

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Library Philosophy and Practice (e-journal)

Libraries at University of Nebraska-Lincoln

January 2020

Information: A Strategic Resource for Effective decision making and successful Management of the Open and Distance Learning (ODL) System by National Open University of Nigeria (NOUN)

Collins Odili
collinsodili@ymail.com

Follow this and additional works at: <https://digitalcommons.unl.edu/libphilprac>



Part of the [Library and Information Science Commons](#)

Odili, Collins, "Information: A Strategic Resource for Effective decision making and successful Management of the Open and Distance Learning (ODL) System by National Open University of Nigeria (NOUN)" (2020). *Library Philosophy and Practice (e-journal)*. 3702.
<https://digitalcommons.unl.edu/libphilprac/3702>

Information: A Strategic Resource for Effective decision making and successful Management of the Open and Distance Learning (ODL) System by National Open University of Nigeria (NOUN)

By

ODILI COLLINS

Librarian

**National Open University of Nigeria
Plot 91 Cadastral Zone, University Village
Jabi, Abuja.**

Phone: 08068296916

E-mail: codili@noun.edu.ng

ABSTRACT

This paper was directed towards recognizing information as the most strategic organizational Resource for effective decision-making and successful management of the ODL system provided By NOUN. It identified information as the key asset for goal-oriented managers to plan correctly and accurately to achieve set goals on time. The elements of adequate information processing were enumerated. However, the paper noted some challenges of introducing a holistic adoption of information elements in the management of the ODL by NOUN. Besides, the huge benefits of wholesale utilization of information as the bedrock capital for effective planning were enlisted. The paper concludes by providing the way-forward for NOUN management to attempt, viz, establishment of information unit managed by information professionals to regularly scan the internal and external environments for current data, adequate analysis of collected data and using the outcome for planning, provision of separate budget for information management activities, and so on.

Keywords: Information, Effective Management, ODL System, NOUN

INTRODUCTION

The Open and Distance Learning (ODL) system provided by the National Open University of Nigeria (NOUN) is the most recent product of innovation in tertiary education environment in Nigeria. On discovering that the existing conventional universities cannot provide admission for the increasing number of eligible candidates, there emerged the need to establish an ODL mode of tertiary education. NOUN is the most widely known tertiary institution that offers ODL, its objectives are to offers functional, cost-effective, flexible and easily accessible life-long learning opportunity for those who seek for knowledge. The vision is to render enhanced quality education for all and achieve mass-education goals of the federal government. To manage ODL effectively and achieve desired goals, information must be properly utilized as a critical asset by NOUN management and administrators, by ensuring that they have continuous access to accurate, timely, current and relevant information to make successful decisions to enable their Institution be well recognized and have a place in labor force. Today in the world of rapid changes, timely and precise information is the key of success for all, they are the basis for each decision. High quality of management information systems means high quality of information, perceived usefulness, decision makers' satisfaction and increase the quality of managerial decision making (Hasan et al. 2013). Therefore, administrators must realize that NOUN is operating in an information-driven economy where rich information remains the most crucial economic resources for competitiveness and continual survival. Moreover, they should understand that management is associated with decision-making, an information-intensive task and a basic ingredient of managerial leadership. It is the ability to make sound, timely decisions and this often separates a successful manager from a non-successful one. It is therefore, the responsibility of managers to make high quality decisions that can be accepted and executed in a timely setting. On this note, the decisions should be cohesive, conjectured, contingent, flexible, influencing, intuitional, non-

judgmental, objective, and operational among others. Contributing to the above views, Choo (1996) stressed the need for managers (including NOUN administrators) not to only apply information for decision-making and effect changes and developments but also to create new knowledge that may be used to design new academic programmes, repackage existing ones and enhance organizational processes. This paper therefore, intends to recognize information as a crucial management resource, provide the appropriate framework and orientation for NOUN managers to adopt and implement a workable information strategy for effective management of ODL in Nigeria.

