supply for knowledge management
- b) identify the availability of internet facility and of internet access
- c) investigate the availability of adequate computers
- d) determine the availability and source of access to databases
- e) as certain the level of training available for library staff to enhance the management of the institution’s knowledge assets.

4.0 Literature Review

The ability to manage knowledge is crucial in today's knowledge economy. Barber (1998) once remarked that the ability for us to do a better job in the future depends on how well we utilize information and how well we train and mold the information into something that helps us to be more competitive. In the present context, the process of effectively acquiring, molding, assembling and utilizing (disseminating) information for the operational efficiency and relevance of the academic library is what is conceived here as Knowledge Management. Supporting this, Zakari (2017) opined that Knowledge Management can simply be construed as the endeavours, activities (or discipline) that aim at spreading far and wide the information/knowledge of or about a phenomenon, individuals, communities, societies, and institutions in order to bring about direct positive change in the state-of-the-art of a system, institution, organisation, community, society; especially as it relates to its productivity, effectiveness, efficiency, and performance to achieve the desired short and long term goals, aspiration and mission. Beckman (1999) views Knowledge Management as an art of creating values for an organization's knowledge assets. Thus, a Knowledge-Based Institution (KBI) or academic library will be that, where information communication technology (ICT) is extensively used to enhance knowledge so that higher human capital brings further improvement to the institution.

Knowledge Management is one of those concepts that librarians take time to assimilate, only to reflect ultimately "on why other communities try to colonize our domains" (Hobohm, 2004). The University system is ideally a place where inventing new knowledge is not a specialized activity, but a way of behaving, indeed, a way of being, in which everyone is a knowledge worker. (Nonaka, 1991). Garvin (1993) adds that such a system is skilled at creating, acquiring and transferring knowledge, and at modifying its behaviour to reflect knowledge and insights. In our view, knowledge management for the academic library has three components namely: the quantum of materials acquired, the culture of the institution to what extent it is knowledge-based and the infrastructure. For the purposes of this paper, infrastructure is the most important.

The Librarian may know how to source, acquire, assemble, organize and disseminate knowledge but lacks the infrastructure necessary for such quality service delivery in library or library effectiveness. The culture of an institution embodies a clearly articulated institutional mission and vision by the management, and a demonstrable preparedness to learn from external environment for the furtherance of the vision (Tierney, 1988). Leaders of such institutions need to emphasize continuous improvement in individual and group work organizational arrangements which should bring further improvement to the institution as a whole and the university library in particular. The organization must attach a high value to knowledge, and as such, questioning and experimentation through demonstrable empowerment of individuals, experimental learning of tacit knowledge and the enhanced sharing of knowledge within the institution and with selected partners, must be encouraged through the extensive use of ICT (Bozdogan, 2013; Stone house and Pemberton, 1999). As part of such culture, creativity, risk taking, tolerance of mistakes, trust and frequent contact among constitutional members, as well as good

communication are emphasized, while institutional socialization and the development of a community consciousness are encouraged. Emphasizing good communication and socialization will help bridge the digital divide between members of the community and academic libraries within a specific geographic area.

Structure is another important component of the organizational learning context. Research evidence Pemberton and Stone house (2000); Hopper(1990); Quinn(1992) suggests that the command-do-and-control based hierarchical and bureaucratic organizational structures such as is obtainable with most Nigerian Universities, tend to hinder the development and transfer of knowledge, as their tendency to reward length of service rather than inventiveness, generally stifles initiative, risk taking and innovation. The different levels and vertical division in a classical structure tends to hamper the building, diffusion, co-ordination and control of knowledge, while the communication of knowledge can also be distorted by passage through levels in a hierarchy. Hence, the empowerment of the individuals, to foster cross-functional communication, will certainly facilitate organizational learning and Knowledge Management more effectively (Obaide, 2004).

