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Administration and Management of Digital Libraries: An Overview

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ABSTRACT

This paper examined administration and management of digital libraries: an overview. The concept management was clearly defined and explained in the context of the work; thereafter the term digital library was explained succinctly as an age that is characterized by efficient and effective conversion, storage, diffusion and dissemination of data to users. The various services that are performed in the digital environment were listed as follows: Circulation Services (Reader Services); Serial Services; Electronic Library Services; Online Public Access Catalogue (OPAC)Services. Social Media. In the context of this study, some difficulties that prevent a digital library from operating smoothly include: Librarians lacking the necessary abilities to successfully handle these services; inadequate cash provided by the university administration to purchase the required equipment; attitude issue with librarians still favoring the traditional method of service delivery over change; Lack of maintenance culture: Lack of maintenance culture is one of the biggest challenges to maintaining university libraries in the digital world. This attribute is not only associated with libraries but also with the Nigerian government and elites. The management of university libraries in digital libraries becomes challenging without the maintenance culture spirit; Insecurity in the face of advancing information technology: Confidence is necessary for managing people and physical resources efficiently in university libraries. The library manager must be up to date on contemporary advances in order to manage university libraries in a digital environment with strong confidence. In the face of advancing information technology, many librarians lack confidence; No clearly defined ICT Policy.
Keywords: Management; Managers; Digital Library; Library Managers;

Introduction

Regardless of the type, management and administration of the library are fundamental to its development. Managers of libraries have a significant impact on their institutions' productivity and performance. Libraries will move at a very slow pace as a social institution without proper management and administration. Several factors, such as power dynamics, issues with diversity, the role of leaders as change agents, and management styles, influence the effectiveness of academic library executives (Weiner, 2003).

The expansion of information and communications technologies (ICTs) in university libraries has greatly complicated library management. As a result of their apparent success in the manufacturing industry, quality management systems are increasingly being used in library services in order to enhance the quality of those services (Hsiah, Chang & Lu, 2000). Libraries, like other institutions, are required to assure compatibility with an ever-changing operating environment. For their survival, development, and profitability, they must retain compatibility with environmental changes (Purushothama, 2015). Like all organizations, libraries need managers, but finding a new course of action demands leadership rather than just effective management or careful attention to detail. With the advent of ICT in libraries, the way information services are delivered around the world has changed (Jenkins, 2011; Madu &Azubogu, 2017).

THE CONCEPT MANAGEMENT

Simply put, management is the act of managing all of an organization's resources in order to achieve its goals through the processes of planning, organizing, directing, and regulating. This is what the term "management" suggests.

According to Mason and Wetherbee (2004), who were referenced by Phillips, leadership entails defining a vision for the library, persuading others to embrace that goal, and encouraging other staff members to contribute to that vision (2014). Management comprises carrying out the work according to the specified strategy.

According to Nwosu (2007:48), a library management author, the managers of these libraries are supposed to devise medium-term strategies for the libraries' own maintenance, expansion, and development. They should build systems for analyzing the amount of success attained by their workers and the services they provide, in addition to providing intelligible information to students, staff, and the greater university community about the services given. They need to put more work into extending their product range and collection, as well as strengthening their personnel's abilities, processes, and student support services.

Also, in a study conducted by Mason and Wetherbee (2004), as cited by Phillips (2014), management entails completing tasks in accordance with the established plan, whereas leadership entails developing a vision for the library, persuading others to support this vision, and inspiring other staff members to contribute to this vision.

WHO ARE MANAGERS OR ADMINISTRATORS?

Within an organization, managers and administrators are people who oversee and facilitate the work of other people. There are many different subcategories of managers and administrators. One of the most typical is to envision managers as members of a vertical hierarchy. There are managers at all organizational levels, but those closer to the top have greater responsibilities and more power than those at lower levels. Management can be separated into three levels in most normal organizations, particularly in the context of this research work in a library setting:

1. Top management, which in academic libraries typically consists of the assistant and associate directors, College of Education (CL) College Librarian or Chief Librarian, University Librarian (UL) for Universities and Polytechnique Librarian (PL) for Polytechnique who is responsible for the overall operation of the entire organization. In the majority of firms, senior managers have the authority to create company-wide policies and have a significant impact on how the organization is led.

