

Accessibility, Awareness and Use of Egranary Digital Library Technology in Academic Library by Lecturers of Umaru Musa Yar'adua University Katsina, Nigeria

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Abstract - The study investigated on the Accessibility, Awareness and Use of EGranary Library System by Academic Staff of Umaru Musa Yar'adua University. A null hypothesis was formed to investigate the influence of eGranary on enhanced access and usage of information resources by academic staff. The study used a quantitative research paradigm and a survey as the research method. Through the usage of the eGranary digital library system, a questionnaire was employed as the primary instrument for data collection on accessibility and utilization of information resources. The study used a population of 506 academic employees and a sample size of 150 academic staff, with a response rate of 95.0 % for data analysis. The study's data was broken down into percentage and frequency tables. According to the findings of the study, demographic characteristics (gender, age, education, and professional rank) had no significant impact on access to and use of information resources at the surveyed university. The study advised that the surveyed university to invest more in ICT facilities in order to improve academic staff's access to and use of eGranary and information resources for research.

Keywords: Accessibility, Awareness, Utilization, eGranary, Digital Library

I. INTRODUCTION

The university library serves as the academic hub of the university system, providing material support and a conducive atmosphere for teaching, learning, and research for university personnel, students, and other scholars. It is critical for library services to place a greater emphasis on patrons' utilization of the resources available to them. Academic library resources, according to Aina (2004), are an excellent indicator of an institution's greatness and quality. According to Popoola (2018), the information resources and services offered in institutional information systems must be capable of supporting student and faculty research activities. Accessibility was recognized as one of the pre-requisites of information use by Iyoro (2014) in his study. According to Aina (2004), the more easily accessible information sources are, the more likely they are to be used, and readers prefer information sources that involve the least amount of effort to access. The eGranary system was created in 2001 by the WiderNet Project at the University of Iowa in the United States and is constantly updated. It's an intranet, or "internet in a box," consisting of a 4 TB hard drive with specialized surfing software that can be

connected to a PC or a local area network. An eGranary Digital Library collects educational resources over a local area network to save money in locations where the Internet is sparse. The Katsina State House of Assembly passed Law No. 7 on September 5, 2006, which established the Umaru Musa Yar'Adua University Library alongside the University. It was created to support and supplement teaching and research by providing a diverse collection of materials related to the institutional disciplines. The University, as well as the Library, opened in January 2007 with the admission of the University's first cohort of students at a temporary location at Hassan Usman Katsina Polytechnic. The University Library relocated into its current ultra-modern facility in January 2009, and on March 19, 2009, it was ultimately and publicly opened at its current permanent site by the former President of the Federal Republic of Nigeria, Late Alh. Umaru Musa Yar'Adua, GCFR (of blessed memory) (University library guide, 2012). The Main Library, which includes a collection of carefully selected books and journals in all subject areas of the University's programs, is part of the Umaru Musa Yar'Adua University Library system. It also offers e-Library services, which include over 200 laptops and desktop computers that are all completely connected to the internet as well as the eGranary digital library system, which has an off-line collection of over 30 million educational resources. In addition to the Main Library's resources, five faculty libraries with books and e-Library services are linked to the main Library via the intranet. Ibid.

II. REVIEW OF LITERATURE

Popoola (2008) defined information resources accessibility as a user's ability to recognize the information needed, identify the various channels or sources available, identify the appropriate source, evaluate the information, and use it in an ethical and legal manner to make informed decisions. The study also looked at a lot of literature to figure out what kind of digital library system is employed in the university library under investigation, which is eGranary.

Aguolu and Aguolu (2002), Dike (2002), Bukland (2015), Seth (2016), Iyoro (2014), Dangani (2009), examined the availability and accessibility of databases extensively.

Academic staff has not used library services because of poor access to information resources, according to Aguolu and Aguolu (2002), Bukland (2015) believe that the availability of digital library systems such as eGranary can improve and encourage staff and students to use the library on a regular basis. The review also looked at the opinions of Kim (2016), Rajiv (2009), Hirak (2008), who stated that academic staff use both online and offline information resources. Kim (2016) described the databases used by users, finding that offline databases had the lowest percentage of utilization (15%). However, scholars and researchers such as Seth (2006), Lawal (2015), Popoola (2008), Nndozie (2008), Iyaro (2004), and Aliyu (2014) Oyewusi (2009) studied the accessibility and use of e-granary by academic personnel. Scholars and researchers believe that awareness of information resources provides a framework for recognizing, accessing, analyzing, and producing information for specific purposes, whereas Iyaro (2004) believes that technology self-efficacy and computer literacy is a tool that facilitates access to and use of information resources.

