THE USE OF E-LIBRARY RESOURCES AS A CORRELATE OF USER SATISFACTION IN UNIVERSITY LIBRARIES IN ANAMBRA STATE, NIGERIA

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Abstract
This study was conducted to find out the relationship between the use of e-library resources and users’ satisfaction in university libraries in Anambra State of Nigeria. The population of this study was made up of 2000 students registered library users of two universities in Anambra State of Nigeria. The research design used was a combination of descriptive survey and linear correlation. A sample of 200 students were selected using accidental sampling technique. A researcher-designed instrument entitled E-Library Resources as a Correlate of User Satisfaction Questionnaire (ERCSQ) was used for data collection. Data was analysed using a combination of descriptive and inferential statistics. The Pearson Product Moment Correlation (PPMC) was used to ascertain the strength of the relationship between students' use of e-library resources and their satisfaction. The study revealed that students actually make use of the e-library resources in their university libraries. Results from the correlation coefficient of the two variables showed that there is a weak relationship between students use of e-library resources and the satisfaction derived. The recommendations made on the basis of these findings include: libraries should improve the quality of e-library collections or resources; the university management should provide adequate funding for the academic libraries among others.

Keywords: E-Library resources, User satisfaction, University libraries, Anambra State.

Introduction
The world is in the era of information explosion. Information and communication technology (ICT) has made it possible through internet and World Wide Web technologies. These technologies provide opportunity for cost effective access to broad range of information resources and enhance communication and collaboration. Libraries as custodian of information, makes information available to its users in various forms; printed and or electronic.

A Library located in the university or any tertiary institution is an academic library. Its mission is to help the parent organisation which is the host tertiary institution to achieve its primary goal. Academic libraries help
the university in teaching, learning and research development. According to Agbanu and Nwankwo, (2018), the main function of an academic library is to help the tertiary institution in which it is located to achieve its educational goal. They stressed that academic libraries thus provide the relevant and current information to the user community in either print or electronic format. As the most important infrastructure in the university academic libraries are made up of several units, departments or sections. Each unit or section is headed by a professional librarian. The various departments that made up an academic library include: cataloguing, acquisition, circulation, reference, special collections, Africana, serials, bindery, reprography, and e-library departments (Ezekwe & Muokebe, 2012). E-library is usually the biggest and peradventure the most distinguished department in an academic library, owing to its features. Most often, e-libraries occupy a separate building attached to the academic library building complex, sometimes it is just a large hall in the library complex. Currently, most academic libraries are hybrid libraries. Hybrid libraries are combination of traditional library and electronic library. Hybrid Library/ Gateway Library/Complex Library, according to Vijayakumar, & Jeevan, (n.d.) is a continuum of traditional library, with electronic and paper-based sources used alongside one another.

A library with computerized information storage and retrieval systems connected to computers and most times the internet is called electronic library. The term electronic library is often shortened as e-library. As a matter of nomenclature, e-library can be referred to as digital library, virtual library, community network, library without walls or library of the future (Madhumay, Gaurav, Ravi, 2013). According to Vijayakumar, & Jeevan, (n.d.) e-library is a library with little or no physical presence of books, periodicals, reading space or support staff, but one that disseminates information directly to the distributed users, usually electronically. In e-libraries, the services are fully automated where all resources are in digital form.

E-library is a tool that documents, preserves and disseminates historical, cultural and intellectual heritage of a nation. It is a means of enhancing information provision and learning. E-libraries are organized set of links to items such as documents, software, images, databases, on a network. Electronic library is the library where some or all of the holdings of the library are available in electronic format, and the services of the library are also made available electronically-frequently over the Internet so that users can access them remotely (Onwuchekwa and Jegede, 2011).