2. The middle management is in charge of particular organizational divisions or tasks. Department heads work in information centers and libraries as middle managers. Their managerial duties are focused on ensuring that each section of the library runs well. Middle managers act as intermediaries between top management and supervisors in addition to managing their particular subunits or functions.

3. Supervisors, often known as first-line managers, are managers at the very bottom of the management structure. First-line managers or supervisors are in charge of individual workers' day-to-day operations while they work toward reaching organizational goals. They are also in charge of the company's manufacturing of goods or services. These managers are in charge of establishing the policies and procedures that will ensure the successful and efficient running of their particular units.

RESOURCES USED BY MANAGERS OR ADMINISTRATORS IN AN ORGANIZATION

One definition of a manager or administrator describes that person as someone who has the authority to distribute the resources of an organization. In practice, managers spend a significant amount of time managing a wide array of resources. As was discussed before, one of Mintzberg's management duties was that of a resource allocator. This is the function in which a manager selects how to distribute a company's resources in the most efficient manner possible.

There are four basic categories of resources that managers can control:

1. **The Human Resources:** All of an organization's employees are its human resources. Although the talent, experience, and education of these individuals differ, they should all be regarded as vital members of the team. Professional librarians, paraprofessionals, administrative workers, technological specialists, and, in many libraries, part-time employees such as student assistants and pages are among the many various types of workers in libraries. These are just a few of the many different sorts of personnel found in libraries. The management team is in charge of distributing all human resources across the firm.

2. **Financial Resources:** Funding sources utilized to run an organization are referred to as financial resources. Customers who buy goods or services provide the majority of the funding sources in the for-profit sector. Donations and government subsidies from the federal, state, and local levels, among other financing channels, are widely used by charitable groups. Managers at all levels are increasingly required to manage their companies' finances. Managers are increasingly asked to raise cash and get grants for their non-profit organizations.

3. **Physical resources** are an organization's visible, material components. They are made up of things like supplies and the real space where an organization operates. Library administrators are nonetheless responsible for the effective administration of all physical resources even if libraries are frequently housed in buildings that are provided by other organizations, such cities or universities. Certain physical resources, like supplies, are typically under the control of lower-level management. Due to the extensive quantity of physical resources that must be acquired, maintained, and eventually replaced, managing physical resources can be a time-consuming task. Facilities managers are employed by many big libraries, but pricey resources are often decided by top-level management.

4. **Information Resources:** All organizations, including libraries, are becoming more and more dependent on their information resources. One of the fundamental roles of libraries has always been and will always be the provision of information resources. Managers' unique information resources, on the other hand, are those related with the operation of the company itself. These documents were generally written down on paper and stored in file cabinets in a single, central location of the organization. Organizations of all sizes have created databases of data on their employees, resources, and other management-related problems since the invention of computers. A large portion of this data is now available to many employees within the business, frequently via an intranet link. To obtain a competitive edge, each of these informational assets should be treated with care and utilised to the best extent of their potential. Furthermore, the responsibility of management to protect the privacy and confidentiality of information contained in information resources, particularly information available online, is becoming increasingly critical.

MANAGEMENT STYLES
Studies have shown that there are various management styles that are put to use by several organizations in the world. Yuki, (2002). Enumerated some of the management styles as follows:

- **Authoritarian managers,** also known as autocratic supervisors, have high expectations for their staff and tell them exactly what they need to accomplish and when they need to do it. Likewise, there is a clear distinction between the leader and their subordinates. A manager or leader that is authoritarian takes choices with little or no input from subordinates. Decisions taken under such an administration are frequently criticized as being unoriginal and based on authoritarian ideas as a result of the authoritarian nature of the ruling government.

- **Democratic leadership:** This type of leadership, also known as participatory management, includes encouraging individuals of the organization to have a more active participation in decision-making. Researchers have discovered that this management style is typically one of the most successful, leading to higher output, enhanced group contributions, and increased group morale. Furthermore, this management style has been shown to be one of the most successful methods to inspire staff.

- **The laissez-faire management style**, also known as delegate management, is one in which supervisors take a back seat and let the group to determine what actions to take. This style of management is frequently referred to as the democratic management style. According to the findings of many pieces of research, this method of management often results in group members having the lowest levels of productivity.