The study also looked at issues such as inadequate power supply, low bandwidth, lack of awareness, and shortages of information resources faced by academic staff at various universities from the perspectives of various scholars such as Ngozi (2019), Uwaifo (2012), Jones (2009), Beatrice (2009).

In conclusion, despite the extensive research in this field, it appears that there are gaps in the research area of accessibility, awareness and use of eGranary among academic staff at the university under study, according to a sparse amount of literature. As a result, this study established the concept of boosting information resource accessibility and usage through the deployment of the eGranary digital library system. The review also revealed that academics were utilized as subjects in some TAM investigations, indicating that they may have different ideas and motivations, such as research and publication. As a result, the findings of prior research cannot be extrapolated to the real world. As a result, the researcher chose academic staff at Umaru Musa Yar'adua University as respondents for this study. As a result, the purpose of this study is to see how far the library at Umaru Musa Yar'adua has progressed in terms of accessibility and consumption of information resources.

III. OBJECTIVES OF THE STUDY

1. To find out the kinds of ICT infrastructure does the Umaru Musa Yar'adua University Library have?
2. To discover whether Academics are Aware about the eGranary System.
3. To explore the Extent of the eGranary Availability and Accessibility to the University's Academics.
4. To reveal whether eGranary is being used by Academics at the University under investigation.

5. To find out the Constraints and Solutions related with the Use of eGranary Digital Library Technology.

IV. METHODOLOGY

The capacity to clearly demonstrate the procedure and methods by which data relating to the issue under examination is obtained and analyzed is an important part of any research. The methodology employed to collect and analyze data in this study was quantitative rather than qualitative. The reason for this is that various modes of investigation are based on different philosophical foundations, as well as, to some extent, different methodologies and procedures. Though the research process is similar in both quantitative and qualitative research, they differ in terms of data gathering methods, data processing and analysis methodologies, and communication style of the findings. Because qualitative research processes are more likely to use unstructured interviews or observation as methods of data collection rather than structured questionnaires, analysis entails only describing what was discovered during interviews or observation rather than subjecting the data to statistical procedures, the researcher chose the quantitative method.

The survey's population included all academic staff at Umaru Musa Yar'adua University, bringing the total number of academic personnel to 506 at the time of the study. As a result, there were 506 academic staff members in the study. Given that the goal of this study is to have each stratum of the population represented in the sample, stratified random sampling seems to be the best option.

V. STATEMENT OF THE PROBLEM

Academic communities in Nigerian institutions need access to information to be productive in their study. Universities are, in essence, venues for the development and dissemination of information through research, teaching, and learning in the service of nation-building. Academics at Nigerian universities, on the other hand, are said to be falling behind their counterparts in western countries in terms of access to and use of offline databases (Foster et al., 2008; Adams, & Kim 2010). As a result, despite the digital revolution in research, Nigerian institutions appear to be cut off from worldwide access to knowledge due to a lack of awareness or inadequate spread of modern ICT infrastructural facilities, low bandwidth, or a lack of internet connectivity that will allow access to online resources at the university library, resulting in low accessibility and utilization of information resources in our academic libraries in general, and the Umaru Musa Yar'adua University library in particular, by academic staff.

The study's ultimate goal was to see how academics at the university under study used the eGranary digital library system to access and use information resources.

VI. DATA ANALYSIS AND INTERPRETATION

As a result, because the research could not cover the entire population involved in the study, a sample size of 150 academic staff (representing 30 percent of the total population) was chosen.

The data analysis was discussed in relation to the study's questions and objectives. As a result, the study's findings is presented and discussed in the following manner.

The response rate of the copies of the questionnaire distributed to Umaru Musa Yar'adua University's academic staff is shown in table II.

TABLE I POPULATION OF THE STUDY

Sl. No.	Department	Population
1	Faculty of Humanities	110
2	Faculty of Education	51
3	Faculty Natural & Applied Science	198
4	Faculty of Management Science	98
5	Faculty of Law	18
6	Faculty of Medical Sciences	11
7	University Library	11
8	Center for Renewable energy research	9
	Grand Total	506

Source: Management Information System UMYUK (2020)

TABLE II DISTRIBUTION OF RESPONSE RATE

Sl. No.	Faculties & other Units of the University	No. of Questionnaire Administered	No. of Questionnaire Returned	%
1	Faculty of Humanities	33	30	21.1
2	Faculty of Education	15	15	10.6
3	Faculty of Natural and Applied Science	59	56	39.4
4	Faculty of Social and Management Science	29	27	19.0
5	Faculty of Law	5	5	3.5
6	Faculty of Medicine	3	3	2.1
7	University Library	3	3	2.1
8	Center for Renewable energy	3	3	2.1
	Total	150	142	100

Table II shows the total number of questionnaires distributed (150), of which 142 were duly completed, returned, inspected, and determined to be worthy of analysis, representing a 95 percent response rate, while just 8 (5%) were not returned. This high response rate can be attributed to the researcher's efforts in personally administering and distributing the instruments to each of the faculties, as well as subsequent follow-up to retrieve and collect completed questionnaire copies; this high response rate is sufficient for analysis in this study.