As noted earlier, the most important of the three elements are the infrastructures which comprise the systems and technology that support its learning and knowledge management activities. Developments in technology and particularly those in Information and Communication Technology have played a vital role in providing the infrastructure needed to support network structures and organizational learning within and in collaborating libraries (Nkanu and Okon, 2010 ;Tait, Martzoukou, and Reid , 2016). These new technologies have positively transformed the ability of academic libraries to acquire, store, manipulate, share and disseminate knowledge. Personal computers coupled with local and wide area networks, have expanded the connectivity and availability of computing power of academic libraries, which have acted as catalysts and increased the potential for sharing knowledge between collaborating libraries. While the internet has transformed communications between libraries and individual, intranets and extranets have had similar effects within libraries and their parent's institutions and between networked institutions. According to Natarajan (2008) and Mphidi and Snyman (2004), an intranet is a private form of the internet, which makes use of the same open systems, standards and protocols to allow the sharing of information and knowledge within an institution. It is an extranet where such arrangements are extended to collaborating partner (Mills, 1998).

In the study of Allameh, Zare and Davoodi (2011), Knowledge Kanagement process stores, distributes and shares the current knowledge assets throughout the organization. This therefore, can enhance building and exploiting core completeness that yield superior performance for the institution. Such management process also is a function of a learning organization that has both current and new knowledge asset that continuously generates new knowledge assets.

Knowledge-Based Institution and Knowledge Management Mechanisms

Bell (1973) once defined „knowledge“ as an *“organized set of facts or ideas, presenting a reasoned judgment or experimental result, which is transmitted to others through some communication medium in some systematic form”*.

In the present ICT, global environment, without the basic structures, the process of transmitting to others through some communication form will be hindered. In view of this, KM offers a frame work for balancing a myriad of technologies and tying them together into a whole (Newman and Conrad 2000). Knowledge-based institution is one that ICT is used extensively to enhance, generate and disseminate knowledge so that higher human capital brings further improvement to this institution.

Knowledge exhibits „positive-sum“ and „increasing-return“ qualities, as it expands and increases in value when it is used and shared with others (Miller and Shamsie, 1996; Prahalad and Hamel, 1990). Knowledge is vitally important to the upgrading, transformation and redeployment of core competences that invariably form the basis of an enduring competitive advantage for an individual, as well as organization (Porter, 1990). Similarly, knowledge assets of an organization are, therefore, composed of principles, skills, rules and techniques that are embodied in its general operational arrangements (Wilkins, van Wegen and de Hoog, 1997; Omotayo, 2015). Such assets take the form of core competences, value-adding activities, structures and processes, procedures and systems, hard and soft technologies, which culminate in the ultimate value in the goods and services of the organization. There is a form of organizational knowledge asset that has come to be known as „competitive intelligence“.

Knowledge Management Mechanisms

Competitive intelligence enables an organization not to be taken unawares by advances and changes in information/knowledge environment. Organizational knowledge can be tacit or explicit (Sanchez, 2000; Mladkova, 2012). The former is often personal and it is based on individual or collective experiences. This form of knowledge is often difficult to articulate, formalize, communicate, record or store since it has to do with skills, habits and abstracts knowledge. Collective tacit knowledge as against individual tacit knowledge is found in organizational consensus on past experiences and organizational cultures. On the other hand, explicit knowledge is relatively tangible, being clearly defined rules, standards, operating methods and procedures which can be recorded and stored. It is important to note that both tacit and explicit forms of knowledge begin as personal, individual or collective knowledge, and are later transformed into and managed as organizational knowledge assets. Hence, Pemberton and Stone house (2000) assert that one of the most important roles of organization learning and KM is to ensure that individual learning leads to organizational management.

Individual learning can only take place in a conducive environment with appropriate infrastructure and skilled personnel with adequate training and re-training provisions with basic infrastructure which will include internet access, availability of computers and nature of databases acquisition (commercial or in-house). Level of funding available to an institution is also likely to affect its capacity for KM. It is

funding that will facilitate database acquisition and human resource development. As the organizational knowledge assets are largely rooted in the human resources of the organization, effective KM in a learning organization focuses predominantly on human resource maximization, as regards knowledge, skills and competences. Both tacit and explicit knowledge can be generated, and the knowledge so generated can be stored, formalized, distributed and effectively coordinated for application only if employees are equipped for challenging work and their existing perception and comprehension patterns as well as thinking, habits positively modified.