- **Bureaucratic management style:** The manager of an organization with a bureaucratic management style strictly follows all operational procedures and rules. If it isn't indicated in the book, the level above them will be referred to as "above them." In reality, this manager behaves more like a law enforcement agent than a manager. They are the ones who carry out the legislation.

FUNCTIONS OF MANAGEMENT (LIBRARY MANAGERS)
It is imperative to point out the five functions of management that helps to display the potentials of leaders or managers (Librarians)

1. **PLANNING:** This simply entails creating a strategy and plan to move from one place to another. Without a plan, nothing will get done. The manager must create a plan, convince people inside and outside the business to support it, lead a team, and adapt the plan as necessary. The manager must be clear about the plan's objectives and the precise goals that the team or group of people is working toward. Planning also specifies how to get there, which is the organized collection of tactics and assets needed to accomplish the objective.

2. **ORGANIZING:** To put it simply, organizing entails gathering and allocating resources—both human and non-human—in the most effective manner to carry out the plan. Organizing involves forming teams, designating individuals as leaders and managers, and allocating duties. Typically, organizing takes place at the start of a management assignment or during the implementation of a business plan.

3. **STAFFING**: Staffing is the process of assembling a work team. Finding individuals and acquiring the necessary resources are included in this. The responsibilities for managing human resources have moved from HR units to managers in many firms.

4. **LEADING**: Effective planning, communication, and rewards for achievement are all part of what it means to be a leader. It also includes motivating others to do a good job. Getting employees to think like you and the company, rather than just going through the motions, is necessary. It involves encouraging others, listening to them, and giving guidance when it's required. Leading a company means taking it in new directions and managing change.

5. **CONTROLLING:** Controlling entails making sure that actions are taken within the parameters of operational guidelines and predetermined objectives and instituting corrective measures when deviations occur. Less successful managers are those who can plan but cannot monitor execution or take corrective measures. In controlling, an individual's performance is evaluated, they are coached and developed, and they are rewarded for a job well done through a performance appraisal and reward system.

DIGITAL LIBRARIES
The digital library is the age of networked civilization. This is a time when information technology has been widely used to store, preserve, and communicate knowledge in digital form, as well as in many other fields of human activity (Saravathy,Nambratha, &Giddaiah, 2012)

To operate in today's digital libraries, librarians must be more than just "keepers of knowledge" or information developers (Ojo, 2012). Even if the system is designed to be used directly by the system's ultimate end user from their desktop PC, the role of the librarian cannot be overlooked in digital libraries. A librarian is still necessary for digital libraries. Furthermore, the librarian

and information scientist will be required for the packing and repackaging of the content (Yaya&Adeyokun, 2011).

A technologically powered digital environment is one that is typical of current civilization and in which information can be accessed electronically and transmitted via technical techniques. Access to information is held or kept in a digital format, and access to, retrieval of, and distribution of the information is done electronically using computers and other technical means. This environment is especially relevant to libraries since it is a library environment in which material is held or saved in a digital format. A digital library is one example of this type of collection.

A digital library, according to the Digital Library Federation, is an organization that provides the resources, including specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence of collections of digital works over time, so that they are easily usable by a defined community or set of communities. Furthermore, a digital library assures that these collections of digital materials survive in perpetuity (as cited in Uzuegbu and Mc Albert 2012). According to Ringeera (2007), digital libraries are controlled environments that house digital multimedia assets. These environments are designed to make it easier to access the material they contain, and they also include tools to help users navigate a global network. Furthermore, digital libraries contain scattered users and assets that are maintained as a cohesive whole. The author claims that the spread of digital libraries is linked to the advancement of information and communication technologies (ICT).

MANAGEMENT OF DIGITAL LIBRARIES

The Library Management is responsible for deciding if a philosophy and vision are expressed and how far they are carried out. The effectiveness of a library, its place in the academic community, and its capacity to adapt to new functions and projects are all impacted by leadership (Weiner, 2003).

