

Research

Copyright and digital revolution in Nigeria libraries: The need for digital professional skills by librarians

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Digital revolution has posed significant threats and distortions on library service delivery and the copyright system that originally exists in the provision of traditional information resources by librarians to users. Hence, this study enumerates the need for librarians to update their professional skills and competence to keep abreast in the growth and development of library caused by the continuous digital revolution in the information society. Such professional skills and competences needed by librarians in ensuring the provision of adequate and efficient access to digital information resources include media, computer, digital, information, technology, and visual literacy skills coupled with the necessary need to maintain the copyright of authors' ownership of the digital materials provided to users. It was recommended that the management of the public libraries should provide constant training and workshop for skill acquisition and development for librarians; and that necessary attention should be given to the amendment of previous copyright system to embrace the digital revolution and the continuous growth of the libraries in Nigeria.

Key Words: Copyright, digital professional, Libraries, Librarian skills, digital revolution, information resources. Nigeria

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INTRODUCTION

Information and Communication Technology (ICT) has posed several significant impetus and transformations on library activities and operations. In the past, libraries operate in the traditional form with physical buildings and the librarians major functions were to collect and develop, process and the provide services for users through printed books with little or no computer use (Adamou and Ntoka, 2017). These traditional library activities were however significantly cumbersome and difficult for the librarians (Olatokun and Omiunu, 2019). However, the library and its activities were soon affected by the ICT

revolution hence, library activities became digitized. According to Olatokun and Omiunu (2019), digital library (DL) tends to provide a combination of libraries activities and services through networks for users to access electronic information from different location hence, increasing accessibility. However, Ogunsola (2011) and Adamou and Ntoka (2017) noted that the traditional libraries as buildings will continue to exist and support the digital libraries hence, the traditional academic libraries would co-exist with digital libraries opportunities.

In addition, Onoyeyan and Awe (2018) noted that librarians are also expected to protect intellectual property rights of creators. There are three main types of

Intellectual property rights and includes patents, copyrights, and trademarks. Patent law protects inventions that demonstrate technological progress. Copyright law protects a variety of literary and artistic works, including paintings, sculpture, prose, poetry, plays, musical compositions, dances, photographs, motion pictures, radio and television programs, sound recordings, and computer software programs. Trademark law protects words, slogans, and symbols that serve to identify different brands of goods and services in the marketplace. According to Onoyeyan and Awe (2018), patent and trademark copyrights relate to industrial property rights while copyright focuses on the protection of owners of property rights in literary and artistic works against those who adopt the exact form of words or arrangement employed by the author in the production of his work (Odunowo, 2002) hence, its focus in this article.

A copyright is a law that gives the owner of a document, musical composition, book, or other pieces of information, the right to decide what others can do with it or it is the right to copy or use another person's work (Fabunmi, 2007). To this end, such created work can only be copied if the owner of such work gives the permission. Hence, this denotes that users who copy such work without the due permission under the copyright law could be arrested for copyright infringement. In Nigeria, copyright law of a work implies that the author of such work has the exclusive right to control certain actions in respect the whole or a substantial part of such work either in its original form or in any form that is derived from the original (Fabunmi, 2007).

Aguirre (2010) noted that the issue of copyright has been found to hamper library service provided by librarians to users. In addition, copyright issues have affected the responsibility of librarians that can open them to charges of copyright violation (Aguirre, 2010). This is because the right of access to information is subjected to the limitations regulated by copyright law (Onoyeyan and Awe, 2018). Copyright law, however, also makes provision for exceptions (Onoyeyan and Awe, 2018) such as carrying out a specified act for research purposes, private use, criticism or review and use in prescribed educational institutions (Fabunmi, 2007; Asein, 2012). According to Asein (2012) and Onoyeyan and Awe (2018), this exception is expected to create a balance between users' access to information and the protection of the intellectual property of creators.

