# Integration of Information and Communication Technologies (ICTs) For Library User Motivation: A Strategy towards a Knowledge-Based Nigeria

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**A b s t r a c t**

This paper is an attempt to explore on the role of Information and Communication Technologies in enhancing library user motivation in Nigeria.  For the paper to justify its position, conceptual issues were clarified and defined. Maslow's Hierarchy of Needs Theory was adopted as the guiding theoretical perspective to the understanding and justification for library user motivation towards acquiring required skills that have to do with know-what, know-why, know-how and know-who for effective knowledge- based societies. The paper further explains the rationale for ICTs integrations in library information service delivery and it also review some situation in other developing countries of the world and Nigeria on the concept of Information and Communication Technologies (ICTs) and Library Service, and the need for library user motivation. Moreover, challenges that could undermining ICTs' integration for user motivation by library staff were carefully identified and measures as strategies for addressing the challenges were equally proffered significantly for economic wellbeing of library users in Nigeria.

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## Background to the Study

Information is a commodity that is recognized world over and it is the bedrock that facilitates meaningful achievement of sustained social and economic wellbeing. This keeps developed countries in an advantageous position and having an inch over the less developed and developing nations of the world. The integration of ICT facilities are considered as tools that can greatly assist in complementing Library information service delivery to users in general. Information is inevitable in every area of human endeavor as each discipline is faced with its own unique features and demands. Library organization is not an exemption. This sector is primarily accountable for preserving, processing and dissemination of information relating to cultural heritage of its community. Users constitute the main patrons of this information organization. Library users would only appreciate and be willing to change when they know among other things the derivable benefits, viability and time duration and opportunity cost the chance process would entail. Therefore, with the required creation of awareness, patience and application of appropriate instructional strategies and guidance, library users could be guided to accept and successfully learn new things.

Library effectiveness is largely determined by the quantity usage of its resources and how it motivates usage of such resources. It is natural that high performing information organizations try to motivate and retain their clienteles and provide them with all pre-requisite support for effective use of information resources. However, the provision of basic information resources alone might not lead to individual satisfaction if users of such resources are not motivated. Librarians face tough motivational challenges especially through the use of non financial motivators and it seems helpful for libraries to integrate Information and communication technologies for effective user motivation. The purpose of motivation study is to energize the bahaviour of library user towards utilizing library information resources (Lee, 2007). The goal is not manipulating library users do what librarians want them to do, but making them reach their highest level of satisfying their information need and getting them excited to do so. This paper attempts to explore on the role of ICTs in enhancing library user motivation. For the paper to justify its position, conptual issues were defined. It further explains the rationale for ICTs integrations in library information service delivery and it also review some situation in other developing countries of the world and Nigeria inclusive for sustainable development. Challenges as factors that could undermining ICTs' integration for user motivation by library staff were carefully identified and measures as strategies for addressing the challenges were equally proffered significantly for economic wellbeing in Nigeria.

## Research Objective

The objective of the paper is to examine the Integration of Information and Communication Technologies (ICTs) For Library User Motivation as a strategy towards a Knowledge-Based economy with specific reference to Nigeria.

## Methodology

Information needed to actualize this paper was gathered from secondary sources of data which were obtained from textbooks, journal articles, conference papers, online sources etc. The content analysis was employed since the paper is a desk paper. This involves reading meaning into materials consulted for purpose of achieving a reliable conclusion.

**Concept and Significance of Library User Motivation**

The word Motivation is derived from the Latin word "movere" which means to move. It is the inner force that moves the people to work (Sharma, 2011), and a driving force in a person that makes him to do something willingly (Ifeyinwa, Nkechi, Aghauche, 2015). Motivation is also the determinant of an individuals thought and action: why an individuals behavior is initiated, persists, and stops, as well as what choices are made by the individual (Weiner, 1992). Also Ferguson (2000) defines motivation as an internal process that pushes or pulls the individual, and the push or pull relates to some external event. Motivation can also affect an individual's perception, learning, and attitudes. Perception is the process by which an individual selects and interprets external and internal stimuli. The final goal of perception is to create a meaningful picture of the world (Lee, 2007).

