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## 21st Century Education: Information Resources Availability and Information Service Delivery in Nigerian College Libraries Towards National Development

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# 21<sup>ST</sup> CENTURY EDUCATION: INFORMATION RESOURCES AVAILABILITY AND INFORMATION SERVICE DELIVERY IN NIGERIAN COLLEGE LIBRARIES TOWARDS NATIONAL DEVELOPMENT

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## ABSTRACT

*The 21st century is the millennium of information. It is also seen as the era of explosion of information output and information sources. It is known as the beginning of knowledge age. New patterns of work and new business practices have developed as a result; new kinds of work with new and different skills are required. In this century, the meaning of knowledge has changed. Information delivery to meet user needs is the goal of every college library. For effective information delivery, availability of information resources is very fundamental. The study, therefore, investigated the influence of information resources availability on information delivery in college libraries in Lagos and Oyo states, Nigeria in the 21<sup>st</sup> century.*

*The study adopted the survey research design with the questionnaire as instrument for data collection. Stratified random sampling technique was used to select 469 registered users out of 4,689 and 73 library staff. The collected data was analysed using frequency distribution, mean and standard deviation for the research questions while Pearson Product Moment Correlation was used to test the hypotheses at 0.05 level of significance.*

*Findings indicated that textbooks, electronic information resources and journals were available in the college libraries. The resources were mostly used on daily basis by students and staff in the college libraries. Study revealed that adequate provision of books, periodic user education and orientation, registration of library users, lending services, reference services, etc. were some of the information service delivery in the college libraries. Results further showed significant influence of information resources availability on information delivery ( $F(1;470) = 40.706, P < 0.05$ ). The availability of information resources in colleges enabled the college libraries to deliver effective information services to the user community in Emmanuel Alayande College of Education and Yaba College of Technology.*

*It recommends among others that there is need for college libraries to make adequate provisions for recent and up-to-date information resources in both print and non-print formats to meet the*

*needs of their users. Adequate publicity through awareness programmes should be carried out for the resources and services to sensitise the users and promote usage.*

**Keywords:** *Information resources, Availability, Information service delivery, College libraries, 21st century education, National Development*

## **Introduction**

The 21st century is the millennium of information. It is also seen as the era of explosion of information output and information sources. It is known as the beginning of knowledge age. New patterns of work and new business practices have developed as a result; new kinds of work with new and different skills are required. In this century, the meaning of knowledge has changed. Knowledge is no longer what is stored in the minds of experts, represented in books and classified in disciplines. It is now thought of as being like a form of energy, as a system of networks and flows – something that does things or makes things happen. In the knowledge age, change not stability is a given. Knowledge age workers need to be able to locate, assess and represent new information quickly. They need to communicate this to others. They need to be adaptable, creative and innovative and be able to understand things as a system or big picture level.

The library as an institution provides the intellectual ammunition to aid higher education policy and curriculum implementation from the accumulation and storage of information relevant to the advancement of knowledge. The library also performs its myriad functions by receiving copies of books published in the country by both government and private authorities. It also collects books on contemporary issues or new ideas from international organisations. Its responsibilities also include processing, organisation and maintenance of information materials for use especially in the area of technology integration to improve teaching and learning situation in higher education institutions. However, library is seen in the contemporary world as one of the largest repositories of knowledge all over the world (Aguolu, 2002). The thrust of all library services is the provision of up-to-date and timely information to the users. The library is, therefore, poised to acquire the knowledge created in the academic community and make them available to the wider society.

To fulfill the mission of supporting the educational objectives of its parent institution which include teaching, learning, research and cultural development, the college library has to develop and maintain standard and relevant information materials such as reference and non-reference books both in print and electronic format, journals, audio collections, visual collections, audio-

visual collections, Internet connectivity and access, professional librarians (resource persons) and provision of adequate library services (Aguolu, 2002). These information resources are carefully selected, acquired, processed and made available for use in higher education institution libraries. Libraries are essential facility for teaching and learning.

College libraries serve a variety of users such as students, faculty, administrators and staff with diverse information needs. These libraries collect a variety of information sources and offer various services for supporting instructional, research and learning activities. Hence, the importance of libraries in academic institutions is considerable and they are often viewed as a nucleus of academic activity (Majid and Abdoulaye, 2000).

The role of information delivery in college libraries is to support organisations, institutions and research by facilitating access to the library's extensive range of information resources and services (Omekwu, 2008). The aims of any library, therefore, are to collect, organise, preserve and disseminate information to users. Information services in academic libraries are provided to meet the needs of users. Information delivery includes personal assistance provided to users in pursuit of information. The character and extent of such services will vary with kind of library or information centres, and the type of users. The information delivery is to be developed not only to meet user needs and to improve present services but also to anticipate users' needs in the future. The effectiveness of any information service depends upon the satisfaction of the information needs of its users. The efficiency of an information service can be measured only by the degree to which its resources are utilised (Shrestha, 1998 cited in Shrestha, 2008).