Meanwhile, librarians serve as the custodians of information and are charged with the responsibility of granting access to information to the public and protecting the interests of copyright owners. According to Korletey (2014), the library which include Nigeria libraries is filled with the collections of various information resources which cuts across several formats such as the traditional and electronic formats; and these collections are copyrighted works which the use are subject to the

copyright act of the Federal Republic of Nigeria. Onoyeyan and Awe (2018), indicated that with respect to copyright issues, librarians exhibit some level of ignorance in providing access to these wide array of information resources and in protecting authors' copyright. In addition, Afegbua (2017) noted that most users of the various information resources are not aware of the copyright law in the use of such resources. This is more challenging in the provision of such access to information resources in the digital era. Hence, the need for librarians to possess the knowledge of copyright issues so as to mitigate the misuse of related information resources by users of the library.

According to Oguamanam (2011) and Solanke (2014), copyright system in Nigerian is largely ineffective in controlling the infringement of protected works by users hence, the real impact of copyright on access to information resources is hardly being felt. In addition, the increasing trend in digital technology poses inevitable concerns over copyright-induced barriers to access. For example, the digital technology transforms the manner of production, dissemination and storage of data and information hence, the traditional safeguards and balance that have shaped copyright systems since inception, with a strong concern for access to copyright materials, have been threatened in ways that also affect access to digital materials (National Research Council, 2000). This is because copyrighted materials in digital form can be easily duplicated, but at the same time, access to these materials is now being protected with digital locks and license which is to be obtained by a price (Chuma-Okoro, 2018). Another important challenge that could affect the copyright issue in Nigeria is the high cost of obtaining licenses for the use of copyrighted works, especially materials in digital formats (CIPR, 2002). According to Omiunu (2019), users from developing countries such as Nigeria may find costs too high due to the high level of poverty in the nation hence, potential users may tend to infringe on copyright law. These costs range from cost of server maintenance; cost of updating web page; cost of answering electronic mail from library users who are having difficulty accessing information. Also there is the fixed cost of producing, storage and maintenance of information resources. Hence, the possibility of providing access to information resources at low or no costs has attracted global attention (Hall, 2008). This is because according to Peterson, Emmett & Greenberg (2013) and Omiunu (2019), such information resources provided by the library are the life blood of the academic and information society.

Also, the Development Agenda by the Sustainable Development Goals (SDGs) has emphasized the need to ensure "inclusive and equitable quality education" and to "promote lifelong learning opportunities for all" which is enhanced by the provision of information resources by the libraries through the operation of the librarians

(UNESCO, 2017; Chuma-Okoro, 2018). However, there is a link between the provision of information resource and copyright because the various collections of information resources (which include traditional and electronic formats) that are normally protected under copyright law as works of expression (Chuma-Okoro, 2018). Librarians have the professional duties with respect to copyright materials to meet users' needs placing emphasis on copyright-protected resources to provide the necessary and needed information requested for by users, coupled with the need to respect the intellectual property rights in the protected works of authors (Cochran, 1997 cited in Onoyeyan & Awe, 2018; Fabunmi, 2007). According to Jadhav (2012) the role of librarians in copyright protection include to ensure users have access to copyrighted and public domain works and also to exercise their rights under the exceptions and limitations to creator' rights in the law. According to CIPR (2002), software, textbooks, and academic journals are key items where copyright is a determining factor in pricing and access, and which are also essential ingredients in education and information society. Hence, concerns over the impact of copyright on access to the elastic collections of library information resources have attracted attention (Chuma-Okoro, 2018). These concerns are more exacerbated by the functions and operation of the libraries in the digital era.

Adapting the five laws of libraries by Ranganathan (1957), the library is said to be a growing organism (Ranganathan, 1957), coupled with the development caused by the digital economy, librarians have been tasked to be involved in persistent acquisition of user driven and purpose oriented information resources as well as ensure the effective utilization of its available resources (Nneji, 2018) and also upgrade their professional skills beyond the traditional ones possessed in time past. Digitized library resources provide elastic benefits that spread across the acquisition, organization, circulation, preservation and conservation (Omekwu, 2009 cited by Nneji, 2018). To this end, Egberongbe (2016) posits that for librarians in Africa, Nigeria inclusive to be relevant in the digital era, they need to embrace the new technology use in the library, coupled with the professional skills revolution accompanying the new technology. According to Media Smarts (2017); Omiunu, Longe and Igwe (2019) and Omiunu (2019), the digital era posed a significant need for individuals such as librarian to upgrade their professional skills to remain significant in the information society. These professional skills cut across media, computer, digital, information, technology, and visual literacy skills.