When it comes to the library and information service environment in the digital era, the management of change consists of three parts, as outlined by Tarn and Robertson (2002): determining what needs to change, doing a pre-change analysis to understand why changes are essential, and setting goals. The next step in doing a force field analysis is determining who will be affected by change and to what extent. But, as Ugah and Udo (2011) note, not everyone has a responsibility to manage effectively. On the other hand, whenever people collaborate, there is typically a requirement for coordination of activities in order to achieve the intended outcomes. A library needs management and leadership in order to thrive and expand (Phillips, 2014).

Because of the continuous advancement of technology in our surrounds, every part of our civilization must evolve. To continue down this route and absorb new and evolving technologies, every sector of the economy must recognize this truth (Yemi-Peters, 2011). Academic libraries in Nigeria are currently on a crossroads due to issues with declining budgets, inadequate facilities, and new information technology for the provision of mandated services (Ononogbo, 2008). Given current advances in libraries and information centers, realistic and preventative actions are required to ensure that university libraries continue to play an important role in the field of education.

The emergence of the digital library has posed a new set of issues, and academic library directors must be prepared to handle those challenges. If they are not, university libraries and librarians risk becoming little more than bookkeepers and booksellers. To put it another way, if there was ever a time when university libraries needed to properly manage both their people and physical resources, it is now, in the so-called "digital era."

SERVICES IN DIGITAL LIBRARIES

Libraries, according to Tam and Robertson (2002), are adapting to the changing educational and learning environment by making the library entirely reachable both physically and intellectually through electronic systems and by providing round-the-clock ICT assistance for remote users. Librarians, being trained experts in information collecting, administration, retrieval, and dissemination, must change with the times and acquire new abilities (Sarasvathy, Nambratha & Giddiah, 2012).

ICT-induced paradigm shifts have become commonplace in the service sector, but when it comes to libraries and information science, they have been dramatic and fundamental (Thomas, Satpathi & Satpathi, 2010).Some of the services provided by library managers in digital libraries are listed below:

1. *Circulation services (reader services*
2. *Serial services*
3. *Electronic library services*
4. *Online Public Access Catalogue (OPAC)*
5. *Social media services*

CIRCULATION SERVICES (READER SERVICES)

Due to the fact that it requires potential library customers to register, the circulation service is the library's primary offering. Today's version of this service is automated. Integrated library software is used by several libraries to automate their circulation processes. In contrast to the traditional method, registration for library customers is simplified with automated circulation, and charging and releasing of books takes only a few minutes.

Students may now seek for books and other materials in the library without physically being there because the circulation procedure has been automated. As long as the item listings are online, this may be done remotely from anywhere in the globe.

There are several software options for integrated library management. Some are free to use, while others are not. Innovative's Millennium and Sierra, as well as Koha, are examples of integrated library management systems. Because of funding limits and organizational barriers, Nigeria's library automation process is time-consuming. However, several Federal Universities in Nigeria have automated their library operations. The University of Ilorin and the University of Jos utilize Koha Integrated Library Management software, whilst the American University of Nigeria employs Innovative's Millennium Integrated Library Management program.

SERIAL SERVICES
Because of the advancement of information and communication technology, serial publications such as electronic journals and electronic newspapers are now available. These informational resources are simple to obtain from any point on the earth. The great majority of people read journals online, despite the fact that there are several types of electronic information sources available. Due to the high cost of both acquiring and subscribing to these information sources, Nigerian university libraries are forming a consortium with the Committee of Vice-Chancellors and the Committee of University Librarians in order to subscribe to these information sources at a lower rate. Other foundations that provide these services at a discounted charge are The Essential Electronic Agricultural Library (TEEAL) and the Research4Life Foundation (TEEAL), both of which support less developed nations such as Nigeria, Zambia, India, Kenya, and others. Libraries may now obtain inexpensive access to electronic publications, allowing them to address the intellectual demands of their clients, who include both students and professors.
It is increasingly critical for library managers to gain digital literacy skills in order to assist their clients in overcoming the challenges of locating and searching for the information they want. In addition, they must organize literacy programs to draw attention to the need of subscribing to electronic journals and to teach students and lecturers how to acquire information as quickly as possible.