Information delivery in college libraries improves the knowledge and skills of students for positive productivity as a tool for national development. According to Metzger (2011), library and information service delivery are needed to enable the students and staff of the colleges develop full potentials and widening the horizons of perception, interests and skills. Other needs for information delivery in libraries include public enlightenment or rights in the society, understanding social values and expected conduct in public life; assisting to adjust to existing social, political, spiritual and economic activities of the society, to cultivate and maintain reading culture and promotion of good literatures (Iyoro, 2008). Onohwakpor (2005) summed up the need for library services from the perspective of adult education when she observed that, "If adult education is to have a greater share in the moulding and building of a happier individual and a better society, the providers of adult education must go beyond their roles as literacy facilitators to a more practical role of providing libraries for sustaining the newly acquired skills of adult learners.

The methods of delivering information services to students and faculty vary from institution to institution (Hillman and Sabourin, 2016) and one of these is the provision of current and adequate information resources in different media and formats. Information resources refer to the information bearing materials like textbooks, journals, encyclopedia, e-resources, etc. which are usually consulted to meet specific information needs. While delivering his inaugural lecture titled “What is higher in higher education”, Peretomode (2010) was emphatic in his submission that the library should be given priority funding in the universities. This is because, for the educational institution to be strong academically, the library which is the heart of the colleges, polytechnics and universities must have recent, relevant and quality information materials available and accessible to their users.

Information resources have tremendously contributed to the development of higher education such as colleges, polytechnics and universities, students and staff of an academic institution use information resources in the library and beyond the institution where they find themselves for learning and research (Okiki, 2011). The Internet and the World Wide Web provide students with fast and easy access to information resources located around the globe (Leckie, 2008). Information resources refer to print materials that could be sourced and accessed manually or electronically by users (Kerins, 2008). It is also the information carrier materials which could be print or in electronic form (Anderson, 2009). Adequate and appropriate information resources provide opportunity for users to get access which has depended on the availability of emerging technology as a means of creating, storing and distributing, retrieving and using information resources of emerging technologies (Ajiboye and Tella, 2007).

According to Popoola and Haliso (2009), information resources are those information bearing materials that are in both print and electronic format such as textbooks, journals, indexes, abstracts, newspapers and magazines, reports, CD-ROM databases, the Internet/E-mail, video tapes/cassettes, magnetic disc, computers, microforms. The application of information technology in creation, storage, retrieval and dissemination of information has provide library users with easy access to information, provision of remote access to and use, provision of round the clock access to users, up-to-date and unlimited access to information from different sources (Lee, 2008).

Availability of information resources entails the provision and inclusion of the resources in the collection of the libraries at the disposal of users in academic libraries. Both print and electronic information resources should be accessible to the users when they are available. The information resources available in college libraries play a prominent role in facilitating information service delivery by the librarians as well as access to required information by the users (Bhatia, 2011). In fact, information resources constitute one of the important elements that make up a good library.

Either lack of or inadequate provision of these resources will greatly affect the provision of information services by the librarians. Thus, it is the primary responsibility of the library to make available adequate information resources that will enable the staff to carry out effective information service delivery to meet the growing needs of the user community.

Bhatia (2011) noted that it is equally important to be familiar with the use and exploitation of the information resources for quick and effective usage for promotion of academic excellence in the college. Awana (2008: p.481) buttressed this point by maintaining that:

*Adequate supply and availability of up-to-date relevant reading textbooks, journal and reference materials to aid users in their academic pursuit, will attract users to an academic library. Adequate supply and availability of materials must be matched with accessibility by users.*

Apart from the printed resources, the electronic resources available in academic libraries also play a prominent role in facilitating quick information service delivery by the library staff as well as easy access to required information by the users. Such e-resources like E-books, e-journals, OPACs and online databases are gradually replacing the importance and usage of print media (Bhatia, 2011). Therefore, it becomes highly imperative for both the staff and users of the library to develop ICT skills for effective usage and exploitation of the resources to promote research and academic activities.

The success of any library information delivery in this Information Age relies greatly on the nature of information resources available, and also how readily available these resources are to the users of the library. It is, however, regrettable that academic libraries in Nigeria, and college libraries in particular are still lagging behind in terms of information resource availability which could facilitate effective information delivery to the user community.

Without information resources, libraries cannot carry out their primary function of information delivery while the users cannot feel satisfied. Unfortunately, most college libraries in Nigeria today cannot really boast of adequate information resources that can serve the needs of the user community. In most cases, the available information resources are not usually current, insufficient and are grossly inadequate compared to the user population of the institution. It is also observed that the resources of these libraries are largely prints with little or no provision for electronic resources like e-journals, e-books, and electronic databases like JSTOR, AGORA, ERIC, EBRARY and others. Many academic libraries including the colleges are gradually losing their users to the world of Google and online-based electronic resources which the users now rely on for current information resources anywhere and anytime with little or no restriction of access. This can be attributed to insufficient information service delivery to users.

### **Statement of the Problem**

Information resources are very indispensable in any library, and most especially in this 21<sup>st</sup> century where there is a continuous explosion of information globally and knowledge is said to double every 4years. These resources which mostly come in form of prints and electronic form the basis of quality information service delivery. Without information resources, libraries cannot carry out their primary function of information delivery while the users will not feel satisfied. Many academic libraries including the colleges are gradually losing their users to the world of Google and online-based electronic resources which the users now rely on for current information resources anywhere and anytime with little or no restriction of access. The researcher tends to evaluate how the quality of service availability affects service delivery of information. This study, therefore, investigates how information resources availability affects information delivery in college libraries in Lagos and Oyo states, Nigeria

### **Objectives of the study**

The main objective of the study was to investigate 21<sup>st</sup> Century Education: Information Resources Availability and Information Service Delivery in Nigerian College Libraries Towards National Development. The specific objectives are to:

1. Define the concept definition of Education in the 21<sup>st</sup> century
2. find out the types of information resources available in college libraries;
3. ascertain the frequency of use of available information resources by users in college libraries;
4. examine the forms of information service delivery in college libraries;
5. find out the influence of availability of information resources on information delivery in college libraries.