Hong and Kuo (1999) have said that in KM process, job enrichment, enlargement and rotation, constitute a pulling force within a learning organization. The effective administration of all these activities involved in the knowledge management process, will, over a reasonable period, turn the organization into a knowledge-based organization, which invariably becomes an organization of knowledge specialists. Every member of such organization will be highly self-disciplined, as there will be a greater emphasis on individual responsibility for relationships and communications. To enable the members to be of greatest value, they must be highly trained, continuously retrained and instantly updated on the best practices in their professional fields.

Everyone therefore, constantly thinks of the information or knowledge which is needed to do one's job, as the focus always is on the available cutting-edge knowledge, which will enable the individual perform his or her job as professionally and excellently as possible. Thus, every member of the organization participates in KM, as everyone in the course of the performance of work assignments, stores, distributes and shares knowledge, as well as takes responsibility for information flow throughout the organization. The use of expert systems, which are computer programmes that stimulate the reasoning processes and knowledge of human experts to solve specific operational problems, will be dominant feature of work organizational arrangement in such institutions.

Employee recruitment and selection exercises will be very strictly conducted to ensure that only the best persons are brought into the institution, as the persons selected for employment must be capable of rapidly developing the required professional know-how to grow the organizational knowledge base. Members of the organization will be subjected to constant performance appraisal, and at any point anyone is found to perform below expectation owing to not keeping pace with advancement in knowledge pertaining to one's job, even after a retraining is provided, the person is immediately removed from the institution.

5.0 Methodology

The study adopted a descriptive research method. The population of the study consisted library staff of the eight (8) higher institutions studied which was 96 which also constitute the sample size. The enumerative technique was used due to the small number which can be managed within the time frame. The instrument used was wellstructured questionnaires administered to the respondents on designated

dates across the participating institutions. Out of the 115 questionnaires administered, only 96 were filled and retrieved by the researchers. The retrieved questionnaires were analysed using simple percentage statistics.

The chart (figure 1) below shows the respondents by gender.