ELECTRONIC LIBRARY SERVICES
The phrase "library without walls" might be applied to an electronic library. Electronic libraries are libraries that provide their users with access to information resources in digital formats via computers and other technology. A considerable number of academic libraries can be classified as hybrid libraries since they provide access to electronic resources and services while conserving and promoting the use of physical assets housed in the library building. Because of the internet's fast expansion and penetration in the twenty-first century, students and faculty members now have quick access to a vast array of information resources online (Berg, Hoffman and Dawson, 2010). Clienteles who are unable to visit the library can now use Online Reference Services by emailing the librarian and waiting for his answer. This service has been made possible by the use of electronic library services.

Before the advent of the internet, it was the role of the librarian to choose and arrange information sources for quick access and usage. However, in the age of information overload, the librarian guides consumers using electronic library services on how to get the information they need. Despite the advantages of using an electronic library, print sources of information are still accessible because not every user possesses the necessary abilities to access networked resources. As a result, it becomes imperative for librarians to train all of their users in information literacy.

ONLINE PUBLIC ACCESS CATALOGUE (OPAC)
Since the beginning of the 1980s, there has been an online public access catalog. A catalog entry is one that includes details about a piece of library literature. Obtaining a comprehensive description of library materials is the process of cataloguing.

Cataloguing is the cornerstone of librarianship since it guides clients to the information they require (Purushotam, 2008). Catalogue cards are still utilized in several university libraries in

Nigeria, even in this digital age. Prior to the emergence of ICT, the only way to get bibliographic information about library works was through catalogues (book, card, or sheaf). The Online Public Access Catalogue (OPAC) is an online information retrieval system that employs a Boolean search interface to discover records of library information resources.

OPAC is an information retrieval system that mostly consists of short bibliographic data about books, periodicals, and audiovisual materials accessible in a certain library and may be accessed locally or remotely (Omekwu,2008). The list is frequently accessed online by library customers, employees, and the general public via computer terminals at home, coffee shops, and other venues. OPAC is simply a simple index of the bibliographic information contained in the system that allows for quick and easy online searching of the whole catalogue using one or more search parameters. OPAC administration has resulted in improved library services for some users.

The majority of these OPAC are components of an integrated library management system. OPAC allows users to quickly and easily cut down on time spent sifting through catalog cabinets. There are OPAC modules in programs like KOHA and Millennium.

SOCIAL MEDIA SERVICES

As a result of the move from Web 1.0 to Web 2.0, several developments have occurred in web technology. We are now in the Web 3.0 era, often known as the intelligent web. Despite its early stages, Web 3.0 has enabled individuals to access the internet via a number of devices, including televisions and mobile phones (Prabhu, 2016).

Furthermore, Web 3.0 has given birth to Library 3.0, where libraries are now perfect learning settings for problem-solving, experimentation, and idea sharing (Kalelioglu and Gulbahar, 2010). In the framework of this study, web 2.0 apps were investigated without delving into great depth concerning web 3.0. Web 2.0 is more interactive than Web 1.0's static web interface. Web 2.0 refers to the next generation of web tools and apps. (2012) (Thanuskodi). Among these applications are social networking websites, blogs, Really Simple Syndication (RSS), and podcasts. The most popular of these apps are social networking websites.

Social networking sites are web-based services that allow users to either construct a public or semi-public profile inside a constrained system or articulate a list of other users with whom they share a relationship. Users may then browse and traverse their own list of connections as well as connections made by others in the system (Boyd and Ellision, 2007).

Users can connect with one another via instant messaging, digital content sharing, and information exchange on these websites. Social media has been integrated into library services in developed countries. Patrons can learn about new trends and services the library offers by creating library Facebook pages and following the library's Twitter accounts on social media sites such as Facebook, Twitter, and Whatsapp.

Despite the lack of a defined plan to support its usage for standard library services, academic libraries in Nigeria have begun to adopt it. According to Nigerian study, social media platforms

such as Facebook and Twitter are used to advertise library services and provide reference services (Ezeani,Igwesi, 2012&Opeke,Onuaha, 2013).

Furthermore, a participant in Rogers' (2009) research thought that the word "important" did not do it credit. Any library that does not embrace Web 2.0 technology is failing itself and all other libraries. Librarians may now engage with their clients in real time and exchange information with other institutions to improve service delivery by using social media platforms.