### **Research questions**

The following are the research questions for the study:

1. what do we mean by 21<sup>st</sup> century education?
2. What are the types of information resources available in college libraries?
3. What is the frequency of use of information resources in college libraries?
4. What are the forms of information service delivery in college libraries?
5. What is the influence of information resources availability on information service delivery in the college libraries?

### **Literature Review**

#### **Nature of the 21st century**

In the 21st century academic library, the emergence of ICT has redefined the library's role. Print materials are no longer sufficient to store information. CDROM databases, electronic document delivery, automated cataloguing, circulation systems and online information retrieval (OPAC) have become the order of the day. Eguavoen (2011) citing Ostrow (1998) admits that the advent of the internet, digitization and the ability to access library and research materials from remote locations have also created dramatic changes by the end of the 20th century. Ramzan (2004) asserts that developments like expert systems, wireless networks, virtual collections, interactive Web interfaces, virtual reference services, and personal Web portals bring about greater changes since the start of the new millennium. Moghaddam (2009) is of the view that as information technologies, information systems and information networks have been developing. This century has also witnessed a dramatic change in users' information seeking pattern. Byamugisha (2010) adds that the patrons' expectations for a distance service delivery across library services have increased; patrons have come to expect a wide variety of automated push and or pull services from libraries and from a distance.

Nigerian academic libraries in the 21st century are gradually changing to fit into their clients' information seeking patterns. The situation has brought about the establishment of digital libraries to compliment traditional ones. This is evidenced in the attempt to digitize library resources to cater for the information needs of new generation users that is, the 21st century library users who exhibit much dexterity in using new sources and new technologies.

### **The Role of Education in the 21st Century**

Our world is changing, and as the world evolves, the challenge is more on how we prepare ourselves and the next generation on the challenges that comes with the new world and what is expected of them for this new world we need to change the way we educate them. The challenge therefore is more on how we must create a curriculum that will be able to meet the information needs and help students connect with the world and understand the issues that our world faces.

As the century unfolds, schools in the 21st century will more and more become nerve centers, a place for teachers and students to connect with those around them and their community. Teachers in this new environment will become less instructors and more orchestrators of information, giving students the ability to turn knowledge into wisdom.

In order to educate in the 21st century, Information professionals need to cultivate and maintain the student's interest in the material by showing how this knowledge applies in the real world. They must also try to increase their student's curiosity, which will help them become lifelong learners. Next they should be flexible with how they teach and give learners the resources to continue learning outside of school.

As the century evolves, there are many skills that users will need in order to be successful in the 21st century. Here are a few of the most important 21st century skills:

- Ability to collaborate, work in teams
- Critical thinking skills
- Oral presentation skills
- Written communication skills
- Ability to use technology
- Willingness to examine civic and global issues
- Ability to conduct research to learn about issues and concepts
- Chance to learn about new career opportunities
- Functional numeracy and literacy
- Technological literacy Communications and media literacy

In all these skills, the most important as the century evolves would be the Information literacy skills; the ability of users to source, evaluate, analyse, use and reference information materials with less difficulties.

In the 21st century, the world is changing and becoming increasingly complex as the flow of information increases and becomes more accessible day by day. The world is radically more different than it was just a few years ago, hard to imagine that it's such a short period of time - the world and its people, economies and cultures have become inextricably connected, driven by the Internet, new innovations and low-cost telecommunications technology. A computer is a must, to be a successful student, in this modern age, all the required information and communication is accessible online and the library is at the centre of it all.

### **Availability of information resources in college libraries**

The major aim of any college library is to make available resources that will support the intellectual activities of its parent institution. Libraries must, therefore, strive to make information resources available for its patrons willing to develop themselves intellectually. Rathinacapathy (2005) posited that library is an important intellectual resource of the academic community and helps them to fulfill the curriculum requirements and to promote studies and research. Ahuauzu (2002) also stated that the library includes the totality of human and organised material resources available in both book and non-book format for providing and obtaining needed information.

Fayose (2000) identified library resources as those materials which enable libraries to carry their function out effectively. They are made up of books and other information bearing media.

Muteshewa (2004) revealed that traditional libraries stored different types of information resources in different formats in buildings. Various tools and guides to locate these resources were available only when a patron physically visited the library. The situation has now changed and access to these guides has become paramount. He asserted that with the advent of computers and telecommunication technologies, libraries and information services can provide access to these resources through work-stations like PCs and terminals that are in patron's offices, as well as in the Library. Information resources in college libraries includes electronic information resources, electronic data bases, textbooks, journals, newspapers, electronic books and journals, magazines, encyclopedias, dictionaries, project, thesis and dissertations.