Motivation is of utmost importance in the effort of library user attraction. It is aimed at inspiring library users to work independently in such a way to produce best results in the use of information resources. User motivation is important in libraries. It is the "degree to which an individual wants and chooses to engage in certain specified manner (Mitchell,1982). Ferguson (2000), further opined that Motivation is a dynamic internal process that energizes and directs actions and action tendencies. Motivation pushes or pulls the individual. Environmental antecedents and goals provide sources of motivation. In library environment, the purpose of motivation study is to energize the bahaviour of library user towards utilizing library information resources (Lee, 2007).

According to Ifeyinwa, Nkechi, Aghauche (2015), some motivators are financial whereas others are non financial. Financial motivators include wages, salaries, bonuses, allowances, fringe benefits etc. However, it is pertinent to note that library user motivation involves a continuous process of the use of non-financial motivators which include praise, recognition, incentives, self enrichment, opportunity for growth collaborative goal setting etc. Expectedly, positive motivators encourage and induce library users to work harder towards a knowledge-based economy.

It is important to note that, a library is an organization whose mission is to provide information to its users. Library users are the human resources, who utilze information services using library resources. Though referring to students, Small (1998) emphasized that Library users with a high need for achievement prefer moderately challenging learning tasks (e.g., using an online search strategy to locate relevant research materials). Library users who are high in "need for affiliation" prefer activities that allow them opportunities to interact with other library users(e.g., cooperative learning teams). Library users with high need for power prefer activities in which they can assume leadership roles and have an impact on others. With an understanding of achievement motivation, library media specialists can collaborate with classroom teachers to design instruction that incorporates a variety of learning activities and products to satisfy the range of achievement motivation needs. Motivation may be defined as psychological forces that determine the direction of a person's behavior in an organization (Senyah, 2003). Librarians try to motivate users to contribute their inputs for effective library services, and to ensure that these users satisfy their individual information needs at a high level. When library users are highly motivated, they tend to direct their energies toward meeting their informational needs and to display optimum levels of information literacy

performance. How well the services are utilized depends on how well such users are motivated. Hence, It is the responsibility of the library management to discover the potential of their user community, and to apply the appropriate motivational strategy.

**The Need for Library User Motivation**
Basically, learning span form cradle to grave. The process of learning begins the birth of a child and continues till his death. New challenges and their likes often necessitate some kinds of learning for purposes of proper adjustment, living up to expectations and being adequately equipped to face immediate and anticipated tasks expected of every individual. Thus learning is inevitable in every area of human endeavor as each discipline is faced with its own unique features and demands. Library organization is not an exemption. This sector is primarily accountable for preserving, processing and dissemination of information relating to cultural heritage of its community. Users constitute the main patrons of this information organization. They are often classified according to the kind of information they required or according to their level of involvement in literacy education. For instance, we have people that need information documented in audio format only, video format only or both, or written in braille format etc., as the case of blind or visually impaired library users. This recognition and accordance of necessary consideration for the composite feature of library users remain crucial to the success of any type of library be it public, special, school or academic which aimed at motivating users to perfect certain innovations.

As the library's most valuable asset, library users in Nigeria must be encouraged to upgrade their educational and information literacy level. Efforts must also be made to sharpen their skills regularly with the use of modern information and communication technologies within and outside the Library. Certain considerations are necessary for a meaningful discourse on library user's motivation and this depends on several factors. For instance, library users would only appreciate and be willing to change when they know among other things the derivable benefits, viability and time duration and opportunity cost the chance process would entail. Therefore, with the required creation of awareness, patience and application of appropriate instructional strategies and guidance, library users could be guided to accept and successfully learn new things about their libraries.