According to Melcollier as cited in Sankaranpillai, (2010), e-library has to do with multimedia materials in digital form, designed for the benefit of its user population, structured to facilitate access to its contents, and equipped with aids to navigate the global network, with users and holdings totally distributed. Candela et al.…. (2007) see an e-library as a virtual organization that comprehensively collects, manages and preserves digital content and offers to its user communities specialized functionality of the content of measurable quality and in accordance with codified policies. It is called ‘virtual’ because, in a good electronic wide, area networked library, the user enjoys the euphoria of being in distant libraries and yet has not physically moved. Green (2005) sees a virtual library as an organized set of links to items (documents, software, images, databases, etc.) on a network.

E-library is a technology that brings together the resources of various libraries and information services, both internal and external, in one place, so that users can find what they need quickly and easily. Bradley (2002) argues that whatever digital libraries may be called, they are collaborative ventures in which information professionals and other experts in specified subject areas pool their knowledge and experience to collate information on a specific subject.

Association of College Research Libraries (ACRL), (2000) summarised e-libraries in five sentences as follows:
- The digital library is not a single entity
- The digital library requires technology to link the resources
- Linkages between digital libraries and information services are transparent to users
- Universal access to digital libraries must be a goal
- Digital library collections are not restricted to document surrogates but include digital artefacts that have no printed equivalent. Having looked at the definitions above, the researchers then define e-libraries as organizations that provide the resources, including the specialized staff, to select, structure, offer intellectual access to, interpret, distribute, preserve the integrity of, and ensure the persistence over
time of collections of digital works so that, they are readily and economically available for use by the clientele.

Information resources obtained through the e-library is known as e-library resources or electronic resources. Ugwu and Onyegiri (2013) clearly gave examples of electronic resources which include, but are not limited to: web sites, online databases, e-journals, e-books, electronic integrating resources, and physical carriers in all formats, whether free or fee-based, required to support research in the subject covered, and may be audio, visual, and/or text files. According to Ekere, Omekwu and Nwoha (2016), electronic information resources include World Wide Web; WIFI; search engines; online indexes; video CDs VSAT based Internet connectivity; online Library catalogue; online databases; portals; E-journals and E-books. They further enlisted specific types of electronic information resources as consisting of electronic books (e-books), electronic journals (e-journal), and indexes, collections of journal articles, reference works, digital collections and databases. Information contained in electronic information resources can be accessed only through the computer and internet.

The objective of university e-library is limited if access and retrieval of e-resources and services are ineffective. However, access to and retrieval of digital information resources has remained one area of growing concern for e-librarians. The Library of Congress Collections Policy Statements Supplementary Guidelines (2008) stressed that electronic resource is any work encoded and made available for access through the use of a computer. It includes electronic data available by remote access referring to the use of electronic resources via computer networks; and direct access (fixed media) referring to the use of electronic resources via carriers (e.g. discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment (Anyim, 2018). For a library user to access e-library resources, he must be computer literate. E-resources are most useful to the information literate users of any library. Trivedi (2010) states that improved access to e-library resources enhances research activities, promotes efficient delivery of information economically to all users; encourages cooperative efforts in research resources, computing, and communication networks; strengthens communication and collaboration between and among academic researchers and take leadership role in the generation and dissemination of knowledge.

E-libraries offer such benefits as equitable access to information, reduced barriers of distance, timeliness, shared resources and content delivery. According to Hirsh (2014), the mission of e-library is to provide both information services and resources that are capable of meeting the research, teaching and learning needs of the faculty and students. Of course, academic researchers see e-library as research Centre and intellectual energy house where knowledge, ideas and directions are generated to achieve research goals of the university. E-libraries are designed to enhance the accessibility of information where users can browse information electronically in a digital environment via local area network (LAN), campus back bone (Intranet) or Internet. E-libraries use advanced information technologies, such as information retrieval, multimedia communication and information visualization. Digital libraries bridge the lack of integration that exists between library systems and other kinds of information resources such as document databases (text or multimedia) and structured databases. Their advantages include: access to information that might be restricted to the user due to geographical location or finances, access to more current information, and provision of extensive links to additional resources related contents (Dadzie, 2007). E-libraries have been the prerogative of the developed world, and due to the advancements and affordability in computer and communication technology, they are, though slowly, getting importance in other countries. The transition from print to electronic medium, apart from resulting in a growth of electronic information, has provided users with new tools and applications for information seeking and retrieval. Electronic resources are invaluable research tools that complement the print-based resources in a traditional library setting. This rapid emergence and development of electronic information technologies therefore makes it possible to envision radically different ways of organizing the collections and services the library has traditionally provided.