Ogunyade (2001) argued that libraries need to be supplied with the right materials before they can be utilised. It is then that libraries can contribute to the advancement of knowledge not only through provision of information resources but also by ensuring effective use of the resources. On electronic information resources, Ogunyade further opined that the electronic information resources in libraries have revolutionised the way in which information is gathered, processed and communicated to users. Siddiqui (1998) cited in Ogunyade and Obajemu (2006) supported that the advent of electronic data during the last half of the 20th century has revolutionised the processing and distribution of information resources and its uses in the libraries, it has helped in the growth and development of the libraries in her bid to provide efficient services to the users.

Library is one of those resources which are essential to support and strengthen the educational quality. Over the centuries, libraries are the source of keeping and distributing the information through books, journals, reference and other resources that are used by students and staff in their teaching and learning process. However, library resources are the most ignored area in higher institutions because there is hardly any disagreement that the libraries are deficient in information materials available for supporting teaching and learning activities (Jamil, Tariq and Jamil, 2013).

Successful educational system depends exhaustively on the availability of information sources and services which further promotes its accessibility and utilisation. In this regard, academic libraries are providing knowledge and information resources for teaching, learning and research. Academic libraries are rapidly supporting and encouraging adapting new form of teaching and learning exercises. For example group projects, group study, team work and activity-based learning and assignments (Edward and Fisher, 2002). The efficient and effective provision of library resources can have positive impact on academic achievement (Williams, Wavell and Coles, 2001).

Adeoye and Popoola (2011) highlighted the effectiveness, availability, accessibility and use of library and information resources in their study. They explained that, for effective learning process, learners must have access to necessary information materials and resources. These resources might be in tangible (i.e., printed resources) and intangible (i.e., electronic resources) format. They express that librarian is responsible for providing the right information to the right person at the right time. Adeoye and Popoola (2011) added that library information resources can be in both printed and electronic formats including textbooks, journals, indexes, abstracts, newspapers, magazines, reports, CD-ROM databases, internet, email, video tapes/cassettes, diskettes, computers and microforms. Lance, Rodney & Hamilton-Pennell (2005), therefore, divided library resources into two categories i.e., traditional printed material or resources and non-printed or electronic resources.

Hamade & Al-Yousef (2010) investigated the use of information resources by LIS graduate students in Kuwait University. The study used the bibliometric method of citation count of the references found in the literature review papers of LIS graduate students by identifying the preferred form of publications, retrieval method, time span, subject distribution, and the most cited journals. The study found that majority of the students used journal articles, web pages, and books as the most preferred form of resources. Their preferred method of retrieval was the printed format while the time span of the most used citations was from three to ten years. The students mostly used traditional library journals such as Bulletin of MLA, Library Review, The Electronic Library, Library Management, and College and Research Libraries.

Jirjwong and Wallin (2002) identified various form of electronic resources such as on-line databases, online public access catalogs (OPAC), e-conference, e-mail discussion, full-text databases, books, scholarly websites, pre-print archives and bulletin boards. Some of these sources are available in few university libraries and cyber-café in Nigeria. Oyewusi and Oyeboade (2009) also found out electronic data bases, OPAC, close circuit TV (CCTV), e-journal, microfilm and facsimile were not accessible for use in Ladoke Akintola University of Technology, Nigeria. They further noted that the university has not been able to acquire the electronic resources because of financial constraints.

### **Information service delivery in college libraries**

Information service delivery is concerned with the supply of information to the users on demand either in print or non-digital form. Kuteyi (2012) described information service delivery as the set of information services provided by the library to its users in order to meet their various and diverse needs. Such services include reference services, referral services, document delivery, current awareness services, selective dissemination of information, bibliographic searching,

lending services, interlibrary loan, internet access, etc. Nevertheless, the effective provision of this set of information services to the public can only be possible with the availability of relevant and up-to-date information materials in various formats. As academic libraries are to students, lecturers and researchers, so are the public libraries to the general public.

The main purpose of library information delivery is to satisfy the information needs of the user, it is difficult to provide all the documents required by the user from their own collection as well as from centralized collection. A high satisfaction level depends not only on the availability of required information that offer services but also ability of the library to locate the documents and supply it from elsewhere as quickly as possible (Singh, 2013).

Ikolo (2015) examined users' satisfaction with library services at the Delta State University main Library, Abraka, Delta State. The objective was to find out if users are satisfied with the services, facilities, the library environment, information sources and staff of the library. The findings revealed that the services offered at the Delta State University are inadequate and below average. Most users were satisfied with the availability of information sources in the library but also registered that most of these information sources are not available for loan. The findings also showed that there is a significant relationship between the assessment of library collection by users and their satisfaction with information sources. The library environment is clean and the reading carrels are adequate but, there are no effective lightening and toilet facilities.

Kaur & Manhas (2008) conducted a survey on "use of internet services and resources in the Engineering Colleges of Punjab, Haryana and Himachal Pradesh. The survey revealed that the majority of the respondents, i.e. 65.6%, access the Internet from college or their workplace. More than 75% of the respondent's use the Internet services mainly for educational and research purposes. More than 70% of the respondents feel that the Internet is useful, informative, easy to use, inexpensive and time saving.

Adebayo (2009) was of opinion that more dynamic, challenging and practical user-friendly services such as current awareness services, selective dissemination of information, literature searching, indexing and abstracting and functional ICT services should be given priority. Adeogun (2006) opined that the value of information service in the present information dispensation is not possessing information but in providing access to it, and more importantly in developing the organisational and technological capabilities in the end-user to be able to identify, access, sift and determine the authenticity and validity of information. Omekwu (2007) emphasised that in an environment of change and reform, information professionals should be proactive rather than reactive in library and information delivery.