**Efforts towards Library User Motivation**
It is pertinent at this juncture to identify some practical measures which could sustain library users not only in continuing to learn new information skills but to remain active library users. To achieve this, certain considerations are crucial and inevitable. These are:
1. Viability: Before selling new idea to library users, it is proper for the librarian to know the degree of viability and sustainability of the new idea, technology or innovation.
2. State of readiness: it is important to assess the state of library users readiness to cope with the demand of the new technologies or approaches.
3. Outreach approaches: there is a the need for identification of possible outreach approaches which could be adopted in order to effectively impact library users within the shortest possible time. A user will want to know whether he is asked to adopt a new technology or practices, its possible short and long-term relevance to the satisfaction of his information need, and opportunities as compared with the already known methods.

4.      Beliefs and Taboos:  Man is a religious being who is often guided by what he beliefs in. Idowu (1991) affirmed that for satisfactory result in handling community issues, it is important to consider the complexity of its culture and systems of beliefs.

Having identified all the above, the following practical steps could be taken for motivational purposes:

a.      Establishment of demonstration room: it is often said that seeing is believing. Such demonstration rooms will draw attention and justification for change. As much as possible such demonstration avenues should be placed at strategies and conspicuous locations for library users to see, appreciate and desire.

b.      Varied awareness programmes:  there is the need to create sufficient awareness through different possible means of dissemination to all target users. This should be sustained until all those concerned are fully aware of the new technologies or techniques of their usage.

c.      Public lecture: this is a form of library awareness programme. It involves talking in which sessions for questions and answers are built into the lecture. This helps librarians to know how the users feel, allay possible fears and make clarifications.

d.      Library show: this will afford librarians the opportunity to display their information resource and services, promote interaction and exchange ideas ideas with their patrons by learning from one another. This popularizes their services to the library users as well as updating their knowledge on matters relating to their information needs.

e.      Sustained Research: knowledge is never static. There is always room for improvement and better ways of doing things. There should therefore be sustained research activities covering all libraries and instant implementation of the research findings.

**Knowledge-Based Economy**

The term Knowledge is simply viewed as a familiarity, awareness, or understanding of someone or something, such as facts, information, descriptions, or skills, which is acquired through experience or education by perceiving, discovering, or learning. And knowledge acquired by  human beings ... has always been central to economic development. But only over the last few years has its relative importance been recognized, just as that importance is growing(Jeurling, Kapil and Hrkac, 2003). Knowledge is now recognized as the driver of productivity and economic growth, leading to a new focus on the role of, technology and learning in economic performance. *According to* Organization for Economic Co-Operation and Development (1996), *the term knowledge-based economies* refer to economies which are directly based on the production, distribution and use of knowledge and information.

However, it is not a new idea that knowledge plays an important role in the economy. The OECD economies for instance, are increasingly based on knowledge and information. This concept *knowledge-based economy* stems from this fuller recognition of the place of knowledge and technology in modern economies.

Knowledge-based economy involves members of a society to know-what, know-why, know how and know-who. Knowledge is a much broader concept than information, which is

generally the "*know-what*" and "*know-why*" components of knowledge. The term *know-what* refers to knowledge about facts, *know-why* refers to knowledge about principles and laws governing facts, *know-how* refers to skills i.e abilities to do something with one's factual knowledge, *know-who* refers to the ability to trace knowledge providers across disciplines and specializations (OECD, 2000).

In addition, the structure of Knowledge-based Economy according to Gudauskas (2012), should look like:

1. Education systems that ensures that citizens are equipped to acquire, use, and share knowledge
2. Innovation systems that bring together researchers and businesses in commercial applications of science and technology
3. An information society infrastructure that gives all people access to affordable and effective information and communications
4. An economic and institutional framework that ensures a stable macroeconomic environment, competition, flexible labor markets, adequate social protection

Therefore, Information dissemination and accessibility is underlying factor for sustainable economic, political, communal, and social development... without information, we don't function individually and definitely not as a society. Libraries as information institutions play a key role as information pipeline (Gudauskas, 2012). Hence, it is necessary for the Nigerian Library user to be motivated for his effective improvement in production, distribution and use of knowledge and information.