A. Respondents by Faculty

Respondents were given options representing topic disciplines to indicate their departments and faculties in order to ascertain their subject discipline. The purpose of finding this variable is to allow the researcher to understand the eGranary's search pattern and amount of usage based on their specialties. The academics' responses are listed in the table below.

The distribution of academic staff according to their faculties is shown in Table III. The Faculty of Natural and Applied Sciences received the most votes with 56 (39.4%), followed by the Faculty of Humanities with 30 votes (21.1%).

TABLE III DISTRIBUTION OF RESPONDENTS BY FACULTY

Sl. No.	Faculties	No. of Respondents
1	Faculty of Humanities	30
2	Faculty of Education	15
3	Faculty of Natural and Applied Science	56
4	Faculty of Social and Management Science	27
5	Faculty of Law	5
6	Faculty of Medical sciences	3
7	University Library	3
8	Center for Renewable energy	3
	Total	142

The population size of the respondents in the faculties accounts for the variation in the trend of this distribution. This is evident in the demographics of the respondents as well as the sample size. The reason for the high number in the faculty of Natural Applied Sciences could be due to the fact that they have the most departments, with a maximum of six departments in the remaining faculties and a new faculty with only one and two departments, respectively.

TABLE IV DISTRIBUTION OF RESPONDENTS BY LEVEL OF EDUCATION

Education	Frequency	%
BA/Bed/BSc	55	39.0
MA/Med/MSc	64	45.1
PhD	23	16.2
Total	142	100

Table IV shows an analysis of the results based on the respondents’ degree of education. According to the table, the majority of respondents (64%) had MA/Med/MSc as their highest educational qualification, followed by those with BA/Bed/BSc (55%) and PhD (23%) respectively (16.2%). Before being completely incorporated into the Nigerian university system, academics with first (BA/Bed/BSc) and masters degrees (MA/Med/MSc) are expected to acquire their PhD. This explains why Nigerian academics are required to get a PhD before being promoted to top academic posts, particularly the professorial cadre.

The purpose of the study was to determine the status of respondents based on their professional positions, which is shown in Table V. The greatest responses, 55 (39.0%) and 25 (18.0%), respectively, were from the ranks of graduate

assistants and assistant lecturers. Respondents from the professorial cadre, reader (associate professor), and professor received the fewest responses 7 (5.0%) and 3 (2.1%), respectively; this is due to the small number of academic employees in these categories, as well as their hectic time commitments.

TABLE V DISTRIBUTION OF RESPONDENTS BY RANK

Sl. No.	Education	Frequency	%
1	Professor	3	2.1
2	Reader/Associate Professor	7	5.0
3	Senior Lecturer	12	9.0
4	Lecturer I	18	13.0
5	Lecturer II	22	16.0
6	Assistant Lecturer	25	18.0
7	Graduate Assistant	55	39.0
	Total	142	100

B. Accessibility of Egranary

The respondents were asked to rate their level of access to the university’s eGranary.

TABLE VI ACCESSIBILITY OF EGRANARY BY RESPONDENTS

Sl. No.	Accessibility of EGranary	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
1	I access eGranary on the University LAN daily	20(14.1)	19(13.4)	40(28.2)	63(44.4)
2	I access information resources on the eGranary frequently	21(15.0)	17(12.0)	42(30.0)	62(44.0)
3	I use LAN in my office to access eGranary for my research	20(14.1)	16(11.3)	41(29.0)	65(46.0)
4	I prefer to access eGranary for my research than the print materials	22(15.5)	18(13.0)	39(27.5)	63(44.4)
5	I have enough skills to access eGranary resources	20(14.1)	19(13.4)	40(28.2)	63(44.4)

The data in table VI revealed that academic employees have limited access to the eGranary. The majority of responders, for example, did not have access to the eGranary. Based on the data, it was discovered that only replies with a frequency of 20 (14.1%) and 22 (15.5%) respectively represent academic staff accessibility to the system. The inaccessibility of the eGranary by the academic staff of the university under consideration is represented by a frequency ranging from 62(44.0%) to 65(46.0%). The chart also shows that responses affirming and denying that eGranary has

increased users’ access to information resources are 20(14.1%) and 64(45.1%), respectively. This means that, despite its accessibility enhancement potentials, the current degree of accessibility is unsatisfactory.