### **Appraisal of literature review**

The literature revealed that much research has been done on information resources availability in college libraries as well as ICT skills of both library staff and users, but most of these works centred on academic libraries. There is a dearth of literature on ICT skills and use of information resources while there was little or no literature concerning states like Oyo and Lagos, which are both in the South-west zone of Nigeria. The available literature on electronic information resources, ICT skills and academic library services in Nigeria and other countries were found to be very relevant to this study. The literature showed that ICT has really been applied in almost every aspect of library operations while the ICT skills are prerequisites for effective service delivery. However, there is little empirical work on resource availability and information service delivery in college libraries in South-west Nigeria, and this study is, therefore, expected to fill this gap in the literature.

### **Methodology**

The survey research design was used for this study. The population for the study comprised 4,689 registered library users and 73 library staff from two colleges in Oyo and Lagos States. The stratified / proportionate sampling technique was adopted for this study. The selected colleges were Emmanuel Alayande College of Education (EACOED), Oyo State and Yaba College of Technology, Yaba, Lagos State. The sample was selected based on the proportion of users in each of the library. Thus, ten percent of registered users in each selected library was randomly selected to have a sample size of 469 respondents while the total enumeration was used for the staff due to their small size. This sample size is justified by Gay (1987) who suggested a sample size of 10% of large population as minimums.

Questionnaire was the main instrument used for data collection for this study. The reliability of the instrument was determined by pretesting 30 copies of the questionnaire on the users at the College of Education (Special) Oyo that shares similar characteristics with the target respondents. The analysis of this pilot study measures the reliability of the instrument. The reliability of all scales was probed by computing a cronbach's alpha with the coefficient correlation 0.87. The Statistical Package for the Social Sciences (SPSS) was used to analyse the data collected through the questionnaire. Descriptive statistics such as frequencies, percentages, mean and standard deviation were used for analysing the research questions.

### **Results and Discussion**

The results of the findings are presented based on the research questions.

**Research question 1: What are the types of information resources available in the college libraries?**

The data representing the types of information resources available in the college libraries is presented in Table 1

**Table 1: Types of information resources available**

S\N	Information resources available	HA	A	FA	NA	Mean	S.D
a.	Textbooks	285 60.4%	152 32.2%	32 6.8%	3 .6%	3.52	.651
b.	Electronic information resources	278 58.9%	124 26.3%	62 13.1%	8 1.7%	3.42	.781
c.	Printed dictionaries	242 51.3%	155 32.8%	63 13.3%	12 2.5%	3.33	.801
d.	Printed encyclopedias	229 48.5%	152 32.2%	65 13.8%	26 5.5%	3.24	.888
e.	Electronic databases	182 38.6%	209 44.3%	74 15.7%	7 1.5%	3.20	.750
f.	Printed journals	183 38.8%	202 42.8%	70 14.8%	17 3.6%	3.17	.808
g.	Printed newspapers	207 43.9%	162 34.3%	72 15.3%	31 6.6%	3.15	.912
h.	Printed magazines	154 32.6%	253 53.6%	49 10.4%	16 3.4%	3.15	.737
i.	Printed projects, theses and dissertations	211 44.7%	151 32.0%	81 17.2%	29 6.1%	3.15	.918
j.	Electronic journals	197 41.7%	140 29.7%	64 13.6%	71 15.0%	2.98	1.076
k.	Electronic books	132 28.0%	145 30.7%	124 26.3%	71 15.0%	2.72	1.032

Source: Field Survey, 2017

**Table 1** shows that majority of the respondents 437(92.6%) indicated that textbooks were available in the college libraries which also has the highest mean score of  $X=3.52$ . About 402 respondents representing 85.2% indicated electronic information resources ( $X=3.42$ ). The least of the respondents 277(58.7%) indicated electronic books with the least mean score of  $X=2.72$ . This result implies that information resources in both print and non-print formats were available in the college libraries. Some of these resources also included dictionaries, encyclopedias, journals, newspapers, projects, theses and dissertations, etc.

**Research question 2: What is the frequency of use of information resources in college libraries?**

The data representing the frequency of use of information resources is presented in Table 2

**Table 2: Frequency of use of information resources**

S\N	Frequency of use of information resources	Daily	At least twice per	Weekly	Occasionally	Rarely	Never	Mean	S.D
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			week						
a.	Textbooks	225 47.7%	106 22.5%	79 16.7%	54 11.4%	5 1.1%	3 .6%	5.02	1.14
b.	Printed newspapers	242 51.3%	85 18.0%	59 12.5%	48 10.0%	25 5.3%	13 2.8%	4.92	1.40
c.	Electronic information resources	220 46.6%	129 27.3%	36 7.6%	45 9.5%	19 4.0%	23 4.9%	4.88	1.43
d.	Printed dictionaries	197 41.7%	93 19.7%	77 16.3%	76 16.1%	21 4.4%	8 1.7%	4.75	1.38
e.	Printed journals	179 37.9%	112 23.7%	65 13.8%	68 14.4%	40 8.5%	8 1.7%	4.63	1.41
f.	Electronic databases	122 25.8%	142 30.1%	105 22.2%	54 11.4%	39 8.3%	10 2.1%	4.47	1.32
g.	Printed projects, theses and dissertations	161 34.1%	98 20.7%	78 16.5%	59 12.5%	46 9.7%	30 6.4%	4.40	1.61
h.	Printed magazines	152 32.2%	103 21.8%	84 17.8%	59 12.5%	38 8.1%	36 7.6%	4.35	1.58
i.	Printed encyclopedias	141 29.9%	102 21.6%	92 19.5%	56 11.9%	45 9.5%	36 7.6%	4.30	1.61
j.	Electronic books	136 28.8%	100 21.2%	88 18.6%	59 12.5%	47 10.0%	42 8.9%	4.20	1.63
k.	Electronic journals	113 23.9%	100 21.2%	86 18.2%	51 10.8%	64 13.6%	58 12.3%	3.94	1.71