**The Need for the Integration of ICTs for Library user motivation**
The primary role of a library is to provide information service to support the educational, recreation, cultural, economic and technological endeavours of members in their respective communities (Afolabi and Abidoye, n.d). In addition, Afolabi and Abidoye, added that, several services provided in the libraries are complimented by available facilities, some of which are technology driven. In modern library, technology application in the provision and performance of library services are provided by libraries to patrons. The utilization of emerging technologies in recent times in libraries worldwide has proved beyond reasonable doubt, that a library whatever its services, can perform better when facilities are adequately provided to enhance access to the content of the library.

Information and communication technologies (ICTs) is the application of computers and other technologies to the acquisition, organization, storage, retrieval and dissemination of information (Nwachukwu, 2007). Similarly, Shariful and Nazmul (2006), as quoted by Ajaegbu, Ehioghae and Oreoluwa (2014), defined ICT as the use and application of computer, telecommunications and microelectronics in the acquisition, storage, retrieval, transfer and dissemination of information. Also Ayodele (2002) defined ICT as electronic based technology generally used to retrieve, store, process and package information as well as provide access to knowledge. According to Ajaegbu, Ehioghae and Oreoluwa (2014), the concept of ICT has transformed the world in all aspect of lives include the libraries and studies have also shown that for an effective library service in this modern age, the use of information and communication technology should be integrated in its service. In relation

to this, it has become a necessity for all Nigerian libraries to adopt and harness from the good deeds ICT has brought to the library services especially towards a knowledge-based economy.

Also Dike (2000) claimed that instant access to information from a multiplicity of source is one of the major roles of ICT integration to library operations. Moreover, Nwankwo (2006) opined that ICTs integration to library services could be seen as the best way that could be used to motivate people to adequately solve their literature need for effective research activities. This is because their integration to library operations greatly helps in the provision of efficient reference and information services, the utilization of network operations such as cataloguing, authority control, inter library loans and cooperation and in the participation of international bibliographic project. However, in this context, information and communication technology is the use of electronic devices such as Radio, telephones, internet, TV/ Video system, to store, retrieve and disseminate information in the form of data, text image etc.

**Information and Communication Technologies (ICTs) and Library Services**
The various service provided in the libraries are complimented by available facilities, some of which are technology driven. The integration of emerging technologies in libraries worldwide has proved beyond reasonable doubt, that a library and its services can perform better when its users are adequately motivated. This motivation can be sustained through the application of such technologies and some of services provided by libraries which by extension motivate user to fully utilize include those ten dimensions of service quality applicable to library suggested by Parasuramna; *et al.* (1985) which are more specific and comprehensive as follows:
a.      Reliability is the ability of the organization to provide the promised service accurately. Therefore, this integration of ICTs in libraries will assist librarians in providing reliable information services (such as Current Awareness Services, Referral Services, Selective Dissemination of Information Services etc.) which will motivate users towards constant use of the library resources.
b.      Responsiveness is the willingness to help consumers and to provide prompt service. The integration of mobile technology for instance, offers immediacy and prompt information services.
c.      Credibility is the degree to which consumers (library user) trust the service provider (library staff).
d.      Competence is the employees. Knowledge and their ability to inspire trust and confidence.
e.      Access is the ease of approachability. Most ICTs facilities are easy to access than the conventional ones, hence they tend to motivate their user especially in libraries.
f.      Courtesy is staff politeness, consideration, and friendliness. Since some of the ICTs facilities are interactive and collaborative they tend to increase friendship between library staff and their users.
g.      Security is the freedom from risk and danger. The library user needs to know that all this requested information are usually secured for his future usage through back-up and other means of information security within his library.
h.      Communication is keeping consumers informed about the service. This involves use of several means of communication between libraty staff and his user. For instance,

Blogs often include a comments feature which allows the reader (*user*) to engage in discussion with the blog's writer (*library staff*) and other readers by directly attaching a post to the daily or topical entry (Radzikowska, 2003).

i.    Tangibles are physical elements of the services such as facilities, equipment, and personnel.
j.    Understanding/knowing the user involves trying to understand the users needs and specific requirements; providing individualized attention; and recognizing the regular user and important determinant of quality in high-contact customized services. (Ghobadian, Speller, & Jones, 1994).