Brief Historical Development of ODL in Nigeria:

Nigeria had been demonstrating an unwavering and irrevocable concern for education as an integral part of national socio-economic development as well as a fundamental right for her citizens. Consequently, the need to strengthen the education system continued to emerge and a search for alternative platforms to conventional mode commenced in earnest. The proposal to set up an Open University system was eventually conceived and reflected in the 1977 National Policy on Education. As a follow-up, an Act of Parliament was enacted by the National Assembly in 1983 to establish the Open and Distance Learning across the nation on 22nd July, 1983. However, it was suspended in 1984 by the then military regime (Osam and Ekpo 2009). After a long period, National Open University of Nigeria (NOUN) was resuscitated in 2002 by a democratically elected government headed by President Olusegun Obasanjo (Okonkwo 2012).

The phrase Open and Distance Learning (ODL) has been variously described as open and distance education, education for life, life-long learning, life-wide education, adult education, mass education, media-based education, self-learning education, part-time education, and more. NOUN (2014) defined Open and Distance Learning as an approach that focuses on open

access to education and training provision, liberating learners from the constraints of time and place, and offering flexible learning opportunities to individuals and groups of learners. Whichever perspectives it may be, Open and Distance Learning is an educational process that significantly conducts its teaching by a person/ media at a remote and distance areas, consisting of the use of print, written correspondence, audio, video, and digital networks including multimedia facilities to communicate with learners.

Information as a Concept

Information had been viewed from various perspectives by different scholars. According to Dee and Kathleen (2017) information is data that are processed using knowledge, he went further to state that for information to be valuable or meaningful, it must be accessible, accurate, timely, complete, cost effective, verifiable and secure among others. Meadow *et al* (2000) also viewed information as validated, evaluated and useful data. In another dimension, Alwis and Higgins (2001) suggested that information should be considered as an organizational currency which can be for effective management process. Furthermore, Aina (2010) emphasized that information should be regarded as the fourth economic resource after, land, human capital and money. From the expression above, information may be conceived as a vital economic and organizational resource that enhances proper planning and better actions. Dee and Kathleen (2017) posited that organizations have become intensely aware of the fact that information is a potent resource that must be cultivated and honed to meet their needs. In essence, effective management and business success had been associated with strategic use of information as a fundamental ingredient for decision-making (Goodman, 1993). Strategic application of information extends to decisions on new market opportunities, products, customers, suppliers, and technological developments. The more complex and turbulent the market environment becomes, the faster organizations should

make decisions so as to maintain competitiveness. However, managers must understand the difference between information source and information quality. Besides, there is a need to know that false information will lead to unproductive decisions which may ruin an organization. Therefore, managers should acquire the necessary skills for effective information management and maintain some levels of good and quality characteristics of information which include accessibility, security, timeliness, accuracy, relevancy, completeness, flexibility, reliability, objectivity, utility, transparency, verifiability and reproducibility.

Management as a Concept

Management is a universal human activity in domestic, social and political settings, as well as in organizations. In an institutional sense, the term refers to managers as the people responsible for managing, in a functional sense it refers to the practice of managing. Management according to Grundei and Kaehler (2018) is a steering influence on market, production and resource operations in an organization and its units that may address both people and non-people issues and is exerted by multiple organizational actors through either anticipatory norm-setting (strategic management) or situational intervention (operational management) with the aim of achieving the unit's objectives. To manage a unit is synonymous with "directing" or "leading" it. In other words, it is a planning process to facilitate the achievement of missions and visions of organizations. Moreover, management may be simply viewed as the judicious application of available assets to enhance the realization of set goals. Information remains the most vital economic resource required to make calculated and goal oriented decisions for effective management of ODL. Therefore, NOUN administrators should identify, collect and analyze relevant information to aid formulation of workable policies.