6.0 Data Analysis and Results

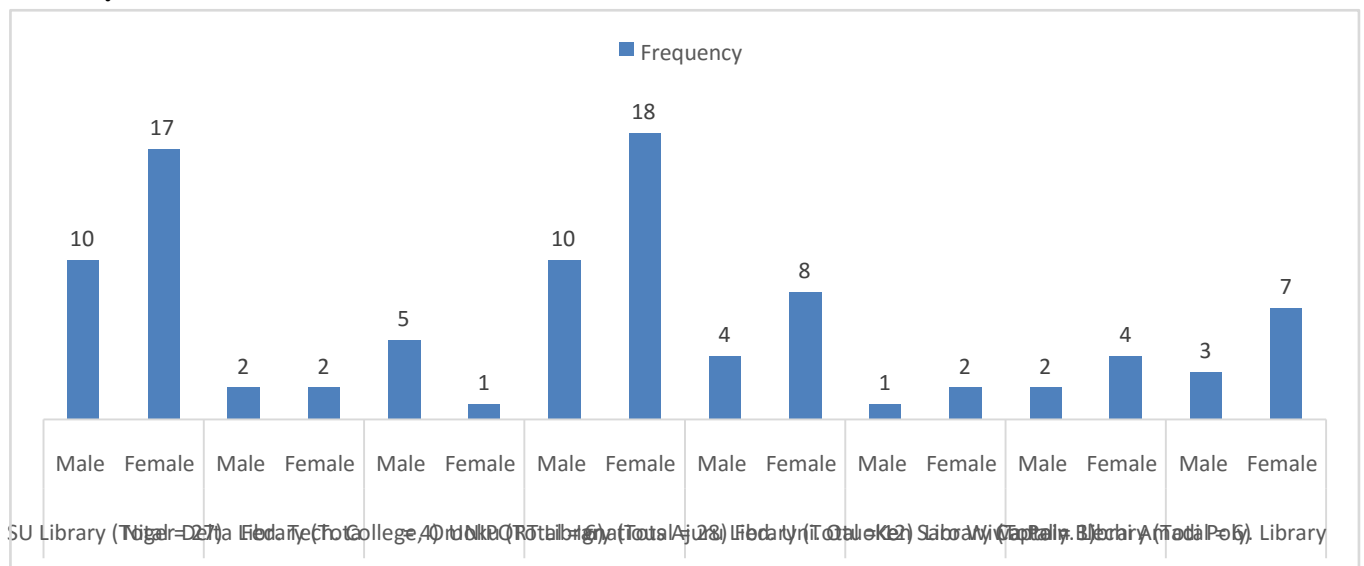


Figure 1 Gender distribution

Presented in figure 1 is the gender distribution for the study. The evidence reveals that for most of the higher institutions (RSU, UNIPORT, IAUE, FU, KSP and CEAP), the female respondents are higher in frequency than their male counterparts with exception in Federal College Technical, Omoku where the male respondents exceed the female respondents; and that Niger Delta where both equal in frequency distribution.

7.0 Discussion

The finding that most of the academic libraries did not depend on public electricity power supply has been reported by Enakrire and Ocholla (2017) in their study on Information and Communication Technologies for Knowledge Management in academic libraries in Nigeria and South Africa. They found that the power supply in the Nigerian universities were not reliable in contrast to the academic libraries in South Africa which had stable power supply. In the present study, the academic libraries depended more on alternative power supply from generators but less on inverters or solar energy power. With the problem of cost of funding the fuelling of generating sets, it will be needful to explore the option of inverter and solar power to enhance more stable power supply. This is proper for Knowledge Management practice.

In the present study, access to internet was available in the entire library studied and not all staff had access to it, but connectivity was slow due to sometimes poor network as well as power fluctuations. Similar finding had been highlighted by Enakrire and Ocholla (2017). In the Nigerian universities studied, there was unreliable internet network. However, this was less among the South African universities.

The study by Enakrire and Ocholla (2017) revealed that ICT tools vary from library to library and these included computers. The present study revealed that some of the academic libraries had adequate computers for staff but some of the computers were not in working condition. This compares Enakrire and Ocholla (2017) where there was lack of computers in the Nigerian universities studied. But this was less for the South African universities. However, among the Nigerian universities, the computers the Librarians used were functional though, they did not ascertain the functional state of most of the computers due to poor power supply. This contrasts with the South African universities where these were better.

The present study found that the library staff had knowledge of available databases in most of the institutions. However, not all the staff was able to use the databases without difficulty. It was also found that not all the library staff was competent in the use of ICT. Enakrire and Ocholla (2017) found that the knowledge and skill for using ICT for Knowledge Management were largely adequate, but varied within the libraries and librarians as well.

Capacity building for Knowledge Management is important. The present study found that most of the institutions relied more on in-house training than sponsorship for external conferences. This finding is similar to that reported by Njeze and James (2013) in their study of Capacity Building in Preservation Techniques in academic libraries. The present study also found that there was lack of highly skilled staff in the libraries studied. A common finding in the studies by Enakrire and Ocholla (2017), Njeze and James (2013) and Issa et al (2016) was inadequate staffing of the academic libraries studied. Capacity Building is a necessity for library staff in this era of ever-changing technology. This had been asserted by Ogunsola (2011). Inadequate funding had been a limitation. However, Ogunsola (2011) opined that professionals do not need to wait for sponsorship before they can develop themselves and this can be done by making use of library facilities in their environment. Enakrire and Ocholla (2017) also opined that there is need for rigorous continuous education for Librarians and that staff development should be intensified to enable Librarians cope with new technologies. Government support for academic libraries is therefore crucial for Capacity Building.

9.0 Conclusion/Recommendations

From the foregoing, the study therefore, concludes that it is an established fact that building adequate and effective capacity for Knowledge Management is an indispensable tool that cannot be underestimated. It enhances the use of already existing knowledge in the realization of the library's mission, vision and goals through adequate infrastructure, skilled and trained and competent staff has

become very essential for quality service delivery in library. It has also created a platform where the value of an organization's knowledge assets are effectively and efficiently maintained and managed in the face of the current global information economy.