Media literacy implies the ability to access, analyze, evaluate, and produce media. Technology literacy refers to as the proficiency obtained in the use of technology, ranges from basic computer skills to more complex tasks. Information literacy implies the ability to access

information needed and to know how to find it online and how to critically evaluate and apply it. Visual literacy refers to the ability to understand and produce visual messages, whether through objects, actions, or symbols, and it is essential to both learning and communication in the modern society. Computer literacy is the basic and non-technical knowledge about computers and how to use them and the familiarity and experience with computers, software, and computer systems. Digital literacy is the set of competencies required for fully participate in a knowledge society and includes knowledge, skills, and behaviors involved in the effective use of digital devices such as smartphones, tablets, laptops, and desktop PCs for purposes of communication, expression, collaboration, and advocacy.

The multi-dimensional scope of such professional literacy skills and competences coupled with the elastic knowledge of copyright protection to ensure users have access to copyrighted and public domain works exercised under the exceptions and limitations to creator' rights are significant to the operation of libraries in the digital era so as to be able to provide efficient library services to users. This implies that librarians would have to increase their professional skills in library services and also in copyright protection in addition to those skills possessed to run the traditional libraries to be able to function and provide useful and efficient services to users through the libraries in the digital era. According to Fabunmi (2007), copyright violation act are easily carried out in the library hence, the need for an increased awareness to ensure that services provided and rendered by librarians in the libraries protect the economic and moral rights of the authors. To this end, this article tends to investigate copyright and digital revolution in Nigeria libraries and the need for digital professional skills by librarians to be able to function effectively and cushion the challenges accompanying the provision of information resources provided by the libraries and copyright infringements in the digital era in the use of these information resources.

Theoretical Underpinning

This article adapts the five laws of libraries by Ranganathan (1957) which are:

- a. Books are for use;
- b. Every reader its' book;
- c. Every book its' reader;
- d. Save the time of the reader; and
- e. The library is a growing organism.

With the digital growth and development of the library which has affected the library and the services provided to users, some of these five laws of Ranganathan (1957) tend to be ineffective except for the first, fourth and fifth law. For example, with the digital growth and

development, the first law, "books are for use" still hold because e-books are still for use. The second law, "Every reader its' book" still hold because "Every e-reader still hold its e-book". But for the third law, "Every book its' reader" is brought to questioning because in the electronic form, Omiunu (2019) noted that use of an e-book does not affect its use by other users at the same time unlike in the use of the traditional book, hence, several e-users can have access to the same e-book or e-journal at the same time hence, an "e-book or e-journal can have several users at the same time" which cancel the third law of Ranganathan (1957). Also, the fourth and fifth law hold in the electronic versions because, e-resources save time of users and the growth and development of the library posed by the digital revolution cannot be overemphasized.

Hence, the digital revolution has posed a significant challenge on the copyright issues and also the need for librarians to upgrade their professional skills if they would keep their relevance in the information society. Putting into consideration the five laws of libraries by Ranganathan (1957), these could be re-written as:

- i. Information resources are for use;
- ii. Library ensures that readers have access to these information resources,
- iii. Information resources can be used by more than one user and the same time,
- iv. To save time, and
- v. That the library is a growing organism
- vi. Because, library is a growing organism, librarians need to keep developing their professional skills to maintain their relevance in the information society, and
- vii. To also ensure that the copyright of information resources provided to users are protected.

Hence, the seven law of libraries- an update of Ranganathan (1957) five laws of libraries.