C. Awareness of EGranary

The researcher went on to examine the availability and level of awareness of the university’s academic personnel.

TABLE VII AVAILABILITY AND AWARENESS OF EGRANARY BY RESPONDENTS

Sl. No.	Availability of eGranary	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
1	eGranary is available in UMYU Library	21(15.0)	18(13.0)	41(29.0)	62(44.0)

Sl. No.	Awareness of eGranary	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
1	I am aware of eGranary in the University Library	20(14.1)	15(11.0)	40(28.2)	67(47.2)

The data in table VII revealed that academic personnel had little understanding of the eGranary's availability and are unaware of its existence. For example, the majority of respondents were uninformed of the E-availability, eGranary's with a frequency of 62(44.0%) and 67(47.2%) for severe disagreement. Only those with a frequency range from 21(15.0%) to 20(14.1%) are aware of the university's current eGranary. This means that there is a lack of user knowledge, which is one of the reasons why, due to the ineffectiveness of the programs, the system is not exposed to its users across campus.

D. Utilization of EGranary

The utilization of the eGranary is a significant factor in this research. It is critical to include this variable. It aids the researcher in determining the amount to which each respondent at the university library under investigation uses eGranary. Respondents were questioned whether or not they utilize the eGranary of the university library under study for their academic pursuits in order to determine their use of the eGranary.

TABLE VIII UTILIZATION OF EGRANARY BY RESPONDENTS

Sl. No.	Utilization of EGranary	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
1	I use information resources through eGranary on the Intranet frequently	20(14.1)	19(13.4)	40(28.2)	63(44.4)
2	I use offline information resources in my research	21(15.0)	17(12.0)	42(30.0)	62(44.0)
3	I use information resources through campus network/intranet for my research	20(14.1)	16(11.3)	41(29.0)	65(46.0)
4	I use eGranary from my office for my research	22(15.5)	18(13.0)	39(27.5)	63(44.4)
5	I prefer using eGranary resources for my research than the print materials	20(14.1)	19(13.4)	40(28.2)	63(44.4)
6	I have enough skills to use eGranary	20(14.1)	19(13.4)	40(28.2)	63(44.4)

The extent to which academics use eGranary is depicted in Table VIII. The findings demonstrated that the majority of respondents, ranging from 62(44.0%) to 65(46.0%), did not use the eGranary because they lacked the necessary abilities. Only 20(14.1) to 22(15.5%) people said they used the eGranary. The findings found that clients were not making use of the resources. As a result of this discovery, users are less likely to investigate the accessible information

in the eGranary for their academic pursuits, preferring instead to rely on print resources, ignoring the eGranary content, which may be more relevant to their studies.

E. Challenges Associated with the Use of EGranary

Respondents were asked to indicate the challenges associated with the use of eGranary.

TABLE IX CHALLENGES ASSOCIATED WITH THE USE OF EGRANARY BY RESPONDENTS

Sl. No.	Setback Associated with the Use of EGranary	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
1	Inadequate provision of computers to all academic staff in the university	18(13.0)	21(15.0)	46(32.4)	57(40.1)
2	Insufficient provision of capacity building on the use of computers and Internet by academic staff	57(40.1)	45(32.0)	22(16.0)	18(13.0)
3	Epileptic power supply	19(13.4)	20(14.1)	47(33.1)	56(39.4)
4	Ineffective provision of Internet access in the university library	22(16.0)	20(14.1)	40(28.2)	60(42.3)
5	Lack of Regular update of the eGranary resources (electronic journals, online eGranary etc.) in the university library	20(14.1)	22(16.0)	45(32.0)	55(39.0)
6	Lack of awareness on access to Internet/electronic resources in the university library	60(42.3)	44(31.0)	18(13.0)	20(14.1)
7	Inefficient user education on access and use of electronic resources in the university library	61(43.0)	43(30.3)	18(13.0)	20(14.1)
8	Irregular alert to academic staff on availability of relevant electronic resources (eGranary etc.) in university library	60(42.3)	50(35.2)	15(11.0)	17(12.0)
9	Irregular maintenance of ICT infrastructures in the university	22(16.0)	20(14.1)	40(28.2)	60(42.3)
10	Irrelevant policy to guide the use of ICTs/electronic resources in the university	57(40.1)	45(32.0)	22(16.0)	18(13.0)

According to table IX, 61 (43.0%) of respondents believe they don't know how to utilize them, whereas 22 believe bandwidth is a problem (16.0%) a scarcity of Regular

updating of eGranary resources (electronic journals, online eGranary, etc.) in the university library has 20(14.1%), epileptic power supply has 19(13.4%), irregular alert to

academic staff on the availability of relevant electronic resources (eGranary, etc.) in the university library has 60(42.3%), and lack of orientation has also 61 (43.0%). Only responses ranging from 18(13.0%) to 60 (42.3%) have differing perspectives on whether the aforementioned obstacles are a challenge in using the eGranary.