CHALLENGES OF MANAGING DIGITAL LIBRARIES

1. Librarians lacking the necessary abilities to efficiently run these facilities
2. Insufficient funding from the university administration to buy the required equipment
3. The unwillingness of librarians to embrace change and their continued preference for the old-fashioned method of providing services is an attitude issue.
4. Lack of maintenance culture: One of the most significant barriers to managing university libraries in the digital age is a lack of maintenance culture. This standard is connected not just with libraries, but also with the Nigerian government and elites. Without a maintenance culture spirit, managing university libraries in digital libraries becomes difficult
5. Lack of confidence in more advanced information technology: Confidence is required for efficient management of personnel and physical resources in university libraries. To administer university libraries confidently in a digital setting, the library manager must be up to date on current advancements. Many librarians are fearful of the advancement of information technology.
6. There is no defined ICT policy in place. University libraries in Nigeria have yet to adopt an ICT-based services policy. Such a strategy will explain what is required for ICT-based library services to be successful in the digital age, the areas that should be prioritized, the importance of ICT training for library employees, and a strategic plan to ensure continued maintenance of ICT equipment. The majority of Nigerian university libraries lack a comprehensive ICT strategy to regulate and oversee how ICT is used to provide library services. Addressing critical issues such as the need of ICT training for librarians, the nature of ICT-based library services, and the amount of library money that should be allocated to ICT-based library services are all essential. There are no rules or attempts to improve the abilities of librarians and libraries to provide e-library services, according to Igiamoh, Saliu, and Hansetu (2013).

STRATEGIES FOR EFFECTIVE MANAGEMENT OF DIGITAL LIBRARIES

Managers of libraries can adopt a variety of strategies to foster the growth of leadership within their company. If implemented, the following tactics would assist university library administrators in efficiently managing digital collections.

As follows:

1. Enough finance for university libraries: In Nigeria, university libraries urgently require adequate funding. Igun (2013) asserts that librarians must lobby for sufficient financial investment by the government and other stakeholders in ICT-based libraries. For library services based on ICT to be sustainable, enough funding is essential.

2. Active communication: In an organization, active communication refers to all of the components that make up the human group (the customer/user, employee/librarian, manager, cleaning staff, etc.), collaborate with one another, and foster an open and trustworthy environment, which is relevant to organizational success

3. Adopting an effective leadership style: Effective leadership, in conjunction with the appropriate leadership styles, may increase organizational effectiveness and, as a result, job effectiveness (Makinde & Opeke, 2017). They also stated that companies all over the world rely largely on the degree of leadership of the front-runners, which is frequently impacted by the business environment.

4. Hiring employees with the requisite abilities is critical if library directors are to meritoriously manage academy libraries in the digital age.

5. Staff training and retraining: According to Chiware (2007), the digital revolution has brought both possibilities and problems to African university libraries and research organizations. To thrive in the digital era, African university libraries must guarantee that their staff is well-equipped to launch and manage digital resources. Staff and patron training is required for the library's adoption of ICT (Anunobi, Nwakwuo, Oga &Benard, 2011).

CONCLUSION

The management and administration principles should be introduced into the library environment by library managers in order to effectively and efficiently serve the university community and beyond. This is necessary for university libraries to live up to expectations in the twenty-first century.

Due to the fact that technology is today viewed as the in thing, from which the library as an organization is not exempt, this is desperately needed in the current generation. When it comes to addressing the information needs of library customers, library executives (Library Managers) must seriously be proactive, active, and responsive.

REFERENCES

Anunobi, C. V., Nwakwuo, O. P. Oga, M. C. & Bernard, I. I. (2011). The adoption of ICT for library and information services. Available online at: https://works.bepress.com/chinwe_anunobi/5/

Berg,S. HoffmanK. and Dawson, S. (2010) "Not on the same page undergraduates' Information Retrieval in Electronic and Print Books," The Journal of Academic Librarianship, vol. 36, pp.518-525,

Boyd D. and Ellision, N. (2007) "Social Network sites: Defination, history and scholarship,"Journal of Computer-Mediated Communication, vol. 13, pp. 210-230, doi: 10.1111/j.1083-6101.2007.00393.x

Chiware, E. R. T. (2007). Training librarians for the digital age in African university libraries. Available online at: https://archive.ifla.org/IV/ifla73/papers/Sat1-Chiware-en.pdf

Ezeani C. and Igwesi, U.".(2012). "Using Social media for dynamic Library Service Delievery: The Nigerian Experience".[Online]. Available: http://digital commons.unl.edu/libphilprac/804

Hsieh, P. Chang, P. & Lu, K. (2000). Quality management approaches in libraries and information services. *Libri,* 50, 191-201.