METHODOLOGY

The article took the form of a systematic review but harness mostly online information resources through data mining method which cut across electronic journals and books, Web pages, among others. However, it was ensured that recent and relevant information resources related to Copyright and digital revolution in Nigeria libraries and the digital professional skills by librarians are obtained and used for this study. Information resources used cover between 2000 and 2020 to give room for the major trends and transformation in library services and development in Nigeria and also at the global level and also to compare the traditional and digital era librarian

skills towards providing the need for upgraded professional skills for the digital librarian. A content analysis, and a systematic review of relevant articles and information were done to drive relevant argument of the study in order to drive the course of this study. Arguments were directed to the following themes of the study:

- i. Copyright revolution in Nigeria libraries,
- ii. Digital revolution in Nigeria libraries,
- iii. The need for digital professional skills by librarians;
- iv. Copyright and digital revolution in Nigeria libraries: The need for digital professional skills by librarians

Copyright revolution in Nigeria libraries

According to Fabunmi (2007), copyright protects authors of original works such as literary, dramatic, musical, artistic, and other intellectual works. The Copyright Act gives the copyright owner the right to (Fabunmi, 2007):

- i. Reproduce the work in various copies;
- ii. Prepare works that are derived from the copyrighted work;
- iii. Distribute various copies to the public either by sale or other transfer of ownership such as by rental, lease, lending, among others;
- iv. Perform such work publicly;
- v. Display such work publicly;
- vi. Perform such work publicly by means of a digital audio transmission with respect to sound recordings.

According to Olowu (n.a) cited in Fabunmi (2007), infringement of copyright refers to when any individual does the following activities without the license or authorization of the copyright owner:

- i. execute, or causes any other individual to execute an act that is controlled by the copyright;
- ii. Imports or cause to be imported into Nigeria a copy of a work that, if it had been made in Nigeria, would be an infringing copy under this section of the copyright Act;
- iii. Exhibits in public any article with respect to which copyright is infringed;
- iv. Distributes by way of trade, offers for sale, hire or otherwise or for any purpose prejudicial to the copyright owner any article with respect of which copyright has been infringed;
- v. Makes or has in its possession plates, master tapes, machines, equipment or such devices that can be used for the purpose of making copies

- vi. that posed infringements to the original work; Permits a place of public entertainment or business to be used for a public performance of the work where the performance constitutes copyright infringement, unless the person permitting the place to be used for the performance was not aware, and had no reasonable grounds to suspect, that the performance would be an infringement of copyright; and
- vii. Performs or causes to be performed, for the purposes of trade or business or as a supporting facility to any trading or business activity, any work in which copyright subsists.

But digital revolution has posed a significant challenge on the copyright issue. This is because digital revolution has provided elastic digital contents and platforms through the public internet that has affected all spheres of human endeavour hence, this has also affected copyright issues in the use of information resources in digital form (Chuma-Okoro, 2018). Digital information resources posed a threat to and distorts the copyright acts of the previous traditional information resources because, unlike the traditional information resources, the copyrighted materials in digital form are easily duplicated (National Research Council, 2000). Hence, access to such digital information resources are protected with the help of digital locks and licences which could be purchased to have access to such materials (Chuma-Okoro, 2018). In addition, the library has served as middle man to reduce the increased costs of accessing such digital materials by users and at the same time maintain the copyright of the owners of such works. According to Tang (2009) and Samuelson (2015), in trying to provide adequately access to such protected digital works, librarians put into cognizance the copyright laws thereby providing mechanism of exceptions and limitations, allowing only certain uses that do not jeopardize the copyright structure of the owners. Such exceptions and limitations promote social goals that focus on education and basic scientific research purpose (Okediji, 2006).

Digital revolution in Nigeria libraries

The digital era has witnessed the penetration of various digital technologies in virtually every area of human endeavours, which also cuts across the education system (Chuma-Okoro, 2018). The digital revolution has transformed information products production, reproduction, dissemination and uses. There is actually a high elasticity of capacity and efficiency in the storage, manipulation and transmission or distribution of data making it possible for the easy recording, storage and instantaneous transmission of such created data and

information resources. To this end, copies of an existing work can easily be produced and instantly distributed globally at no or low cost. To this end, such created digital work can also be easily manipulated and used to create new works which can also be easily distributed globally at no or low cost. Hence, in the absence of deliberate measures such as copyright law to prevent such activities, the digital content are easily accessed, shared, manipulated, and adapted to the needs of prospective users (Olojo, Adewunmi & Ajisola, 2012).