Information Management (IM) as a Concept

Information Management is increasingly being recognized as a crucial element for competitiveness in a knowledge economy, moreover future-looking organizations are keying into it for continual survival. Uzuegbu and Arua (2015) submitted a chronological development of the definition of information management, that is, traditional, hybrid and business perspectives. According to them, before the 1970s traditional IM was viewed as the processes of planning, surfing, organizing, coordinating and controlling of collections of printed information resources for easy access by users. Moreover, after the 1970s, hybrid IM was described as the systematic planning, sourcing, acquiring, organizing, retrieving and disseminating of printed and electronic information resources via ICT. Besides, in the business world, IM is regarded as the planning, organizing, structuring, processing, controlling, evaluating and reporting of information with the ultimate purpose of transforming it into a vital factor of production. Lending support to the later proposal, Robertson (2005) stated that IM is an umbrella concept involving all systems and activities of creating and utilizing information in an organization. Furthermore, Acharya and Pani (2008) termed information management as the process consisting of converting internal and external information of an organization into actionable knowledge while striving for economy, efficiency and effectiveness of corporate information resources. They also emphasized that the conversion process embraces organization, development, and maintenance of integrated systems and services, leveraging of information flow for adequate application of information. By extension, Ali *et al* (2014) cited Schwartz and suggested that IM is a system of people, equipment, procedures, documents and communication that gathers, transforms, retains, retrieves, and presents information for planning, budgeting, accounting, controlling and other management tasks. Contributing to the above definitions, Zakari (2017) referred to Gomez and affirmed that IM depicts a holistic approach of managing the flow of information's data from

creation and initial storage to the time of becoming obsolete and discarded. Summing all the afore-mentioned, IM may be regarded as the combination of well-planned procedures, skills and technologies for generating, collecting, organizing, retaining, retrieving, securing, maintaining and using of information as a resource for effective management of an establishment. Therefore, goal-oriented managers should not only see information as a concept but as a superior asset by which to safely drive their organizations in the knowledge economy. The essence of information management in organizations is to help solve the problems of institutional growth, development and productivity by making the best use of resources in a hanging and dynamic environment growing steadily more complex (Mirjana, 2015).

Need for Information Management in Organizations

The need for Information management which has to do with adequate planning, controlling, directing, among other managerial functions for effective organizational output can never be overemphasized. Therefore, there is an increasing need for information management in all categories of organizations, NOUN in particular, which is premised on business environment complexities, rapid advancements in information technology, competition and paradigm shift of focus from mechanical assets to information-based assets (Sharma, 2004), as he enlisted the following reasons for IM.

1. The industrial model of business (use of machinery) had shifted to post-industrial model where emphasis is on intangible assets (information and knowledge).
2. Information explosion-as a result of exponential growth in the volume of information, there is an urgent need to effectively evaluate information in order to achieve desired results.

3. The information and knowledge economy had necessitated the high-value placed on information.
4. Information professionals and information gate-keepers are on their way to retirement, consequently, future-looking organizations should devise a means to handle it (Tischelle, 2003).
5. Skillful handling of information had been adjudged to contribute to human performance and competitiveness in an uncertain marketplace.
6. Dynamism in society and business environment coupled with resultant challenges are compelling organizations to shift from conventional methods of management to information - compliant style of management so as to cope.

Process of Making Decision

The art and science of making decisions is the heart of executive responsibility in every organization. Harris (2012) described decision-making as the process of significantly minimizing uncertainty and doubt about options to permit a reasonable choice to be made among many. For a workable decision to be taken by executives, pertinent information and right source of that information must be determined, gathered, analyzed and utilized creatively. Decision-making or planning is all about reducing uncertainty and not eliminating it. The task of managers is the ability to recognize challenges and attempt to resolve them through decision making using the most appropriate information as a resource.

Elements of Information Management

Information management had been described in information literature as a systematic process of leveraging information as the most valuable resource or critical corporate asset for effective management of an establishment. According to Zakari (2017), there are three major

activities/processes involved - information input, information processing and information output. Reitz (2004) and Dalkin (2005) further subdivided the three major activities into nine distinct simplified but related stages – information generation, information organization, information storage, information retrieval, information security, information maintenance, information transfer, information use and information discarding.

