ENHANCING QUALITY RESEARCH OUTPUT THROUGH OPEN KNOWLEDGE PRACTICES IN LIBRARY AND INFORMATION SCIENCE: ACASE STUDY OF CHUKWUEMEKA ODUMEGWU OJUKWU UNIVERSITY, ANAMBRA STATE

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ABSTRACT

This study examined the extent of Quality Research Output through Open Knowledge in Library and Information Science, Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State. The objectives: identified the types of OK resources used, assess awareness levels, determining the purposes of utilization, and explored challenges faced by students. The research adopted descriptive survey design and collected data through questionnaires with a population of 282 registered LIS students, achieving a 91.1% response rate. Descriptive statistics with percentages, mean and frequency counts were used for analysis. The literature review highlighted OK as a transformative model in scholarly communication, offering free, immediate access to research articles, e-books, and other resources. Key findings revealed that OK e-books, research articles, and conference papers were the most utilized resources. Students primarily used OK for assignments, class presentations, and updating lecture notes. Awareness of OK resources was relatively high, with most respondents acknowledging their availability in the library. However, significant barriers included inadequate knowledge of locating online items, difficulty accessing relevant materials, and insufficient internet facilities. The study recommended that library management should enhance user training programs to improve information retrieval skills, invest in better ICT infrastructure to facilitate remote access and regular evaluations of users' abilities to navigate OK resources utilisation. In conclusion, OK resources are vital for academic success, particularly in technical institutions like polytechnics. Addressing the identified challenges through targeted interventions, will empower students to leverage OK effectively, fostering a culture of quality research and innovation.

Keywords: Open Knowledge, Research Quality, Open Access, Scholarly Communication, LIS, Knowledge Dissemination

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Introduction

Open knowledge or books (OK) to scholarly communication showed a mechanism to address journal prices and growing limited access to the increasing volume of research literature. Open Knowledge helps researchers directly both as authors and readers and also helps the institutions that fund and supervise research from universities and laboratories to foundations and governments. It increases the distribution of research literature among the researchers without compromising peer review, preservation, indexing, or the other characteristics of conventional publishing. With the growing number of journals, academics and societies which were traditionally publishing them, could no longer cope with the numbers. Over the years, Open Knowledge has emerged as an alternative way to the publisher-driven model of scholarly publishing which provides free access to scientific, timely and adequate information to its varying degree of users.

The Open Knowledge publishing model give access to full- text of journals free of charge to any user through a well- organized and professionally managed web interfaces. The proposal of Open Knowledge originated from grounds that it would strengthen the exchange of ideas and information among the scientific community of young researchers without the limitations of subscription costs, licensing arrangements and copyright inherent to the traditional model of commercial journal publishing and help researchers, postgraduate students, librarians and others. The availability of Information and Communication Technologies (ICTs) carry on to make changes in every aspect of our society and reshapes scholarly communication in many ways.

In an academic setup, research is a very important component as current information is very essential to researchers for being updated their field, therefore, there is a high dependency on scholarly journals to meet their information requirements. Libraries being an information provider have been subscribing to scholarly publications in various disciplines in accordance with the thrust of the parent institution. But with the tremendous growth of specialization in various disciplines the number of journals to be subscribed has exponentially increased. The prohibitive factor for the library is mainly the escalating cost of the subscription to these information resources in respect to the stringent library budget. This has led to a phenomenon called "Scholarly Crisis" where the libraries on one hand have to meet the users growing research information demands and the publication prices (be it print / or electronic) are shooting up and on other hand the library budgets are shrinking. At this juncture "Open Knowledge" resources have dawned as boon to both the academic users and the library managers.

Statement of the problem

Millions of scholarly articles are appearing on the Web but due to number of restrictions, access to them can't be availed every time. Out of these, a large number of articles are useful for Library and Information Science (LIS) research and development that appear in different journals from time to time. Open Knowledge journals that provide free access to research have made their debut to provide ease in access to gathering information for research and everyday information use. Open Knowledge provide a means to getting information that already exists in different formats, and also give users access to information that they might not know about, and they do not have to know or care where the information is located. Despite its crucial role in helping users to access information; the poor performance of Users in locating these information resources in the various libraries has been attributed to the inability of Users to effectively retrieve information for their various information needs.

According to United Nations educational, scientific and cultural organizations (2017), there are about fifteen (15) established OK repositories in Nigeria. Not only is the knowledge of OK repositories. Chigbu, Njoku and UzOKgba (2016) pointed to the implication that academics and students are denied access to huge volumes of information that can be retrieved online. Solutions to any form of the problem can be achieved through adequate information on the said subject matter, as a result of the ever-growing information explosion, the information quality in terms of its accuracy, currency, completeness and other factors can be an issue of great concern.