In addition, with the digital revolution of the internet, users at different location can access digital information individually or in groups without geographical limitations (Olojo, Adewunmi & Ajisola, 2012; European Commission, 2013). However, according to CIPR (2002) and National Research Council (2000), this has attracted diverse and conflicting consequences in the digital technology manifestations hence, has attracted elastic and global attention. Although, there are wide array of open access materials to drive open access initiative (Omiunu, 2019), but users still seeks for other quality information resources and the libraries provide elastic digital information resources through subscription and provide such to users within their academic environment either for no or low cost that is affordable by users.

Consequently, the digital revolution enables the copyright owners of works to have significant control over the access to and use of such content, through technology-assisted technological protection measures (TPMs) and encryption (Chuma-Okoro, 2018) hence, different from the copyright system in the traditional platform. To this end, librarians need to upgrade their professional skills that would encapsulate the copyright issues in the digital revolution era and the growing trend of the libraries posed by digital technology to enhance their efficient provision of library services to users in the information society and at the same time protects copyright of respective materials of owners.

The need for digital professional skills by librarians

According to Ranganathan (1957), the library is a growing organism, and for this reason, and also for the fact that a new era of library has evolved known as the digital library posed by the significant impetus of the global digital revolution, the professional skills and competence exhibited by librarians to provide traditional library services to users are no more relevant in the digital era. To meet the necessary users' information resource needs, librarians need to keep developing their professional skills to maintain their relevance in the information society, and also to ensure that the copyright of e-information resources provided to users are protected (Fabunmi, 2007). If librarians fail to upgrade themselves, Olatokun and Omiunu (2019) noted that the

librarians and the libraries may fail to be relevant in the recent digital era because of the wide array of open access information obtained through the internet by users. Such professional skills needed by librarians in ensuring the provision of adequate and efficient access to digital information resources include media, computer, digital, information, technology, and visual literacy skills (Media Smarts, 2017; Omiunu, Longe and Igwe, 2019 and Omiunu, 2019) coupled with the necessary update of awareness and knowledge of the copyright system in the digital era.

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Copyright system in Nigerian is largely ineffective in controlling infringement of protected works hence, but the increasing revolution of digital technology has further exacerbated its ineffectiveness (Oguamanam, 2011; Solanke, 2014; Chuma-Okoro, 2018). However, the increasing digital revolution which has provided elastic digital contents and platforms in all spheres of human endeavour continuously raise the concern of the inevitability of copyright as a critical factor in ensuring access to the various digital contents (Chuma-Okoro, 2018). In addition, the increasing digital revolution has also pose a challenge in copyright issues through the continuous transformation in the manner of production, dissemination and storage and use of data and information resources. To this end, the copyright systems in the traditional era have been threatened in ways that also affect access to digital information resources (National Research Council, 2000). This is because, unlike the traditional form of information resources, the copyrighted materials in digital form can be easily duplicated but to cushion this, access to such digital information resources is now being protected through digital locks and licences which is to be purchased by respective users before they can have access to such digital materials (Chuma-Okoro, 2018). According to CIPR (2002) and Chuma-Okoro (2018), the high cost of accessing these digital information resources has been known to also constitute a major challenge to users hence, the library has served as middle man to cushion these increased costs of accessing by users and at the same time monitor the copyright infringement by users in the provision of such services to users.