Source: Field Survey, 2017

As shown in Table 2, textbooks were used by most respondents 222(47.7%) on daily basis and 106(22.5%) respondent on weekly basis. Electronic information resources were frequently used on daily basis by 22(46.6%) respondents while 29(27.3%) used it as at least twice per week. Electronic journals were the least used information resources as indicated by 113(23.9%) on daily basis while 100(21.2%) used the resources at least twice per week. It is observed that the available resources in the college libraries were frequently used by students and staff in the colleges on daily and weekly basis. These included dictionaries, journals, projects, theses and dissertations, encyclopedia, etc.

### Research question 3: what are the forms of information service delivery in college libraries?

The data representing forms of information service delivery in college libraries is presented in Table 3

**Table 4.7: Forms of information service delivery in college libraries**

S\N	Forms of information service delivery	SA	A	D	SD	Mean	S.D
a.	Staff is always on ground to answer users' queries	283 60.0%	155 32.8%	29 6.1%	5 1.1%	3.52	.661
b.	Registration of library users is	273	157	28	14	3.46	.739

	timely and simple	57.8%	33.3%	5.9%	3.0%		
c.	Users are allowed to borrow books for a reasonable length of time	228 48.3%	217 46.0%	24 5.1%	3 .6%	3.42	.620
d.	Provision of printed books is adequate	202 42.8%	198 41.9%	65 13.8%	7 1.5%	3.26	.747
e.	Online document search is easy and convenient	187 39.6%	229 48.5%	45 9.5%	11 2.3%	3.25	.722
f.	Binding, photocopying and scanning are available at affordable rates	220 46.6%	150 31.8%	77 16.3%	25 5.3%	3.20	.897
g.	Reference services in the library are very adequate	183 38.8%	206 43.6%	61 12.9%	22 4.7%	3.17	.823
h.	Card catalogue is available to aid bibliographic search	196 41.5%	162 34.3%	101 21.4%	13 2.7%	3.15	.847
i.	There is current awareness services such as alerting users on new arrivals and new services	182 38.6%	165 35.0%	102 21.6%	23 4.9%	3.08	.897
j.	Display and exhibition of new resources and services are done frequently	197 41.7%	158 33.5%	68 14.4%	49 10.4%	3.07	.990
k.	The library has adequate number of journal titles to meet users' needs	162 34.3%	192 40.7%	104 22.0%	14 3.0%	3.06	.824
l.	Online Public Access Catalogue (OPAC) is available and functional	158 33.5%	189 40.0%	117 24.8%	8 1.7%	3.05	.806
m.	User education / orientation is carried out periodically	174 36.9%	165 35.0%	114 24.2%	19 4.0%	3.05	.878
n.	Internet access in the library is very encouraging	157 33.3%	190 40.3%	101 21.4%	24 5.1%	3.03	.867
o.	Electronic resources and online databases are easily accessible	139 29.4%	197 41.7%	105 22.2%	31 6.6%	2.94	.882
p.	Wireless Internet connectivity is always available	153 32.4%	162 34.3%	118 25.0%	39 8.3%	2.91	.951

Source: Field Survey, 2017

Table 3 shows that various forms of information service delivery in college libraries included staff availability to answer users' queries as affirmed by 438(92.8%) respondents. Adequate provision of books was indicated by 400(84.7%) respondents while periodic user education and orientation was indicated by 339(71.9%) respondents. The least of the respondents 315(66.7%) indicated that wireless Internet connectivity was always available. Other forms of information service delivery in the college libraries included registration of library users, lending services, reference services, card catalogue, journals, etc.

**Research question 4:** What is the influence of information resources in the 21<sup>st</sup> century availability on information delivery in college libraries?

**Table 4: Summary of regression for the significant influence of information resources availability on information delivery in college libraries.**

R =.282 R Square =.080 Adjusted R square =.078						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4747.026	1	4747.026	40.706	.000(a)
	Residual	54810.090	470	116.617		
	Total	59557.117	471			

Table 4 reveals significant influence of information resources availability on information delivery in college libraries. The result yielded a coefficient of multiple regressions R of .282, multiple R-square = .080 and Adjusted R square = .078. This suggests that the two factors when combined accounted for 78% (Adj.R<sup>2</sup>=.078) variation in the prediction of information delivery in college libraries. The other factors accounting for 22% variation in the prediction of information delivery in college libraries are beyond the scope of this study. The ANOVA result from the regression analysis shows that there is a significant influence of information resources availability on information delivery in the college libraries, F (1,470) =40.706, P<0.05. The null hypothesis is, therefore, rejected.