Also Idowu (2011) enumerated the following library services according to the international standard:

1.    Reference services
2.    Document delivery service
3.    Borrowing, renewing and reserving
4.    Computerized interactive search
5.    Technical services
6.    IT services
7.    E-library services
8.    Serials services
9.    Exhibition and displays
10.   User education services
11.   Selective dissemination of information (SDI)
12.   Current awareness services (CAS)
13.   Referral service
14.   Reprogprahic Service
15.   Counseling service
16.   Webliographic service

In addition, Zhou (2005), as quoted by *Osawele and Uzairue (2013)* further added that digital library services includes:

a.    Analyzing and processing different kinds of information resources;
b.    Activating and finding potential value hidden in any information;
c.    Providing added-value information products and services at right time and right and place;
d.    Finding the right users for information and provide personalized and tailored services

**Theoretical Under Pinning**

Arnold (1991) as quoted by Ekere (2010) Said that, Motivating people is about getting them to move in the direction you want them to go in order to achieve a result. However, Theories of motivation can help us understand why people behave as they do (Ugah, 2008). Senyah (2003) opined that, Maslow's needs theory seems to be more applicable to developing countries than the developed world. The need hierarchy theory of motivation is associated with Abraham Maslow, a clinical psychologist by profession. His framework, developed in

1943, is one of the most widely used theories for the study of motivation in organizations. Maslow considered humans as having needs and wants (Ekere, 2010). Thus, Maslow's Hierarchy of Needs Theory is adopted as the guiding theoretical perspective to the understanding and justification for library user motivation towards acquiring skills that have to do with know-what, know-why, know how and know-who for effective knowledge-based societies.

The theory posits that behavior at a particular moment is determined by the strongest need. Maslow hypothesized five levels of needs: physiological, safety, social, esteem, and self-actualization (Ugah, 2008). According to Ifeyinwa, Nkechi, Aghauche (2015), Maslow's Hierarchy of Needs Theory believes that people are motivated by a sequence of needs that are arranged in hierarchy of importance. These needs as follows:

**Physiological Needs**: This comprise of the need for basic amenities of life such as air, water, food, clothing and shelter.

**Safety or Security Needs:** These include the need to be free from physical danger and the fear of loss of job, property, food, clothing or shelter.

**Belongingness/Love Needs**: This is third in the hierarchy of needs and can only become a motivational factor when the other two lower order needs have been met. Belongingness needs include the need for love and affection and the need to be accepted by one's peers.

**Esteem Needs**: Comprises of two different sets of needs: the need for a positive self image and self respect and the need for recognition and respect from others. (recognition, power, status, attention and admiration)

**Self Actualization Needs**: They involve realizing one's potential for continued growth; the urge to become what one is capable of becoming or have the potential to become (growth and self contentment).

**Maslow's Hierarchy of Needs Application in Library**
**Physiological Needs:** In practice, physiological needs are met through adequate environment well equipped with proper ventilation, good housing facilities etc.

**Safety Needs:** The library management can motivate its users through information search facilities such as good network packages, electric power assurance, mechanism etc.

**Social/Belongingness Needs:** These needs can be provided through collaborative work, friends of library associations, social interaction, welfare package, contacting library staff in times of joy and distress etc.

**Esteem Needs:** Can be met through spacious offices, job challenging assignments and other opportunities which will foster a sense of accomplishment.

**Self actualization needs:** Can be met when the library management creates opportunities that will enable its users to grow and attain desired height.