Hence, apart from possessing the relevant professional skills to provide efficient library services to users in the information society as stated by MediaSmarts (2017); Omiunu, Longe and Igwe (2019) and Omiunu (2019), librarians still need to possess the needed skills to cushion the copyright challenges among users in the use of such digital materials. This is because access to digital resources are normally protected under copyright law

hence, the use of such works by users should be subjected to consent of the copyright owner, usually at a cost and any use without the such consent could amount to infringement of copyright (Lewinski, 2008). Moreover, the issue of copyright can potentially place a restriction to access to digital resources that are placed under protection where such consents cannot be easily obtained. These barriers may tend to affect the numerous activities of users such as copying, reproducing the work in formats that are suitable for the potential users, and sharing or using the work to create new materials. These activities are generally exclusively reserved for the owners of such copyright and works and hence, require owners' consent for any third party such as the users to carry out any of these activities. Moreover, at the same time, these activities are often indiscriminately common with users of the libraries (Chuma-Okoro, 2018).

The objective of copyright, like the libraries, is to facilitate access to knowledge resources by the public (White, 2012). However, the libraries collate, preserve and lend out various copyrighted and non-copyrighted knowledge resources to users for their needs; and also provide on-site access to their resources (Adeoye & Popoola, 2011; White, 2012). However, there seem to be a contending of objectives between trying to protect owners' works and to ensure that the public adequately have access to such protected works (Tang, 2009). Hence, copyright laws tend to mediate such contending objectives by providing mechanism of exceptions and limitations, that allow certain uses without the consent of the owner of such copyright with respect to the users interests and that of social policy goals that ensures that the public have continuous access to various resources (Samuelson, 2015).

According to Okediji (2006), such exceptions and limitations tend to promote social goals encapsulated around the library users and uses such as education and basic scientific research purpose through enabling the access to and use of various protected works coupled with encouraging further uses to create other resources. To this end, the exceptions and limitations placed by copyright allow the use of protected work for the purposes of critical commentaries, news reporting, teaching and private study, preservation of materials by libraries and archives, and uses that lack economic significance (Samuelson, 2015). However, due to the fact that librarians do not follow users out of the library when they eventually have access to needed digital resources, there seem to a competing interest between the selfish uses by the users and the exceptions and limitations placed by copyright on the protected works provided by the library to the users. Hence, this could pose a significant challenge to copyright issue with respect to digital information resources.

Digital libraries are the digital face of traditional libraries. According to Shetta(2010), digital environment

make issues related to copyright law difficult as the librarian is torn between providing digitized resources and respecting rights of copyright owners. Unlike printed materials, close monitoring and restriction of usage of digital materials is very difficult. This is because of the ease of digital information distribution across the world through e-mail, electronic bulletin board, websites and networks. There is also the ease of creating digital or digitized copies of materials including text, audio and video. The use of primary and secondary mass storage media has also made it possible for library users to download, store, display and print. These downloaded documents can be modified and forwarded to others without the knowledge of the copyright owner and the library, thus violating the copyright laws.

Though to an extent, the digital revolution enables works' copyright owners to have significant control over the access to and use of content, through technology-assisted technological protection measures (TPMs) and encryption (Chuma-Okoro, 2018). This is because digital information resources pose a new form of copyright-protected use, creating additional burdens on users because they require fresh copyright clearances unlike that posed by the traditional resources unless the act of digitisation is for purposes covered by an exception or limitation (Ginsburg, 2004; Christie, 2007; Chuma-Okoro, 2018). Hence, the revolutionary transformation of the digital technology on data and information resources has distorted the traditional meaning and scope of copyright protection.

For example, the concept "access", which traditionally was taken to be "given for the user", has received another transformation meaning that could mean "the act of copying and performance" (Litman, 2006; Cronqvist, 2010). However, there seems to be a dichotomy between the concept "copying" and "access to" and this has allowed copyright law to only restrict some activities such as those of "copying" but not of "access to" (or use) of a any copyrighted work. Also, the concepts of "publication", "distribution" and "communication" has also received distortion in the digital revolution because, there has been no clear distinction between what is actually public and what is private on the internet (National Research Council, 2000). Hence, various activities which termed private acts by users and are exempted from copyright, now qualify as "publication" or "communication to the public through the borderless and openness of the internet hence, have inevitably compromise copyright's balancing mechanisms in the use of digital resources (National Research Council, 2000). Hence, the need for professional skills that encapsulate the copyright issues by librarians to enhance the efficient provision of library services to users in the information society.