Based on the findings of the study, it is recommended that:

- The various institutional Chief Executives should liaise with the PHED for regular supply of electricity which will save some fund the institutions especially those that mainly depend on alternative source of power supply. The saved fund can be utilized in other areas of pressing needs within the library. The provision of Inverter and Solar to supplement the PHED and generating set in the near future in order to achieve 24 hours electricity supply which is one of the requirements for a 21st century library.
- The Management of the libraries and the ICT department should enable to provide broader internet bandwidth to address the issue of low internet connectivity and as well all staff free internet access. This would enhance the quality of service delivery to their patrons.
- Adequate computers should be made available and maintained on regular basis. Non-functional systems should be repaired or replaced especially in the libraries affected.
- All the Management of the libraries should seriously make adequate provision for developing the staff through continuous training and re-training of all kinds for effective management of the institutions' knowledge based assets and other services required for the overall growth of the library as an organization.
- There should be adequate staffing to reduce work overload and give room for existing staff to avail themselves of available training and self-development opportunity to enhance their job performance fit into the present knowledge age.
- Finally, the Chief Executive Officers should engage more of collaboration in terms of public/private partnerships for support. This is to unburden some of identified areas of needs so as to provide inadequate funding for their libraries through grants and sponsorship.

References

- Allameh, S.M., Zare, S.M. & Davoodi, S.M.R. (2011). Examining the Impact of KM Enablers on Knowledge Management Processes. *Procedia Computer Science*, 3, 1211-1223.
- Barber, A.E. (1998). *Recruiting employees: individual and organizational perspectives*. Thousand Oaks, CA: *Sage Publications*.
- Beckman, T.J. (1999). The current state of Knowledge Management. In: J. Liebowitz (Ed). *Knowledge management handbook*. Boca Raton, FL: CRC Press, pp. 1-22.

- Bell, D. (1973). The coming of post-industrial society: A venture in social forecasting. New York, NY: Basic Books.
- Bozdogan, T. (2013). A research on knowledge leadership characteristics in Accounting Department Managers in Turkey. *International Journal of Business and Social Science*, 4(14), 125-136.
- Deolia, A. (2017). Knowledge Management: Scope, Responsibility and Challenges of Librarians. *International Multidisciplinary Journal Deliberative Research*, 33(33), 35-40.
- Enakrire, R. T. & Ocholla, D. N. (2017). Information and communication technologies for knowledge management in academic libraries in Nigeria and South Africa. *South African Journal of Information Management*. 19(1), a750.
- Garvin, D.A. (1993). Building a learning organization. *Harvard Business Review*, 71(4), 78-91.
- Hobohm, H. C. (2004). Knowledge Management: Libraries and librarians taking up the challenge – An overview. In: H.-C. Hobohm (Ed). Knowledge Management: Libraries and librarians taking up the challenge. *IFLA Publication Series*. Munchen: K.G. Saur, pp 7-10.
- Hong, J. C & Kuo, C.-L (1999). Knowledge Management in the learning organization. *The Leadership and Organization Development Journal*, 20(4), 207-215.
- Hopper, M.D. (1990). Rattling SABRE- New ways to compete on information. *Harvard Business Review*, 68(3), 118-125. Ifidon, S. E. & Ifidon, E. I. (2007). New Directions in African Library Management. Spectrum Book Limited: Ibadan.
- Issa, A.O., Idowu, A.O., Amusan, B.B., Ojokuku, B.Y., Adedeji, F.A., & Oguntayo, S. (2016). Academic library staffing and implications for librarianship practice in Kwara state, Nigeria. *Ilorin Journal of Sociology*, 8(1), 28-45.
- Miller, D. & Shamshie, J. (1996). The resource-based view of the firm in two environments: the Hollywood film studios from 1936 to 1965. *Academy of Management Journal*, 39(3), 519-543.
- Mills, A.(1998). Extranet-based business models. Centre for Research on the Applications of Telematics to Organizations and Society. Pp 1-22.
- Mladkova, L. (2012). Sharing tacit knowledge within organizations: Evidence from the Czech Republic. *Global Journal of Business Research*, 6(2), 105-115.