Igun, S. E. (2013). Problems encountered by Nigerian university libraries. *Nigerian Libraries,* 46 (2), 87-101.

Jenkins, F. W. (2011). The role of leadership in library administration.*Library* . *Student Journal,* 6 (12).Retrieved fromhttp://www.librarystudentjournal.org/index.php/lsj/article/view/278/316.

KaleliogluF. andGulbahar,Y. (2010) "Investigating the usage of blogs in educational settings from multiple intelligences perspective," The Turkish Online Journal of Educational Technology, vol. 9, pp.132-144,

Madu, C. C. &Azubogu, N. (2017). Impact of the application of information and communication technology (ICT) in information dissemination. *The Information Technologists,* 14 (2), 169–177.

Makinde, O. O. &Opeke, R. O. (2017). Leadership style and job effectiveness of librarians in south-west Nigerian universities. *Lagos Journal of Library & Information Science, (LAJLIS),* 6 (1/2), 105 – 120.

Nwosu, M. C. (2007). The imperative of quality assurance in the management of the libraries of Abia State University, Uturu and Michael Okpara University of Agriculture UmudikeUmuahia.*The Research Librarian,* 1 (2), 35 – 45.

Ojo, J. O. (2012). Information and communication technology in the twenty first century: its

potentials and emerging challenges. *Jewel Journal of Librarianship* 4, 92- 99.

Omekwu,C. (2008). "Cataloguers in the global network environment," The Electronic Library, vol. 26, pp.188-201,

OpekeR. andOnuaha,U.(2013). "Librarians' Use of Social Networks in Nigera,"PNLA Quarterly, vol. 77, pp.95-103,

Philips, A. (2014). What do we mean by library leadership: Leadership in LIS education. Available online at:

Purushotam, T. (2008) Information technology and library evolution, APH Publishing: New Delhi, pp.256

Purushothama, G. M. (2015). Change management strategies and motivation in library and informationcentres in coastal Karnataka. Proceedings of the Third Asia-Pacific Conferenceon Global Business, Economics, Finance and Banking, 17 – 19 July, Singapore.

Prabhu, D. (2016)"Application of web 2.0 and web 3.0: An overview," International Journal of Research in Library Science, vol.2, pp.54-62,

Ringeera, L.K (2007). A survey of the challenges facing the use of digital libraries in Kanya. Retrieved 8th August 2018 from e – repository. Uonbi.ac.ke >

Rogers, C. (2009) "Social Media, Libraries and Web 2.0: How America Libraries are Using New Tools for Public Relations and to Attract New users," pp.1-7.

Sarasvathy, P., Nambratha, G. R. &Giddaiah, D. (2012). Changing roles of the librarians in the virtual / digital Era. *SREls Journal of Information Management*, 49(5), 495 – 500.

Tam, L.W.H. & Robertson, A. C. (2002). Managing change: libraries and information services in the digital age. *Library Management*, 23 (8/9), 369 - 377.http://hdl.handle.net/10722/48727.

Thanuskodi, S. (2012) "Use of Online Public Access Catalogue at Annamalai University Library," International Journal of Information Science, vol. 2, pp. 70-74, doi:10.5923/j.ijis.20120206.01

Thomas, V. K., Satpathi, C. &Satpathi, J. N. (2010). Emerging challenges in academic librarianship and role of library associations in professional updating. Library Management, 31 (8/9), 594 - 609

Uzuegbu, C.P & MC Albert (2012). Digital librarians and the challenges of open access to knowledge: The Michael Opara university of Agriculture Library experience. Library philosophy & practice.Accessed 8th June 2018 from https://unilib.unl.edu/LPP/.

Weiner, S. G. (2003). Leadership of academic libraries: a literature review. *Education Libraries,* 26 (2), 5 -18

Yaya, J. &Adeyokun, B. O. (2011). Digitization of library services in Nigeria: from traditional to electronics library. *Jewel Journal of Librarianship*, 3, 127 – 134.