According to Media Smarts (2017); Omiunu et al. (2019) and Omiunu (2019), such professional skills needed by librarians which are posed by the digital

revolution on the library activities include media, computer, digital, information, technology, and visual literacy skills. With respect to librarians, and putting into consideration the upgraded law of library by Ranganathan (1957) as provided in this study, media literacy implies the ability of librarians to effectively and efficiently access, analyze, evaluate, and produce media to meet users' needs. Technology literacy refers to as librarians' proficiency to use of recent technology due to the technology revolution which ranges from basic computer skills to more complex tasks to access, analyze, evaluate, and produce information resources to meet users' needs. Information literacy implies the ability of librarians to access digital information needed by users and to know how to search for them online and how to critically evaluate and assist users to meet their needs. Visual literacy refers to the ability of librarians to understand and produce visual messages, whether through objects, actions, or symbols, and to fit it into library users needs in the modern society. Computer literacy refers to the ability of librarians to professionally possess and use the basic and non-technical knowledge about computers, software, among others efficiently to meeting users' needs. Digital literacy is the set of librarian competencies that cuts across knowledge, skills, and behaviors involved in the effective use of digital devices such as smartphones, tablets, laptops, and desktop PCs for library service purposes for communicating, expressing, collaborating, and advocacy to meet users' library service needs.

In addition, librarians should possess an ample knowledge of the copyright system posed by the digital revolution and such knowledge should be used to provide library services to and also educate the public library users revolving around the exceptions or limitation of the act of copying, use and performance as stated by Ginsburg (2004); Litman (2006); Christie (2007) Cronqvist (2010) and Chuma-Okoro (2018). Such professional knowledge, competences and skills could help librarians remain significant in the growing effect of library posed by the digital revolution in the information society and also providing efficient access to users of digital information resources in Nigeria libraries and at the same time maintaining the right of the copyright of owners of such digital resources.

CONCLUSION AND RECOMMENDATIONS

Digital revolution posed significant threats and distortions on library service delivery and the copyright system that originally exists in the provision of traditional information resources by librarians to users, coupled with high cost of information resources in a digitized library environment. This has also posed a significant threat to librarians' activities hence, the need for librarians to

update their professional skills and competence to keep abreast in the growth and development of library in the information society. Such professional skills needed by librarians in ensuring the provision of adequate and efficient access to digital information resources include media, computer, digital, information, technology, and visual literacy skills coupled with the necessary update of awareness and knowledge of the copyright system that accompanied the librarian's operation in the digital era. To this end, it is recommended that:

- i. The management of the public libraries should provide constant training and workshop for skill acquisition and development for librarians,
- ii. Such skills should include media, computer, digital, information, technology, and visual literacy skills development with focus on the librarian profession,
- iii. The Nigeria Copyright Act should also be upgraded to meet the digital revolution challenge posed on the previous copyright act that focuses on the traditional format of information resources,
- iv. There is also need for the creation of awareness and development of the Copyright act that embraces the digital revolution in Nigeria by the federal government of Nigeria and other policy makers.
- v. This creation of awareness and development of the Copyright Act that embraces the digital revolution should cut across the librarians and the public users of the libraries especially the digital format.
- vi. Grants for empirical studies should be provided to investigate the level of such awareness and users needs with respect to the Copyright Act in the use of digital information resources as provided by the libraries for the public.

Also, in finding solution to high cost of information resources in a digitized library environment in Nigeria, the following should be done:

- i. There should be partnership between libraries and digital technology companies during digitization process for the purpose of cost reduction and effectiveness.
- ii. Libraries should network to share costs as the cost of subscription and data base reduces when increased number of libraries and other organizations subscribe.
- iii. The government of Nigeria should encourage use of open source software, as open access of electronic resources will address cost of software
- iv. Finally, Nigeria libraries should seek more grants and other sources of funding. While the government on its should provide adequate funds

for policy implementation in libraries.

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