Against this backdrop, there is a need to examine the information quality of resources readily available in the Information explosion age as regards the extent of Open Knowledge and quality research among LIS students of Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State which will indicate the type of Open Knowledge available in the library as well as the satisfaction and challenges derived and faced by the users when using the Open Knowledge.

Objectives of the study

The general objective of the study was to ascertain the extent of Open Knowledge and quality research among LIS Students in Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State. However, the study will be guided by the following specific objectives which are as follows:

1. To identify the types of Open Knowledge utilised by LIS students in Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State

2. To ascertain the purpose of utilisation of the Open Knowledge to access information resources by LIS students in Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State
3. To identify the challenges of Open Knowledge utilisation of information resources by LIS students in Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State.

Research Questions

The study was guided by three research questions

1. How well do you utilise the following OK resources?
2. What purpose do you utilise Open Knowledge Resources?
3. What are the challenges faced using Open Knowledge to access information resources

Literature review

Open-access Information Resources are one of the newest channels through which access to information can be gained by students in institutions of higher learning in Nigeria and the world over. Prince and Saravanan (2015) defined OKIRs as electronic resources which are available to the end user without payment. This means that there is no need for the institution or the individual to pay for accessing and using the resources. One of the OKIRs of OK is that anyone on the public internet can access and use OKIRs to the fullest capacity; it gives users access to the newest information without restriction and they are made available, published and disseminated quickly on the Internet (Onyebinama, 2020). These resources include library catalogues (OPAC), OK journals, OK magazines, OK databases, OK e-books, OK theses, website information, OK repositories, etc.

According to Kumar, Singh and Haleem (2015) OKIRs are the most valuable resources in the field of teaching, learning and research. In the era, when the use of terms like learning organisation, knowledge economy, and knowledge management is getting popular, OKIRs play a vital and most important role in making all the terms functional in their very own way. Pooling and sharing resources have given teaching and learning a boost towards sharing knowledge, competences and facing the challenges of an ever-changing world. The development of Web 2.0 has also boosted the process of development of digital databases and increased the provision of access for information users to these digital databases. This development has focused more on the accessibility options and utilisation of OKIRs by the users. OKIRs are usually defined as the resources that are available online and can be freely accessed by users for their research, teaching, learning and sharing purposes.

It is imperative to incorporate principles to re-awaken the importance of OKIR in the minds of the students. However, the efforts of students are been thwarted as noted by some studies. Ogunsanya, Solanke, & Olatoye (2020) opined that the factors which hinder students' effective use of online resources may be technical and non-technical. The technical constraints include inadequate and poor telecommunication infrastructure, absence of national information communication infrastructure, problems of connectivity, lack of or limited bandwidth for ICT for learning and research and non-reliability of public electricity; while the non-technical constraints include, among other constraints: online usage skills necessary for general surfing of the net, lack of time to use ICTs as a result of school work amongst others (Association of African University, AAU, 2000).

Ivwighreghweta and Onoriode (2012) stated that access to and uses of OKIR in Nigeria is hampered by the inadequacy of existing resources, lack of information about them, inadequate security of materials, the uncooperative attitude of parent bodies, lack of appropriate and coherent policies, inflation and unstable budgetary allocation. Another development, a serious constraint against the use of the internet, according to Agber (2015) is limited access to the internet.

Methodology

Descriptive survey research design was adopted for this study using quantitative analysis. The population of the study comprises of registered undergraduate LIS students at Chukwuemeka Odumegwu Ojukwu University, Uli, Anambra State, which were Two Hundred and Eighty Two (282) and Total enumeration of respondents was used bringing the sample size to Two Hundred and Eighty Two (282) in accordance to Research Advisors' Table 2011 at a precision level of 3%. Data was collected using questionnaire. The questionnaire was subjected to reliability test where Cronbach Alpha Coefficient was found to be 0.932 which signifies a high level of reliability of the instrument. The data collected was presented in tabular form and analyzed using descriptive statistics and frequency counts using Statistical Product and Service Solutions (SPSS).