INFORMATION GENERATION (IG) - This is the first stage and it embraces all the formal and informal activities of documenting information on the various formats - paper, punch cards, tape, and any other media that convey information. Organizations may generate information arising from their daily transactions. In addition, information may be created through social interactions among staff, meetings (formal/informal), discussions, lectures, seminars, workshops, conferences, and more. Other documented information can be generated in forms of letters, memoranda, newsletters, bulletins, minutes of official meetings and proceedings (Sverlinger, 2007). All these categories of information may be termed 'raw information'.

INFORMATION ORGANIZATION (IO) - This is otherwise known as information development (ID) consisting of processes, such as ordering, surrogating, or description of information and information artifacts. IO is underscored by the disturbing information explosion which had mounted pressure on organizations. Information-wise organizations should set up specific procedures to properly organize information so as to achieve desired IM ends. Most importantly, adequate IO must produce superior access and use of information in an organization (Rawat and Rawat, 2008).

INFORMATION STORAGE (IS) - This may be described as the act of depositing processed or transformed information into an information system (IS) of an organization for future use. There are manual, electronic and digital devices to store information depending on availability of

resources, type of organization and purpose. It is advisable to have at least one backup storage device.

INFORMATION RETRIEVAL (IR) - IR refers to accessing of stored information either for actual use, review, withdrawal and ultimate deleting. Information-centric organizations must aim at easy access when handling information storage activity (Mohammed, 2011).

INFORMATION SECURITY (ISC) - Cherdantseva and Hilton (2013) identified ISC as the task of protecting information in an organization with the objectives of confidentiality, integrity, availability, privacy, accountability, auditability, authenticity and trustworthiness .It requires neck-breaking diligence to avoid unexpected theft, fire-incidents, hacking, and more. Moreover, it is recommended that appropriate mechanism must be in place to prevent unauthorized access, modification, disclosure, and destruction.

INFORMATION MAINTENANCE (IMT) - It extends to all efforts done to preserve, check and minimize deterioration of the value and usefulness of information assets. Besides, IMT should involve the unavoidable job of ensuring the currency or updating of information and increase its lifespan for maximum benefits.

INFORMATION TRANSFER (ITR) - ITR is equally regarded as information sharing or information dissemination. Sverlinger (2007) recognized it as the method adopted to share information among the different sections vertically and horizontally within an organization.

INFORMATION USE (IU) - This may be defined as the actual application of information to achieve a specific goal which includes making a decision to choose a particular course of action, that is, craft new policy, review (repackage) existing policy, design new product/service, evolve new marketing strategy, just to mention but few.

INFORMATION DISCARD (**ID**) - ID is associated with removal of obsolete information from an information system to create room for current ones and to ensure desired standard of timeliness. Notably, organizations must take care to stipulate appropriate procedures that should guide all the afore-mentioned information management processes to facilitate achievement of IM and strategic goals of an organization.

Utilization of Information for Effective Management of ODL

Effective management of the novel ODL by NOUN and realization of its intended goals is underpinned by proper application of the elements of IM. NOUN has a huge opportunity to occupy a vintage position as the leading ODL single-mode university not only in Nigeria but in West African sub-region if effectively managed. And this can only be achieved if information is accorded the right attention and utilized as the most economic “raw material” for planning and production (Sahu, 2008).

Information Generation and Management of ODL

NOUN generates a very large chunk of information from different sources, such as students' (intending, new and returning and graduating) records, available and proposed courses, meetings (formal and informal), social interactions among staff and with immediate environment, investments, personnel records, accounting records, market survey, research output, library resources, and more. Besides, NOUN can access relevant information from external sources including Federal Ministry of Education, National Population Commission, National Bureau of Statistics, Internet, educational agencies, research institutes, to mention but few (Fabunmi & Erwat, 2009). One aspect is to gather relevant information, and another crucial aspect is the ability to systematically organize it to aid smooth retrieval. Essentially, NOUN managers must

consider this element in her efforts to adopt information as a vital ingredient in managing the most-desirable ODL platform.