### **Discussion of findings**

From the research work, the study showed that textbooks, electronic information resources and journals were available in the college libraries, these shows that the libraries are keeping track of developments in the 21<sup>st</sup> century by having a wide range of information resources. The research findings reveals that though there are both printed and non printed resources, electronic books (ebooks) was the least available information resource in the college libraries. As we know that availability information resources is the bedrock of information service delivery in any library, if these resources are not available, libraries will find it difficult to offer user the right service. In line with Popoola and Haliso (2009), available information resources in libraries must include both print and electronic format such as textbooks, journals, indexes, abstracts, newspapers and magazines

The study found that information resources like textbooks, electronic information resources, newspapers, dictionaries, journals and electronic databases were mostly used on daily basis by students and staff in the college libraries. It was observed from this study that Electronic journals were the least used information resources at the colleges. Also, if these resources are not used, it means that they are either inadequate, irrelevant or outdated to the information needs of the users. Therefore, college libraries must ensure that the available materials in the library are recent,

relevant and specific to the information needs of the user's community in order to ensure high usage and patronage.

Study revealed that various forms of information service delivery in college libraries included staff availability to answer users' queries, adequate provision of books, periodic user education and orientation, registration of library users, lending services, reference services, card catalogue, etc. Wireless internet connectivity was the least information service delivery in the college libraries. Manhas, Kaur & Rani (2015) supported the provision of internet access, electronic information resources and creating access to vast reservoir of information as a core service in the 21<sup>st</sup> century librarianship. From this findings, it concluded that the level of information service delivery in college libraries will determine the level of usage and patronage of such services by the users. The inadequate information services in libraries may cause the users to neglect such services for other available services such as the Web and internet sources.

The study further revealed there is a significant influence of information resources availability on information delivery in college libraries in Lagos and Oyo states. This means that effective delivery of library and information services depends greatly on available information resources. This finding was supported by Ikolo (2015) who reported that there was a significant relationship between the library collection and user satisfaction with information sources while Kuteyi (2012) reported that effective provision of information services can only be possible with the availability of relevant and up-to-date information materials in various formats. Likewise, Singh (2013) further supported that information service delivery deals with provision of information resources by the library from its own sources or from outside or other libraries.

### **Conclusion and Findings**

The research finding observed that electronics information sources remained the least form of information sources available in the sampled college libraries despite its enormous advantage most especially in this 21<sup>st</sup> century. In the 21<sup>st</sup> century where information is centered on electronics and digital format, one wonders what type of information services would be provided to meet with today's information users when their primary information sources in terms of electronic resources in this generation are not available in such libraries.

The findings reveal that Electronic journals were the least used information resources as well even when they are available. This tends to pose a big challenge to the developing world in the 21<sup>st</sup> century. When the access and usability of electronic journals are becoming the main stake in research in the advanced countries, but findings reveals that the reverse is the case in Nigerian college libraries.

Wireless internet connectivity was the least information service delivery in the college libraries. The internet services in the 21<sup>st</sup> century is a necessity for all libraries and it should not be seen as an optional service that could be neglected or treated with less priority as we are aware that Data is the most valuable resource for libraries in the 21<sup>st</sup> century.

The availability of information resources in colleges of education is fundamental to information service delivery in college. Information resources availability like textbooks, dictionaries, newspapers, electronic information resources enabled the college libraries to deliver effective information services to user community in the colleges. This is the major reasons why the users come to the library to satisfy their information and research needs. Both college libraries must ensure that adequate information services are delivered to meet users' needs such as staff availability to answer users' queries, adequate provision of books, periodic user education and orientation, lending services, reference services, and so on.

### **Summary and Recommendations**

The emergence of information and communication technologies has brought a paradigm shift for college libraries. ICT has enhanced access to research and communication. This means that it has become a very useful tool in college libraries whose mission is to support teaching, learning and research. This being the case, professional librarians in the 21<sup>st</sup> century are expected to exploit the opportunities brought about by ICT to ensure that college libraries are repositioned to be 21<sup>st</sup> century compliant and remain the hub of information provision, generation and dissemination.

In view of this, the following recommendations were made:

- Training of librarians in the 21<sup>st</sup> century should be given priority. This is because the success or failure of a library service depends on the caliber of staff.
- In the face of dwindling budgetary cuts, librarians in the 21<sup>st</sup> century should make personal efforts to improve their skills in order to defend their profession. As information providers in the 21<sup>st</sup> century, they are expected to be competent and knowledgeable. Therefore, it is recommended that computer literacy skills, metadata skills, information literacy skills etc should be acquired. These skills are needed to effectively serve users and remain at the top.
- Sequel to inadequate information resources in the college libraries, there is need for college libraries to make adequate provisions for recent and up-to-date information resources in both print and non-print formats to meet the needs of their users (both students and staff). This will enable them carry out effective service delivery for their user community.

- Owing to the non-awareness of users to some information resources and services in the college libraries, there is need for adequate publicity of these resources and services to sensitize the users and promote usage.
- On the issue of inaccessibility to electronic information resources, college libraries have a major responsibility of creating access to electronic information resources. Therefore, adequate infrastructure should be provided to enable users to access the available electronic information resources. Where the resources are not available for accessibility, college libraries should make efforts to subscribe to electronic resources, including databases for effective information accessibility and utilization.