**The Table below Summarizes the Application Maslow's Hierarchy of Needs in Libraries**

| Maslow's Hierarchy of Needs and Applications in Libraries | |
|---|---|
| *Physiological needs* | Clean Air<br>• Enough work space<br>• Ergonomically-designed workstations (designed for comfort or to minimize fatique).<br>• Appropriate lighting<br>• Appropriate temperature<br>• foodservice facilities |
| *Security needs* | • Safe workplace<br>• Job security |
| *Social Affiliation* | • social activities<br>• Teamwork<br>• Friendship<br>• Sense of belonging<br>• Affection |
| *Self-esteem* | • Recognition<br>• Awards<br>• Prestige<br>• Autonomy |
| *Self-actualization* | • Well-being of others<br>• Accepting self<br>• Meaningful work |

**Source**: Adapted from *Hosoi (2005)*

**Information and Communication Technologies for Effective Library User Motivation**
The availability of information and communication technologies (ICTs) in libraries have today not only increased and broadened the impact of information resources at their doorsteps, but also placed more emphasis on effective and efficient services. Their applications in libraries, commonly known as library automation, have indeed continued to ease and promote quick and timely access to and transfer of information resources that are found dispensed round the globe ( Afolabi & Abidoye, n.d).

It is obvious to note that, the applications of Information and Communication Technologies (ICTs) have broadened the walls of library operations and services. As a result of this, Several libraries portray examples on the integration of various ICTs components in their services. For instance, Pacheco, Kuhn and Grant (no date) brought that, The Cambridge University Medical Library blog, entitled "Medical Library" is kept by both the Reader Services Librarian and the Collection Development Librarian for users of the Medical Library. The blogroll

provides links to the Library website, as well as a few external sites of interest to the subject. Posts are wide ranging, and cover user service information such as opening hours, ejournal access, and library training sessions, as well as in-depth subject specific information about relevant web resources, information on news stories, best practice information, and clinical information. Also Hull York Medical School Library keeps a blog for its students, entitled "News: News from HYMS Library services. These Posts are all user services based, covering opening hours, database trials, ejournal access, advertising library surveys, and other topics of this nature. New posts are made weekly. Moreover, Nigerian Library Association (NLA) maintains a blog as an official channel for motivating library and information science professionals in Nigeria.

However, the Portsmouth City Library (UK) applied  Wikis to motivate their users with customized services such as wiki for book lovers and readers, and inviting them to share experiences through reviews and recommendations. In addition, The Library of Congress even worked with Flickr to make the precious national historic photographs collection accessible worldwide (Khan, 2013). A flickr is an online image sharing application used to share images within communities and allows users to upload, share and tag images.

ICTs provide effective communication which is vital for the successful functioning of every organization (Senyah, 2003).  Good communications underline effective relations and enhance the general quality of working life, motivation, morale and output. Participative communication helps to build up confidence in librarians by the library users because there is mutual respect among them.

Similarly, the integration ICTs also facilitates Participative management. Participative management is the process where subordinates (*library users*) actually share a significant degree of decision-making power with their immediate supervisors (*library staff*) outside their own subordinate pyramid. The committee system, with membership including the lower-rank people, is one of the acceptable steps for implementing participative management (Senyah, 2003).

The integration ICTs in library facilitates effective communication to library users on information on how to satisfy physiological needs of clean air, enough work space, designed workstations for comfort or to minimize fatique, Appropriate lighting, Appropriate temperature and foodservice facilities. Bradley,   (n.d) stated that "many public and community libraries around the world are the only place where people can get reliable access to light and electricity to read, study and apply for a job". Hence, Coldwell, Craig, & Goold (2011) propose that, the challenge for the modern educator then is to "engage a diverse range of students (*library users*) using an ever increasing range of e-Technologies now available.

The following are some of the ICT facilities or resources that can be integrated effective library user motivation.
**Television**: This technology motivates library user to employ two major senses of seeing and hearing when satisfying his information needs. It has the quality of direct address, every viewer thinks as if he is being talked with personally. Hence, it facilitates the maslow's hirarchy of Belongingness/Love Needs which involves the individual users' need for love and affection and the need to be accepted by one's peers.