According to Taylor and Francis (2013), there are areas in which improvement and innovation are needed to facilitate access to and retrieval of e-resources. They suggested creation and adoption of metadata
Satisfying users’ needs in the academic libraries has been the primary objective of libraries and librarians. The extent to which the user’s needs are satisfied depends on the size and collection of the library, the availability of functional e-library, the adequacy and accuracy of its materials, the usefulness of its catalogues and finding tools, the ability and cooperation of the library staff in maximizing the exposure of the users to these resources and to other library services (Ijekhuamhen, Blessing, Omosekejimi, 2015). Users’ satisfaction is the means with which users determine that a product or service meets the required needs and expectations. If the products or services do not meet their needs or expectations, it is therefore assumed that they (users) are dissatisfied with the product or services. Iwihu and Okorodudu (2012) stated that user’s satisfaction of library information resources and services is a way in which users judge the adequacy of the library information resources and services rendered to them and also if their expectations are provided to them. Library user satisfaction implies how users feel after using the information resources and services and their willingness to return to the library when next they need information (Ikenwe and Adegbilero-Iwari, 2014).

According to Terhile and Anthanisus (2013), academic library satisfaction is the provision of actual information or services that will meet the needs of an information seeker or user. This makes it mandatory to perform some assessment on the library services quality and delivery in order to ensure ultimate satisfaction. It appears that users are prone to self-sufficiency in finding the information they need due to the e-library resources and its search engines (Chinonye, et al… (2016). Gakibayo, Ikoja-Odongo and Okello-Obura (2013) noted that through the use of electronic resources, researchers and students now have access to global information resources, particularly the Internet for their scholarly intercourse. From the discussions above, it is evident that the e-library resources are the most used or consulted in academic libraries, it becomes necessary to ascertain if any correlation exists between the use to which these facilities are put by the university community and the satisfaction derived from the usage. This study, therefore, investigates the relationship between the use of e-library resources (independent variable) and the satisfaction derived from such (dependent variable) in academic libraries in in Anambra State of Nigeria.

**Problem Statement**

University libraries are established to support the teaching, research and community service preoccupations of their parent institutions. Like their counterparts in other parts of the world, university libraries in Anambra State of Nigeria are at the heart of knowledge generation and dissemination. In order to live up to their broad mandate, these libraries acquire different kinds of information materials in both print and electronic format. Consequently, functional e-libraries are embedded in these academic library complex in order to ensure that the users derive the needed satisfaction. Students and lecturers in Nigerian universities appreciate the importance of e-library resources and services to the performance of their tasks. This is evident in the existence of published reports that categorized students and lecturers among the major users of the university e-library and its resources (Terhile & Anthanisus 2013; Hirsh 2014; Shafique, Rehman & Mahmood, 2012). It may be quite erroneous to assume that this regular use of e-library resources simply translates to satisfaction. A search of available literature revealed the absence of any empirical study to establish whether user’s patronage of their institutions’ e-libraries is motivated by the satisfaction received. The implication is that the general association of patronage with satisfaction has no factual or documentary backup. This
becomes the gap which this study intends to fill. Hence this study sets to investigate e-library resources as a correlate to user satisfaction in the academic libraries in Anambra State of Nigeria.

**Purpose of study**

The purpose of this study is to investigate the use of e-library resources as a correlate to user satisfaction in the academic libraries in Anambra State of Nigeria.