Information Organization and Management of ODL

This is a follow-up to information generation. It stresses the order by which information may be arranged. According to Musa (2011), it can be done using ICT facilities (computers, websites, CD/DVD, database, etc.). Also, Information Organization may take the form of alphabetical, subject, geographical, chronological, numerical, title, and so on. Good information organisation will enhance better storage. NOUN administrators should apply creativity to properly handle this activity.

Information Storage and Management of ODL

Information storage emphasizes keeping of information in a particular format to ease retrieval. IS format consists of manual, multimedia and digital devices. Manual IS is the use of files/file cabinets, shelves, cupboards, drawers, etc. Multi-media format includes-CD/DVD, audio/video tapes, handsets, etc. Lastly, storing information in digital form consist of computers, emails, websites, databases, etc. In the view of Somasundaram (2012), Organizations, for example NOUN can process information in a highly sophisticated technology providing a variety of solutions for storing, managing, connecting, protecting, securing, sharing, and optimizing digital information required for their day-today operations. This enables users to persistently store and retrieve digital data (information) in the institutional repository.

Information Retrieval and Management of ODL

This element refers to the ease of access to stored information for use, modification and other purposes. According to Reitz, (2004) information retrieval (IR) is the process, methods, and procedures used to selectively recall recorded information from a file of data. In libraries and archives, searches are typically for a known item or for information on a specific subject and the

file is usually a human-readable catalog or index, or a computer-based information storage and retrieval system. To achieve this feat effectively, NOUN management should have ready access to relevant and rich information at all times, all places, and all situations and for all intentions.

Information Security and Management of ODL

To ensure the value of information, it must be highly protected from all undesirable conditions and unethical practices. The good action for NOUN administrators to take is to adopt standard best-practices of protecting “classified intelligence information” under their custody. It is so important to prevent “information theft” by competitors. This is supported by Sahar, Manar, and Azrilah (2017) who viewed Information Security Management as an application of a risk management process to protect the confidentiality, integrity, and availability of information within the organization.

Information Maintenance and Management of ODL

Future-focused organizations and managers should regularly update their information resources to avoid obsolescence and maintain relevance. The worrisome changes in the tertiary education-market (in which NOUN operates) and the society coupled with information explosion, demand regular and close environmental scanning for capturing of current information to facilitate continuous review process.

Information Transfer and Management of ODL

Information transfer or sharing is the hub of information management. Unshared information is as useless as no information (information myopia) which may result to under-productivity and total collapse of an organization. Omoregie and Popoola (2018) assert that information sharing is the exchange of information among Organizational staff to enhance competitiveness and effectiveness. It is recommended that NOUN top-executives should be information-savvy and develop formal and informal methods to share input-information for making calculated decisions.

Information Utilization and Management of ODL

This is described as the overall purpose of all the activities elucidated above. Adding to this, Jonathan and Udo (2013) assert that information utilization is the actual putting into appropriate use of acquired information, and the utilization of information differs from person to person and from one corporate organization to the other according to their information needs and other socioeconomic imperatives. Investing on information management efforts are wasted if the right information is not rightly applied to the right issue. Importantly, NOUN management should proactively consider this element critically if they desire to achieve the goals of ODL in Nigeria.

Information Discard (ID) and Management of ODL

Information discard is the process of deleting obsolete information from an information system to pave way for current ones and maintain usefulness. Organizations, marketplace and society are undergoing constant changes culminating in the generation of new information. As a result, proactive NOUN management must regularly study these changes and glean relevant and current information to be on top of the resulting challenges.