Results and Discussions

Table 1: Frequencies, Percentages and Mean of Respondents on the types of Open-Access Utilised by registered LIS Students in Chukwuemeka Odumegwu Ojukwu University,

Table 3: Barriers to OK resources utilisation by registered LIS Students in Chukwuemeka Odumegwu Ojukwu University,

What are the challenges faced using Open Knowledge to access information resources

S/N	Challenges	Frequency (F) /Percentage (%)	Agree (A)	Disagree (D)	Total
1	Lack of off-line E-resources databases to satisfy needs affects access to the databases provided in the library	F %	150 58.4	107 41.6	257 100
2	Inability to access relevant material from the databases discourage users from attempting to access the databases	F %	200 77.8	57 22.2	257 100
3	Difficulty in searching and navigating within the databases of the library also discourage users	F %	157 61.1	100 38.9	257 100
4	Lack of user orientation on how to access the databases is a stumbling block inhibiting access to the databases	F %	0 0	257 100	257 100
5	Difficulty to access the login ID and password to show the content provided in the databases	F %	57 22.2	200 77.8	257 100
6	Lack of assistance from librarians	F %	40 15.6	217 84.4	257 100
7	Inadequate knowledge on how to access the offline OK databases	F %	200 77.8	57 22.2	257 100
8	Inadequate knowledge to locate items online	F %	257 100	0 0	257 100
9	Inadequate internet facilities	F %	157 61.1	100 38.9	257 100
10	Lack of conducive atmosphere	F %	150 58.4	107 41.6	257 100

Table 3 reveals that Inadequate knowledge to locate items online 257 (100%), inability to access relevant materials from the databases discourage users from attempting to access the databases 200 (77.2%), inadequate knowledge on how to access the offline OK databases 157 (61.1%) ,as well as inadequate internet facilities157 (61,1%). The above listed were the major challenges encountered by registered LIS students at the Rufus Giwa polytechnic Library, Owo, Ondo State.

Findings

This study revealed that the types of Open-access Resources (OK) most often utilised by registered LIS students at Chukwuemeka Odumegwu Ojukwu University, are e-books, OK research articles and conference papers which align with the current situation because we are now surrounded with information that can be accessed free without any subscription and this can be obtained from various sources including those revealed in this study. Tella and Akande (2019) showed that e-books, e-journals and research articles, online databases, and digital libraries support with the current finding. However, the report by Liang and Mackey (2018)

that online dictionaries, grammar and vocabulary practice sites, and language-learning apps of the OK types used by the respondents in their study contradict this current result.

The findings also showed that the respondents are aware of the availability of OK resources in the library. The study also revealed that the purpose of OK utilisation is for assignments/class presentations as well as to update lecture notes which is in tandem with the findings of Kaaba and Said (2015) that academics regularly use OK for scholarly works, research and teaching/learning activities. It is also similar to Tella and Akande (2019) findings that students used OK for a variety of purposes, including classwork, research, and personal interest.

Furthermore, the study reveal the various challenges to OK utilisation as Inadequate knowledge to locate items online, inability to access relevant materials from the databases discourage users from attempting to access the databases, inadequate knowledge on how to access the offline OK databases as well as inadequate internet facilities as there is never a technology that does not have associated challenges. Asefeh and Nosrat (2007)

confirmed that inadequate internet facilities and lack of acquaintance with the process of use of offline databases along with the availability of lesser terminals connected to the server are the main factors that responsible for the students' poor/low use of offline databases (OK). In the same vein, findings of Al-Rawi and Banna (2018) who reported that several factors influenced the usage of OKs by postgraduate students including availability and accessibility of OK, the quality of OK, and the level of technological infrastructure (ICTs) in universities.

Conclusion and Recommendations

Open knowledge resources offers quicker and broader access to useful information. Based on the findings from this study, it is hereby concluded that OK resources are very useful for polytechnic students who utilises them for assignments/class presentation, updating lecture notes and prepare for examination. These requires access to the library through proper registration for library services.
The following recommendations were made from this study

Library managements in academic libraries should constantly evaluate their users' ability to curl information from both online and offline OK

Efforts should be intensified by library management to improve availability and accessibility of internet and ICTs facilities for students which will enhance remote access to library information resources to aid students in their academics and research activities.

REFERENCES

Al-Rawi, A., & Banna, H. (2018). Use and Perception of Open-Access Academic Resources by Postgraduate Students in Jordan. *The Electronic Library, 36*(2), 236-251. doi: 10.1108/EL-05-2017-0100

Bala, S., Bansal, S., & Sharma, Y. (2018). Awareness of Open-Access Resources among the Researchers of Punjab Agricultural University, Ludhiana. *International Journal of Library Information Network and Knowledge, 3(1), 139-145*.

Chigbu, E. D., Njoku, E. O., & UzOKgba, N. (2016). Management and Usage of Open-Access Scholarly Online Resources in University Libraries in Nigeria. *The Electronic Library*

Chua, S. K., Qureshi, A. M., Krishnan, V., Pai, D. R., Kamal, L. B., Gunasegaran, S., & Sood, S. (2017). The Impact Factor of an Open-Access Journal does not contribute to an Article's Citations. *F1000Research*, *6*.