**Research Question**

The research question carved out of the purpose of this study is as follows: To what extent does the use of e-library resources relate with the satisfaction derived by academic library users in Anambra State?

**Hypothesis**

This study is further anchored on a null hypothesis which states that: The correlation coefficient between the use of e-library resources and user satisfaction in university libraries in Anambra State of Nigeria is not statistically significant.

**Significance of the Study**

This study will be of great benefit to government policy-makers, university administrators, professional librarians, library scholars/researchers and other library patrons. It will direct attention to e-library use as a predictor of user satisfaction in university libraries. It also provides the required research evidence in support of the relationship that exists between rate or frequency of e-library use and user satisfaction. The result equally expands and deepens the stock of published information on library user studies. Moreover, this study specifically contains valuable information that would enable critical stakeholders assess the extent to which students utilize the resources and services of their institutions' e-libraries resources. More importantly, this research report may open the way for more incisive investigation of the interaction of the independent and dependent variables in this study. An important significance of this study therefore rests on its potential to generally increase the stock of published literature in Library and Information Science (LIS) scholarship.

**Method**

The two (2) research designs combined in this study are descriptive survey and linear correlation. Descriptive survey design enabled the researchers to collect and analyse data from a representative sample of a larger population that is heterogeneous in location, gender, at minimal cost (Aina & Ajiferuke, 2002 and Ali, 2006). The descriptive survey design was combined with linear correlation which involved matching the mean ratings of the independent and dependent variables as analysed in the contingency tables. This helped to establish the extent to which e-library resources use (independent variable) affect or influence library user satisfaction (dependent variable) in the universities surveyed. The area of the study was Anambra State of Nigeria. The researchers studied two universities in Anambra State, namely; Chukwuemeka Odumegwu Ojukwu University (government) and Tansian University (private). A sample of 200 respondents, representing 10% of the 2000 registered library users in the participant-universities in line with the suggestions of Borg and Gall (2006) was selected. A researcher-designed questionnaire was used for data collection. The instrument is entitled: E-Library Resources as a Correlate of User Satisfaction Questionnaire (ERCSQ). The instrument was scrutinized by two experts in Chukwuemeka Odumegwu Ojukwu University Library. Using accidental sampling technique, the ERCSQ was issued to 200 users found in the sampled university libraries in the course of questionnaire distribution. The computation of the reliability coefficient indices of the instruments using Cronbach’s Alpha Testing Technique produced a reliability index of 0.84. Every participant-university was visited in the course of data collection. This exercise, which lasted for two weeks, was accomplished with the assistance of colleagues in each library. At the end of the questionnaire administration, 160 copies were completed and returned. Descriptive and inferential statistics were used for data analysis while results were presented in tables. Responses to the item statements in the instrument are weighted as follows: Strongly Agree (SD) = 4; Agree (A) = 3; Disagree (D) = 2 and Strongly Disagree (SD) = 1. The Pearson Product Moment Correlation (PPMC) was used to ascertain the strength of the relationship.
between the two variables. A criterion means of 2.5 was used while the hypothesis was tested at 0.05% level of significance. The table of p-value was used for decision.

**Presentation of results**

**Table 1:** Mean of Responses by Respondents on the use of E-library Resources in Academic Libraries Under Study (N = 160)

<table>
<thead>
<tr>
<th>S/N</th>
<th>ITEMS</th>
<th>N</th>
<th>MEAN(x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Majority of students use university e-library resources more often.</td>
<td>160</td>
<td>3.4063</td>
</tr>
<tr>
<td>2.</td>
<td>I always use my university e-library resources for research-related assignments.</td>
<td>160</td>
<td>3.5125</td>
</tr>
<tr>
<td>3.</td>
<td>Students use e-library resources and services more than other groups within the university community</td>
<td>160</td>
<td>3.1875</td>
</tr>
<tr>
<td>4.</td>
<td>Majority of lecturers use the university e-library on regular basis.</td>
<td>160</td>
<td>3.3212</td>
</tr>
<tr>
<td>5.</td>
<td>Students use information (knowledge) materials in university e-libraries during examination period.</td>
<td>160</td>
<td>3.4513</td>
</tr>
<tr>
<td>6.</td>
<td>E-librarians in my university e-library are always helpful.</td>
<td>160</td>
<td>3.1269</td>
</tr>
</tbody>
</table>