- Mphidi, H. & Snyman, R. (2004). The utilization of an intranet as a knowledge management tool in academic libraries. *The Electronic Library*, 22(5), 393-400.
- Mohammed, Z. (2017). Towards Exploiting: the dynamics of information to cope with the Present and catch up with the future: An Inaugural Lecture presented at the Assembly Hall, Ahmadu Bello University, Zaria, 18th October.
- Munn, N. (2001). Knowledge Management: working at the speed of „e“. In: A. Scammell (Ed). *Handbook of information management*. 8th edition. London: ASLIB, pp. 163-181.
- Natarajan, M.(2008). Knowledge sharing through intranet. *DESIDOC Journal of Library and Information Technology*, 28(5), 5-12.
- Newman, B.D & Conrad, K.W. (2000). A framework for characterizing knowledge management methods, practices, and technologies. *Proceedings of the Third International Conference on Practical Aspects of Knowledge Management (PAKM 2000)*, held in Basel, Switzerland, 30th-31st October 2000.
- Njeze, M. E. & James, I. J. (2013). Capacity Building Initiatives in Preservation Techniques: A Case Study of Nigerian Universities. *Brazilian Journal of Information Science*.7(1), 94-108.
- Noah, C. & Brickman, A. (2004). Capacity building for libraries. *Public Libraries*, 43(2), 102-107.
- Nonaka, I. (1991). The knowledge-creating company. *Harvard Business Review*, 69(6), 96-104.
- Nkanu, W.O & Okon, H.I. (2010). Digital divide : Bridging the gap through ICT in Nigerian libraries. *Library Philosophy and Practice (e-journal)*. 492. Available from <http://digitalcommons.unl.edu/libphilprac/492> . Accessed 3rd April 2018.
- Obaide, A. (2004). A Model for a Successful Implementation of Knowledge Management in Engineering Organizations. Doctoral thesis. University of Salford, Salford, UK.
- Ogunsola, L. A. (2011). Libraries as Tools for Capacity Building in Developing Countries. *Library Philosophy and Practice (e-journal)*.605. Available from <http://digitalcommons.unl.edu/libphilprac/605>. Accessed 3rd April 2018.

- Omotayo, F. O. (2015). Knowledge Management as an important tool in Organisational Management: A Review of Literature" (2015). *Library Philosophy and Practice (e-journal)*. 1238. Available from <http://digitalcommons.unl.edu/libphilprac/1238> . Accessed 3rd April 2018.
- Pemberton, J.D. & Stonehouse, G.H. (2000). Organizational learning and knowledge assets – an essential partnership. *The Learning Organization*, 7(4), 184-193.
- Prahalad, C.K. & Hamel, G. (1990). The core competence of the corporation. *Harvard Business Review*, 68(3), 79-91.
- Quinn, J.B. (1992). Intelligent enterprise: A knowledge and service based paradigm for industry. New York, NY: Free Press.
- Sanchez, R. (2000). "Tacit knowledge" versus "Explicit knowledge" Approaches to Knowledge Management Practice. Available from <https://www.fraserhealth.ca/media/Tacit-vs-Explicit%20Knowledge%20Transfer.pdf> . Accessed 3rd April 2018.
- Serrat, O. (2010). Building a learning organization. In: O. Serrat. Knowledge solutions: Tools, Methods and Approaches to drive development forward and enhance its effects. Manila, Philippines: Asian Development Bank, pp 4-9.
- Stonehouse, G.H & Pemberton, J.D. (1999). Learning and Knowledge Management in the intelligent organization. Participation & Empowerment : *An International Journal*, 7(5), 131-144.
- Tait, E, Martzoukou, K & Reid, P. (2016). Libraries for the future: the role of IT utilities in the transformation of academic libraries. Palgrave Communications, 2, 16070.
- Tierney, W.G. (1988). Organizational culture in higher education: defining the essentials. *The Journal of Higher Education*, 59(1), 2-21.
- Wilkins, J., Van Wegen, B. & de Hoog, R. (1997). Understanding and valuing knowledge assets: Overview and method. *Expert Systems with Applications*, 13(1), 55-72. Conflict of Interest : Nil