## References

- 21st Century Skills in Education Essay. CRAM: May 11th, 2015. <https://www.cram.com/essay/21st-Century-Skills-in-Education/P3CSESFKXJ>
- Adebayo, E. L. (2009). Quality assurance and the implication for management of university libraries in Nigeria. *Library Philosophy and Practice*.
- Adeogun, M. (2006). The challenges of modern tertiary education system: paradigm shifts for educators and information professionals in sub-Saharan Africa. *Africa Journal Library Archives and Information Science* 16.1:45-54.
- Adeoye, M. O., and Popoola, S. O. (2011). Teaching Effectiveness, Availability, Accessibility and Use of Library and Information Resources among Teaching Staff of Schools of Nursing in Osun and Oyo State, Nigeria. *Library Philosophy and Practices*. Retrieved from <http://www.webpages.uidaho.edu/~mbolin/adeoye-popoola.htm>
- Aguolu C.C. and Aguolu, I.E. (2002). *Librarians and information management in Nigeria*. Maiduguri: Ed-Linform Services.
- Ahuazu, B. (2002). *Use of library: a practical approach*. Owerri Spring: Field Publishers.
- Awana, O. (2008). Availability of Books and Other Informational Materials and the Use of Academic Libraries. *African Research Review*, 1.3: 51-64.
- Bhatia, J. K. (2011). Use of electronic resources in degree college libraries in Chandigarh. *DESIDOC Journal of Library and Information Technology*, 31.6: 480-484.

- Byamugisha, H.M (2010). Digitizing library resources for new modes of information use in Uganda. *Library Management*. Vol 31, 1 / 2.
- Edwards, B. and Fisher, B. (2002). *Libraries and Learning Resource Centers*. Boston: Architectural Press.
- Eguavoen, O.E.L. (2011). Attitudes of library staff to the use of ICT: The case of Kenneth Dike Library, University Of Ibadan, Nigeria. *Ozean Journal of Social Sciences*. 4(1 ),1.
- Hamade, S. N., & Al-Yousef, S. (2010). The use of information resources by LIS graduate students in Kuwait. *Library Review*, 59.5: 360-369.
- Hillman, C.R. and Sabourin, K. (2016). Don't get left behind: moving library instruction online. *Journal of Library and Information Services in Distance Learning*, 10(3-4), 277-285.
- Ikolo, V. E. (2015). Users Satisfaction with Library Services: A Case Study of Delta State University Library. *International Journal of Information and Communication Technology Education (IJICTE)*, 11.2: 80-89.
- Jamil, M., Tariq, P.-H. and Jamil, S. (2013). Library Resources: Utilization by Teachers and Students. *Bulletin of Education and Research*, 35.2 (Special Issue): 19-35.
- Jirojwong, S. and Wallin, M. (2002). Use of formal and informal methods to gain information among faculty in an Australian region university. *The Journal of Academic Librarianship* 28.1-2: 68-78.
- Kaur, A., and Manhas, R. (2008). Use of Internet services and resources in the engineering colleges of Punjab and Haryana (India): A study. *The International Information & Library Review*, 40.1: 10-20.
- Kuteyi, M. A. 2012. *Evaluation of library and information service delivery in houses of assembly of three states in southwest Nigeria*. MLIS Project, Department of Library, Archival and Information Studies, University of Ibadan. ix+74p.
- Lee, M. C. (2010). Explaining and predicting users' continuance intention toward e-learning: an extension of the expectation–confirmation model. *Computers & Education*. doi: 10.1016/j.compedu.2009.09.002.
- Majid, S. and Abdoulaye, K. (2000). Use of the Internet for reference services in Malaysian academic libraries. *Online Information Review*, 24.5.
- Moghaddam, A.R.I (2009). Managing digital libraries in the light of staff and users: an approach. *International Journal of Information Science and Management*. Vol, 7, no. 1 January/June
- Muteshwa, A. (2004). Enhancing Access through Electronic Resources: the University of Botswana Experience. *Library HiTech*, 18.4: 315-320.
- Ogunyade, T.O. and Obajemu, A. S. (2006). Use of information resources in some selected health science libraries in Lagos, Nigeria. *Nigerian Quarterly Journal of Hospital Medicine* 16.4.
- Omekwu, C. O. (2007). Library and information service delivery in the era of change and reform: Librarians and NEEDS. *Library Review* 56.8: 716-726.

- Ramzan, M. (2004). Does level of knowledge impact librarians' attitude towards Information Technology (IT) applications? 2nd International CALIBER- 2004, New Delhi, 11-13 February.
- Shrestha, N. (2008). *A study of students' use of the library resources and self-efficacy*. Master Thesis, Faculties of Humanities and Social Sciences, Tribhuvan University, Kirtipur, Nepal. 113p.
- Singh, G. (2013). *Information sources, services and systems*. Delhi: PHI Learning Private Limited.
- The Role of Education in the 21st Century. Teaching Certification, Education and Training: <http://www.teachercertification.org/a/role-of-education-in-the-21st-century.html>
- Williams, D., Wavell, C., Coles, L. (2001). Impact of School Library Services on Achievement and Learning. Retrieved from [http://www4.rgu.ac.uk/files/ impact %20of%20school%20library%20services1.pdf](http://www4.rgu.ac.uk/files/impact%20of%20school%20library%20services1.pdf)