Enweani U.V. (2019). Professional Development; the Result of Effective Mentoring for Paraprofessional in

Academic Libraries in Nigeria: International Journal of Social Sciences and Humanities. Review Vol.9 No 2, August 2019; P, 95-106, (ISSN: 2276-8645).

Enweani, I. B. and Enweani, U.V. Challenges and Prospects of Educating women Scientists in Nigeria. Forum for African Women Educationalist, Nigeria Vol. 1:242-252.

Enweani, U. V. (2012). Using the Library: English studies Vol.(1) 254-266;2012

Enweani, U. V. (2019). Towards Sustainable Information Policy in Developing Countries: A look at the challenges. Journal of Applied Information Science and technology 12(2)

Enweani, U.V. (2018). Challenges of Managing University Libraries in Contemporary Digital Environment
2018. Library Philosophy and Practice (e-Journal 2073h   ttp//digital commons.unl.edu/Libphilprac/2073.

Enweani, U.V. and Muokebe .O. B. (2019). Social Media Utilization in the Teaching Library and Information Science Course in Tertiary Institutions. Research Journal of Library and Information Science. 3, (3), 1-5

Enweani, U.V. and Muokebe, O. B. (2019). Accessibility and utilization of Information Resources on Student's Learning Outcomes in Selected Government Secondary School in Onitsha North Local Government Area of Anambra State. International Journal of Research and Innovation in Social Science. (IJRISS)/Volume III, Issue VIII, August 2019/ISSN 2454-6186.

Enweani, U.V. and Nwankwo , N. G. (2018). Information Needs and Seeking Behaviour of Engineering Lecturers in Nigerian Universities, The case of Chukwuemeka Odumegwu Ojukwu University, Anambra State. Library Philosophy and Practice (e-journal).

Enweani, U.V. and Offor, N. J. (2017). User satisfaction with library resources and services in Chukwuemeka Odumegwu Ojukwu University Teaching Hospital Awka, Anambra State. Review of Information Science and Technology (RIST), Vol 3 p ab-101. 2017.

Enweani, U.V. Enem, F.N. and Igbokwe, J.C. (2019). Use of social media in marketing Library and Information services in University Libraries in south-East, Nigeria. International Journal of Applied Technologies in Library and Information Management, 2019 5(1)04-37-47 ISSN; (online) 2467-8120.

Enweani,U.V. and Eke,C.C. (2019). Use of social media by Religious Organization in Nigeria lessons for libraries and information centers. Journal of Applied Information Science and Technology, 12(2)2019. pp 52-58.

Ezeani, C. N. and Enweani, U. V. (2015). Preservation and conservation of library collections in Federal Universities in South-East Nigeria. Review of Information Science and Technology (RIST), Vol 1 No 1 p1-10. 2015.

Ezekwe, F. A. and Enweani, U. V.(2019). Prospects of Record Management in Nigeria Library Philosophy and Practice, May 2019-Online Research Library Questia Reader Files/Site.JS.min.js.download"></script>

Ezema, R. E., & Leonard, A. (2016). Access to electronic information resources by students of Federal College of Education in South East Nigeria. Nigerian Libraries, 49(1–2), 56–64.

Harisanty, D., Anna, N. E. V., Putri, T. E., & Firdaus, A. A. (2020). Designing 'library smart bot' to support information services in an academic library. *Journal of Southwest Jiaotong University, 55*(6), 12. https://doi.org/10.35741/issn.0258-2724.55.6.15

Hervieux, S., & Wheatley, A. (2021). Perceptions of artificial intelligence: A survey of academic librarians in Canada and the United States. *The Journal of Academic Librarianship, 27*(2021), 1–11.

Igbokwe, J.C., Mbagwu,F.C. and Enweani, U.V. (2019). Availability of Funds, Time and Information Resources as Predictors of Quality Research Output among Libraries in Nigerian University Libraries. An International Journal of Information and Communication Technology (ICT) Volume 16, Number 1, June, 2019. pp 77-93.

Kabba, A., & Said, R. (2014). Bridging the Digital Divide through ICT: A Comparative Study of Countries of the Gulf Cooperation Council, ASEAN and other Arab Countries. Information Development, 30(4), 358-365.

Kumar, S., Singh, V., & Haleem, A. (2015). Critical Success Factors of Knowledge Management: Modelling and Comparison using various Techniques. *International Journal of Industrial and Systems Engineering, 21*(2), 180-206.