Evaluation and Feedback Mechanism and Management of ODL

This is meant to assess the extent of progress made, identify causes of failure and rethink for better outcomes in the future. Management experts suggest that it may be done at a specific period. This according to Adamu (2015) is stage where the opportunity is taken to really assess how well information management programmes are doing in effective information management life cycle and to take corrective actions to obtain better results in the future. It is a permanent and ongoing part of the cycle and an important factor in continuous improvement which NOUN management team can measure by setting up information management monitoring committee to oversee it and report back to management

Benefits of Adopting Information Management Approach

There exist greater benefits for using information as the most valuable management asset and they are thus:

- i. Development of information management skills
- ii. Improvement on management processes and making of superior decisions
- iii. Strengthening of information flows
- iv. Establishment of conducive working environment and building of better work-team
- vi. Building of favorable corporate image.
- v. Timely achievement of strategic goals

Challenges of Utilizing Information Management Approach

Expectedly, there will be some setbacks in adopting a deliberate IM approach in NOUN:

- i. Lack of support from the university vice chancellor as a result of “information myopia” and “marketing myopia”.
- ii. Organizational culture and structure may hinder holistic use of IM orientation.
- iii. Staff resistance and internal politics.
- iv. Scarce human and financial resources.
- v. Bureaucratic management style and poor leadership posture that resist strategic change.
- vi. Government regulatory roles.
- vi. Laissez-faire attitude, fire-brigade approach and policy-instability on the part of chief executives and government.
- vii. Issue of “who takes the glory”.
- viii. Fear of criticism and failure.

WAY FORWARD

For appropriate utilization of information as the most vital asset and successful incorporation of IM orientation into NOUN management, the under-listed are suggested for bold attempt.

- i. Business-minded, vision-driven vice chancellor (VC) should be appointed.

- ii. Top-management and staff must be trained and re-trained to acquire IM skills.
- iii. An IM desk/unit (managed by an expert) should be created under the VC's office.
- iv. Review of the Act of parliament is needful to provide legal backing for holistic introduction of IM approach.
- v. Separate budget provided for IM activities.
- vi. Inclusive management style should be practiced.

CONCLUSION

The paper had been able to recognize information and its proper handling as the most crucial for effective management of the novel ODL platform by NOUN. Also, care had been taken to stipulate the various but interdependent processes of IM in an organization. Moreover, the huge benefits of adopting an information-oriented management were enlisted. In essence, no organization can successfully plan and implement its programmes without recourse to relevant, timely, current and accurate information in the information-driven economy.

Therefore, NOUN management should be future-looking and urgently learn to recognize information as the only “organizational currency” by which it needs to trade profitably in the ever changing business environment, achieve set goals and justify the purpose for which it was established.

REFERENCES

- Acharya, P. & Pani, A. (2008). Information management. In: Sahu, A.K.(Ed). *Information Management in the new millennium: opportunities for library professionals*. India: ESS Publications
- Adamu, S. (2015). Assessment of information management in national hajj commission of Nigeria (NAHCON). Published thesis in Ahmadu Bello University, Zaria.