Table 1 displays data from responses by respondents on their perception of e-library use in university libraries in Anambra State. It can be observed in the analysis that all the 6 item statements, are above the benchmark of 2.5. This is reflected in the pooled mean of 3.3342. It can be further deduced from this result that majority of the respondents agree that they use the e-library in several ways and for different reasons. However, item 2 (I always use my university e-library resources for research-related assignments) has the highest agreement with the mean of 3.5125. While item 6 (E-librarians in my university e-library are always helpful) has the lowest agreement with the mean of 3.1269.
Table 2: Mean of Responses by Respondents on Users Satisfaction Based on e-Library Resources Use in the Academic Libraries in Anambra State. (N=160)

<table>
<thead>
<tr>
<th>S/N</th>
<th>ITEMS</th>
<th>N</th>
<th>MEAN(x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I derive satisfaction from using the knowledge resources in the university e-library always.</td>
<td>160</td>
<td>1.7528</td>
</tr>
<tr>
<td>2.</td>
<td>Majority of those that come to the university e-library to carry out research are satisfied with the quality of resources and services.</td>
<td>160</td>
<td>1.9431</td>
</tr>
<tr>
<td>3.</td>
<td>The major group that derives satisfaction from the resources and services of the university e-library is the students.</td>
<td>160</td>
<td>2.5852</td>
</tr>
<tr>
<td>4.</td>
<td>Many lecturers use the university e-library regularly because they are satisfied with the available resources and services.</td>
<td>160</td>
<td>1.4273</td>
</tr>
<tr>
<td>5.</td>
<td>I am always satisfied using the resources and services of the university e-library during examination periods.</td>
<td>160</td>
<td>3.4815</td>
</tr>
<tr>
<td>6.</td>
<td>I derive satisfaction with the assistance I receive from the e-librarians in my university e-library.</td>
<td>160</td>
<td>2.0635</td>
</tr>
</tbody>
</table>

Table 2 presents data from 6-item statements covering various responses by the respondents (students) on user satisfaction based on the use of e-library resources in university libraries in Anambra State of Nigeria. The result suggests a near-unanimous disagreement by the respondents on their opinion as they only agreed with item statement five that the heaviest use of the resources of the university e-libraries occurs during examination periods (x = 3.2) and item three that the major group that derives satisfaction from the resources and services of the university e-library is the students. The low mean scores recorded for item statements 1, 2, 4 and 6 indicates student’s disagreement that they use their institutions' e-library resources because they are satisfied with them. This near-total disagreement is manifest in Table 2 as pooled mean (x) of 2.2089 is lower than the benchmark of 2.5 set for this study.

Table 3: Correlation Analysis Between the use of E-library Resources and User Satisfaction in Academic Libraries in Anambra State.

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean of E-library Use</th>
<th>Mean of user Satisfaction Based on E-library Use</th>
<th>Pearson Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3.4063</td>
<td>1.7528</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>3.5125</td>
<td>1.9431</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3.1875</td>
<td>2.5852</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>3.3212</td>
<td>1.4273</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>3.4513</td>
<td>3.4815</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3.1269</td>
<td>2.0635</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 presents the correlation analysis between students' use of e-library resources and user satisfaction in university libraries in Anambra State of Nigeria. The table reports a correlation coefficient of 0.101. This result indicates that a weak correlation exists between use of e-library resources and user satisfaction in university libraries surveyed. The level or strength of the correlation is not significant which means there is...
a gap between e-library resources use and user satisfaction. This is a problem situation which needs to be addressed.