**Radio**: A radio programme can be used simultaneously with the services expected of the librarians to render its society which are to inform, educate, entertain campaign etc. This technology overcomes the barriers of space and time and commands a universal audience by geographic spread, income, education, age, sex etc. It is very good for motivating low/ non-literate library users. This technology also facilitates library users to acquire information on safe workplace, Meaningful work and Job security.

**Mobile phones**: Mobile phone is a personal device and reaches almost everywhere and library user can access it in their homes, cars, farms, shops, classes etc (Yahaya & Usman, 2016). As a personal device which involves personal discussions between the library staff and the library user. It allows library user to satisfy his need for a positive self image and self respect and the need for recognition and respect from others.

**Internet Facility:** Internet is described as a worldwide network of computer and people. The internet makes it possible for thousands of dissimilar physical networks that are not connected to one another and that use diverse hardware technologies to connect and operate as a single communication system. It is an important tool for global on line services (Afolabi and Abidoye, nd). This fertility encourages satisfaction of social affiliation needs of teamwork, friendship, sense of belonging, and affection among library users.

**Video Conferencing:** Through video conferencing, people at different locations in the world could be allowed to hold meetings. Offorma (2000) describes video conferencing as a means of linking up two or more remote computers, all of which have a small camera attached which enables the participants to see each other, to speak to each other and in some systems, to be able to start, send documents through the linked computer. Some libraries use this medium to source for information that is not available in their own libraries and at the same time use this great medium to create awareness to users who are ignorant of the available of information resources in the library.

**Electronic Mail (E-mail**): This medium can also be used to send and receive mails. This is commonly and widely used with the internet facilities. E-mail is very useful for sending messages to and from remote areas with enhanced network. (Afolabi & Abidoye, n.d). It justifies effective recognition, Prestige and autonomy of library users when interacting with one another.

**Web 2.0**: *Web 2.0* is a web based technology tools which allow users to read, write, interact and collaborate with each other. Eyyam, Menevi and Doruer (2011) summarized that, Web 2.0 applications refers to wikis, blogs, social networking, social bookmarking, instant messaging, Internet telephony, and audio/video conferencing and these technologies allow users to create, collaborate, contribute, connect, share, and participate in a learning community. Though, there are hundreds web 2.0 technologies applicable in libraries and Based on the findings of Adewojo and Mayowa-Adebara,(2016), it could be seen that library staff in Yaba College of technology Lagos State, Nigeria, make use of majorly facebook, WhatsApp and Twitter in communicating and providing library and information services to users. The paper then concentrates on the following most commonly used tecnologies used by potential library users in Nigeria as follows:

**Facebook:** Facebook is the Internet's leading online community. The basic idea is to offer each registered user the chance to create a user profile with pictures and to keep in touch with their so-called "friends", or contacts they link to on the site (Toivo, n.d). As brought by Matingwina (2014), a New York University librarian used Facebook as an outreach tool in order to introduce herself as a subject specialist and the library's services. The results from this initiative showed that the university library users responded positively to the posts, with some thanking the librarian for contacting them and some patrons sending friend requests (Lawson, 2007).

**Wikis**: A wiki is a collective website where any participant is allowed to modify any page or create a new page using her browser. Some students post questions/doubts in the wiki, and other students can give an answer to those questions, or correct/revise the existing answers.

**Blogs:** A blog has been defined as "a web application that displays serial entries with date and time stamps" (Thorne & Payne, 2005, p. 381). Blogs have been published since the mid-1990s, when they mostly resembled online personal diaries, and were basically "web log books" from which the word is derived. The basic idea of a blog in libraries is to stimulate conversation, the communication between blog writers who will comprises library staff and users.