- Aina, L.O. (2010). Information as a change agent in developing society. A Keynote address delivered at the library, archival and information studies students' association seminar, U.I. Ibadan Held on 5th April, 2010.
- Alwis de, S.M. & Higgins, S.E. (2001). Information as a tool for management decision-making: A case study of Singapore. *Information Research*, 7(1), 1-18
- Dalkin, H. (2005). *Knowledge management in theory & practice*. [Online]. <http://www.choo.ischool.utoronto.ca/IMfaq>. Accessed 23 January 2018.
- Dee, M. & Kathleen, M. (2017). Introduction to information, information science, and information system [Online]. <https://bit.ly/2JZ2XPq> [Accessed 08/11/19].
- Eke, F. *et al* (2016). Information and data generating sources: Implications for libraries, authors & researchers. *International Journal of Computer Science & Information Technology Research (e-journal)*. Retrieved from www.researchpublish.com. Accessed 5/12/2017
- Garba, A. *et al* (2014). Utilizing information management tools for effective implementation of UBE programme in Nigeria. *Library/Information Management Forum*, 16 (1&2), 1-18.
- Goodman, S.K. (1993). Information needs for management decision-making. *Records Management Quarterly October*, 21-22.
- Grunde, J. & Kaehler, B. (2018). Corporate Governance – The necessity of a contour enhancement and business extension of the concept understanding; The operation.
- Harris, R. (2012). *Introduction to decision-making process-part 1*. [Online]. <http://www.virtualsalt.com/crebook5.htm>. Accessed 17/10/2014
- Hasan, Y. *et al*. (2013). The Impact of Management Information Systems Adoption in Managerial Decision Making: A Review *Management Information Systems*, 8:4
- Information Management (2017). *Information Management Framework*. Retrieved from: www.sfc.ac.uk/web/FILES/.../Information_management_framework. 15/12/17
- Jonathan, N. C. & Udo, N. (2013). Information Resources, Retrieval and Utilization for Effective Research in Tertiary and Research Institutions. *Asian Journal of Humanities and Social Sciences (AJHSS)*, 1:3
- Meadow, C.T. *et al* (2000). *Text information retrieval system*. CA: Academy Press.
- Mohammed, Z. (2011). Organization, retrieval of information and information resources. *Nigerian Libraries, journal of Nigerian library association*, 44(1), 44.
- Mohammed, Z. (2006). Library/Information services for the legislature. *The Information Manager*, 6 (1&2), 13-15.
- Mohammed, Z. (2018). *Towards exploiting the dynamics of information to cope with the present and catch up with the future*. Zaria: A.B.U. Press.

- Okonkwo, U. (2012). *Open and Distance Learning in Nigeria in Education in Nigeria: From the Beginning to the Future*. Edited by Ivowi, U & Akpan B. Lagos: CIBN Press.
- Omoregie, G.I. & Popoola, S.O. (2018). Organizational culture, information sharing and perception of records management system as factors affecting organizational effectiveness in the banking industry in Nigeria. *Research Journal of Library and Information Science*, 2:3
- Osam, O. & Ekpo, K. (2009). Students' Perception of the National Open University of Nigeria Scheme: A Case Study of Calabar Centre. *African Research Review, An International Multi-Disciplinary Journal*, 3(2), 347-354
- Tenebe, V.A. (2014). *Academic Brief*. Lagos: NOUN.
- Prichard, C. (2000). *Making Managers of Universities & Colleges*. Buckingham: Open University Press.
- Rawat, M.K. & Rawat, S.K. (2008). LIS distance education: A snapshot of digital resource organization, design of information services & management in networked environment.
- Radovic-Markovic, M. (2015). The role of information management in decision making and business success. Retrieved from <https://bit.ly/2WJhqnw>, Accessed on 5/11/2019
- Sahu, A.K. (Ed). *Information management in the new millennium: opportunities and challenges for library professionals*. N/Delhi: ESS-ESS Publications
- Reitz, J.M. (2005). *Dictionary of Library & Information Science*. London: Libs Unlimited.
- Robertson, J. (2005). Ten principles of effective information management. Retrieved from: www.steptwo.com.au/papers/kmc_effectiveim. Accessed on 4/1/18
- Sahar, A., Manar, A. & Azrilah, A. (2017). Information Security Management System. *International Journal of Computer Applications*, 158: 7. Retrieved from: <https://bit.ly/33r72CR>. Accessed on 26/11/19
- Sahu, A.K. (2008). *Information management in the new millennium: opportunities & challenges for library professionals*. N/Delhi: ESS-ESS Publications.
- Somasundaram, G. A. S. (2012). *Information Storage and Management: Storing, Managing, and Protecting Digital Information in Classic, Virtualized, and Cloud Environments*. 2nd Ed., Indiana: John Wiley & Sons, Inc.
- Sverlinger, M. (2007). *Information managers: management decision*. London: University Press.
- Uzuegbu, C.P. & Arua, U. (2015). Understanding the scope and perspectives of information management/knowledge management. In: Igwe, K.N. et al (Ed.). *Fundamentals of knowledge management for the knowledge economy*. Lagos: Zeh Communications.