**DISCUSSION OF FINDINGS**

The result in Table 1 shows that there is a high agreement by the students on the use of e-library resources in academic libraries in their various universities. This is certain because the pooled mean for the items in Table 1 is 3.3342, which is high above the benchmark of 2.50. This finding is in line with the assertion of Nnadozie, (2017) who carried out a research and revealed that majority of lecturers use the library in several ways and for different reasons. This finding however differs from the revelations of Oblinger (2007), Varalakshmi (2009), Simmonds and Andaleer (2001) which indicated that there has been a steady decline in the rate of use of university e-libraries.

The result in Table 2 revealed a disagreement by an overwhelming majority of the students that increase in the volume of e-library resources use tantamount to their satisfaction in the academic libraries. This disagreement by respondents is responsible for the low pooled mean score of 2.2089. This result is in agreement with the findings of Anyim, (2018) that there is utter dissatisfaction with the digital resources and information services provided in the various university e-libraries in Kogi State. This suggests that the use of e-library resources amongst students does not flow from their satisfaction. Again, there is a decline in the number of people who derive satisfaction from library materials (e-resources inclusive) considering the inability of most of these libraries to procure needed published materials as reported in Nnadozie (2016, p. 167). The analysis of responses clearly suggests that most people subscribe to e-library services not necessarily because they are satisfied with the quality of e-library resources and services. This means that the volume or frequency of e-library use may not be a good parameter for gauging user satisfaction in university e-libraries. It is therefore not surprising that majority of those that visited these university e-libraries to read, carry out researches and conduct other transactions were not satisfied with the quality of resources and services.

The study produced a correlation coefficient of 0.101 or 10.1% (Table 3), indicating a very weak correlation existing between students' e-library resources use (independent variable) and their satisfaction (dependent variable) in university libraries in Anambra State. It also proved that majority of the respondents agree that a relationship exists between the use of e-library resources and the users’ satisfaction in academic libraries. The test of hypothesis shows that the correlation coefficient (Table 3) is weak. The weak correlation between the independent and dependent variables reveal the gap between “use or patronage” and “satisfaction”. The existence of this gap points to inadequacies of information materials, shortage of basic facilities and delivery of poor-quality services. This conclusion is buttressed by the test of hypothesis where the correlation analysis produced a p-value of 0.233 and correlation coefficient of 0.101 showing that the p-value is greater than 0.05% level of significance (i.e. P > 0.05). This means that the correlation coefficient of the independent and dependent variables is statistically or mathematically insignificant. The null hypothesis is accepted.

**Conclusions and recommendation**

Based on the results of this study it has been empirically proved that a good number of students make use of the e-library resources in their universities. A relationship exists between the use of e-library resources by students and the user (students) satisfaction in the academic libraries in Anambra State. However, a very weak correlation existing between students' e-library resources use (independent variable) and their(satisfaction) in university libraries in Anambra State.

The following recommendations are made based on the major findings of this study:

1. Students in universities in Anambra State of Nigeria should cultivate and sustain the habit of regular and effective use of the e-resources of academic libraries. However, consistent patronage of library services would help to keep these students abreast of new research findings and current developments in their fields.
2. Efforts should be made to improve the quality of e-library collections and other information materials in university libraries in Anambra State. Specifically, both online database like HINARI and offline database should be subscribed.

3. Administrators of universities in Anambra State should ensure that facilities and infrastructure required to drive e-library resources and services are provided and maintained. This infrastructural facility cut across library building with adequate floor/office space, library furniture, library machines, as well as ICTs and other computer gadgets. The level of satisfaction derived by users would certainly improve upon the provision of these basic facilities in the required quantity.

4. Both students and librarians should endeavour to be computer and information literate.

References