Liang, H., & Mackey, T. P. (2018). Use of Open-Access Institutional Repositories by Undergraduate Students Studying Foreign languages in the United States. *College & Research Libraries, 79*(4), 510-524. doi:10.5860/crl.79.4.510

Muokebe .O. B. and Enweani, U. V. (2019). Availability, Awareness, Use and Users' Satisfaction with E-Resources in Chukwuemeka Odumegwu Ojukwu University Library, Anambra State. Nigeria. International Journal of Research and Innovation in Social Sciences (IJRISS), I Volume III, Issue VIII, August 2019/ISSN 2454-6186

Muokebe .O. B. and Enweani, U.V. (2019). Evaluation of Special Library Resources: A Last Study of

Faculty of Nursing at University of Medical Science Library, Ondo. Nigeria. Research Journal of Library and Information Science. Volume 3, Issue 2, 2019, Pp 8-12 ISSN 2637-5915.

Muokebe, B. O., Enweani, U. V. and Nwankwo, N. G. (2018). Information Need and Seeking Behaviour of practicing Nurses in Nigeria. The case of Our Lady of Lourdes Hospital, Ihiala. Library Philosophy and Practice (e-journal), Vol (5):1-14, 2018.

Nakhoda, M., & Tajik, S. (2017). A survey of the factors influencing the resistance of employees of university libraries to technological changes: Study of libraries of Tehran University. *Library Management, 24*(4), 1–12. https://doi.org/10.1108/LM-02-2017-0025

Odede, I., Arumuru, L., & Atake, O. A. (2023). Attitude of lecturers towards the usage of library collections: A focus on the faculty of education, Imo State University, Abraka. *Journal of Contemporary Studies in Library and Information Science, 1*(1), 1-10.

Odeyemi, S. O. (2019). Robots in Nigerian academic libraries: Investigating infrastructural readiness and potential for library services. *Wildau, Germany.* https://library.ifla.org/id/eprint/2776/

Ofordile J. O. and Enweani, U.V. (2009). Strategies for Improving Reading Culture in Children in Anambra State. Nigeria Library and Information Science Review, Vol.3, 54-60, 2009.

Ogbomo, E. F, & Ishioma, F. I. (2023). Awareness and adoption of quick response code by librarians in universities in Delta and Edo States, Nigeria. *Regional Journal of Information and Knowledge Management, 8*(1), 11-23.

Ogbonna, A.U., Igwesi, U. And Enweani, U.V. (2014). Management of Hybrid Libraries for Effective Library Service in Nigeria New Trends in Accessing Information. Global Journal of Academic Librarianship, Vol (1), 1-7, 2014

Oghenetega, L. U., Umeji, E. C., & Obue, C. N. (2014). Challenges associated with the use of ICT facilities in public libraries of Nigeria. *Developing Country Studies, 4*(22), 1–5.

Okunlola, A. A. (2021). Utilization of library based electronic resources and services by postgraduates in Nigerian private universities. International Journal of Multidisciplinary and Current Educational Research, 3(4), 164–171.

Okuonghae, N., & Tunmibi, S. (2023). Digital competence as a predictor for the motivation to use artificial intelligence technologies among librarians in Edo and Imo States, Nigeria. *Journal of Technology Innovations and Energy, 3*(1). https://doi.org/10.56556/jtie.v3i1.728

Onyebinama, C. O. (2020). Access and Use of Open-access Resources by Undergraduate Students in

Federal Universities in South East Nigeria. *Library Philosophy and Practice*, 1-12.

Piwowar, H., Priem, J., Larivière, V., Alperin, J. P., Matthias, L., Norlander, B., & Haustein, S. (2018). The State of OK: A Large-Scale Analysis of the Prevalence and Impact of Open-Access Articles. *PeerJ*, *6*, e4375.

Shahzadi, U., & Hussain, B. (2019). Awareness and Access of Open-access Resources by Teacher Educators and Student Teachers: Potential for Reflection. *Pakistan Journal of Distance and Online Learning*, *5*(1), 17-30.

Suber, Peter. (2012). Open-Access. Cambridge, Mass: MIT Press. [Updates and Supplements: http://cyber.law.harvard.edu/hOKo/Open_Access (the_book)]

Tella, A., & Akande, S. O. (2019). Use of Open-Access Institutional Repositories by Undergraduate Students in Nigerian Universities. *Malaysian Journal of Library & Information Science, 24*(2), 39-51.

Unesco (2017). Global Open-Access Portal, United Nations Educational, Scientific and Cultural Organization:http://www.unesco.org/new/en/communication-and-information/portals-and-platforms/gOKp/access-by-region/africa/nigeria/