F. Ways of Improvement

Table below contains multiple choice responses. It shows the solution as the challenges associated with the use of the eGranary in the university library under study.

TABLE X WAYS OF TACKLING THE CHALLENGES BY RESPONDENTS

Sl. No.	Way Forward	SA Freq (%)	A Freq (%)	D Freq (%)	SD Freq (%)
1	Adequate provision of computers to all academic staff in the university	18(13.0)	21(15.0)	46(32.4)	57(40.1)
2	Sufficient provision of capacity building on the use of computers/Internet by academic staff	57(40.1)	45(32.0)	22(16.0)	18(13.0)
3	Stable power supply	19(13.4)	20(14.1)	47(33.1)	56(39.4)
4	Effective provision of Internet access in the university library	22(16.0)	20(14.1)	40(28.2)	60(42.3)
5	Regular update of the eGranary resources (electronic journals, online eGranary etc.) in the university library	20(14.1)	22(16.0)	45(32.0)	55(39.0)
6	Creating awareness on access to Internet/electronic resources in the university library	60(42.3)	44(31.0)	18(13.0)	20(14.1)
7	Efficient user education on access and use of electronic resources in the university library	61(43.0)	43(30.3)	18(13.0)	20(14.1)
8	Providing regular alert to academic staff on the availability of relevant electronic resources (electronic journals, online eGranary etc.) in university library	60(42.3)	50(35.2)	15(11.0)	17(12.0)
9	Regular maintenance of ICT infrastructures in the university	22(16.0)	20(14.1)	40(28.2)	60(42.3)
10	Formulation of relevant policy to guide the use of ICTs/electronic resources in the university	57(40.1)	45(32.0)	22(16.0)	18(13.0)

Table above shows that responses range from proper orientation programs on how to use the eGranary to proper orientation programs on how to use the eGranary. Maintaining a steady power supply, increasing knowledge of Internet/electronic resource availability in the university library Regular updating of eGranary resources (electronic journals, online eGranary, etc.) in the university library, design of suitable policy to guide the use of ICTs/electronic resources in the university, adequate capacity building on the use of computers/Internet by academic staff, etc.

Keeping academic staff informed about the availability of important electronic resources (electronic journals, online eGranary, etc.) at with a frequency of 57(40.1%) to 61(43.0%), university libraries are rated highly, followed by effective Internet access in the university library, regular maintenance of ICT infrastructures in the university, and adequate provision of official computers to all academic staff in the university, all with a frequency of 45 18(13.0%) to 22 (16.0%).

This result indicated that proper orientation programs on how to search the eGranary, stable power supply, formulation of relevant policy to guide the use of ICTs/electronic resources in the university, and adequate provision of capacity building on the use of computers/Internet for the university's academic staff will improve the accessibility and utilization of the eGranary by the academic staff so that they can take advantage of and maximize their full potentials to utilize the information resources in the system.

VII. FINDINGS AND CONCLUSION

It was found and concluded that demographic characteristics (gender, age, education, and professional rank) had no significant impact on access to and use of information resources at the surveyed university. Secondly, there is a lack of user knowledge and awareness, it further shows that responses affirming and denying that eGranary has increased users' access to information resources this means that, despite its accessibility enhancement potentials, the current degree of accessibility is unsatisfactory. Moreover, it was found that clients were not making use of the resources. Staffs are less likely to investigate the accessible information in the eGranary for their academic pursuits, preferring instead to rely on only print resources.

VIII. RECOMMENDATIONS

1. Providing regular alert to academic staff on the availability of relevant electronic information resources downloaded on eGranary in the university library.
2. There's the need to intensify more effort by the University library in promoting eGranary system through awareness, orientations, user education, newsletter etc.
3. Access to eGranary should also be improved so as to increase academic and research output. The university to invest more in ICT facilities in order to improve academic staff's access to and use of eGranary and information resources for research.

4. Staff should be encouraged to utilize eGranary library system.
5. Sufficient provision of capacity building on the use of computers/Internet by academic staff this will encourage the staff to the use of the eGranary.

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