**WhatsApp** is another social media platform that allows interaction between library staff and their colleagues and also promotes library services to the users. WhatsApp Messenger is a 'cross-platform messaging application which allows users to exchange messages without having to pay for SMS' (WhatsApp.com, 2012). WhatsApp features include one-on-one chat, group chat, push notifications, sending and receiving both video and audio files (Shambare, 2014). The application is compatible with iPhone, BlackBerry, Android, Nokia, and other Windows smartphones.

**Challenges affecting ICTs Integration in Nigerian Libraries**
With regards to affecting ICTs Integration in Nigerian Libraries, this paper is in agreement with what has been brough by Afolabi and Abidoye as barriers to ICT Integration in Library Services. These include:

1. **Poor infrastructural Facilities:** The problem of poor infrastructural facilities especially erratic power supply have been the major cause of set back in the integration of ICT in library services.
2. **Low Level of ICT Compliance:** members of the library community require knowledge of ICT.
3. **Cost**: high cost of ICT equipment could not make it to be widely utilized by most libraries. Most library users in Nigeria could not afford the cost of common personal computer (Adidoye, Aderele and Adelokun, 2010).
4. **Poor Maintenance of ICT Equipment:** Most libraries in Nigeria lack conducive environments for keeping and effective functioning of ICT equipment. This results most of the ICT equipment to be poorly managed by most libraries.
5. **Frequent Change in Technology:** frequent changes in software upgrading leads to total overhauling of the existing system our libraries.
6. **Lack of Sufficient / Poor Funding:** most libraries or their parent organizations do not allocate sufficient money to the building of ICT infrastructure.

7. **Lack of ICT Policies:** There is a lack of systematic ICT policy in most libraries in developing countries which impedes the deployment of ICTs.
8. **Inadequate Technical/Skilled Manpower:** There are deaths of technical manpower in the area of ICT in Nigeria. Faulty equipment is abandoned in some libraries because there is no knowledgeable staff to repair them.
9. **Inability of the Government to Monitor Effectively the Policy on Information Technology:** various polices on ICTs in Nigeria are not properly monitored.
10. **Erratic Power Supply: most of the** ICT infrastructures depend mostly on electricity to function and access the needed information.
11. **Technophobia:** Several studies have shown that older librarians find it difficult to use some of these newer technologies which also affect their potential library users' motivation.

## Conclusion

Despite the challenges facing the availability and usability of ICTs in Nigerian libraries, librarians of various libraries such academic, public and special libraries must find means of integrating the facilities discussed in this paper for motivating their users. Librarians must try to motivate users to contribute their inputs for effective library services, and to ensure that these users satisfy their individual information needs at a high level. When library users are highly motivated, they tend to direct their energies toward meeting their informational needs and to display optimum levels of information literacy performance. The need to motivate library users to put up higher performances to enhance a knowledge-based society is universally acknowledged. Public libraries in Nigeria must sit up and realize that the library management alone can no longer meet their requirements to operate in a knowledge-based economy without the proper motivation of their user community. It is time for these libraries to explore other sources of user attraction services to meet some of their potential users. When these are achieved through the Integration of Information and Communication Technologies, then society in general would be deemed to have been well-motivated for higher performances towards achieving a knowledge-based economy.

## Recommendations

1. Government should therefore provide enabling environment that would allow donor agencies to provide investors particularly those in information sector to take full advantage of recent advances in information technology to bring our libraries up-to-date.
2. libraries and librarians should establish electronic learning centre within the libraries. Such creation will go a long way to satisfy and bridge such knowledge gap among users whose only handicap is lack of opportunity.
3. There should be adequate feasibility studies by any library before the introduction of new technology to cope with incessant change of new emerged ICTs.
4. Government and other stake-holders should endeavour to vote huge amount of money for ICT infrastructural development in libraries.
5. There should be training and retraining for library staff at all level in respect of use of ICT in order to improve their services.
6. All libraries in Nigeria should open e-library sections and the concept of e-library should be revitalized in Nigeria.

7.      ICT equipment should be serviced regularly by expert, fault should be promptly connected.

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