AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.12 (2), May-August, 2024 https://ajemates.org

DIGITAL RESEARCH ARCHIVE FOR TERTIARY EDUCATIONAL INSTITUTIONS: CHALLENGES MITIGATING IMPLEMENTATION

ALAO, Beatrice Funmilayo
Tel: 07066887542
Email: alaofunmi@gmail.com

OWOLABI, Abdulhakim Adewale
Tel: 08067015567
Email: abdulhakim.owolabi@fcetasaba.edu.ng

&
INAYA, Adesuwa
Tel: 08033244994
Email: debbietupsy@yahoo.co.uk

Department of Computer Education
Federal College of Education Technical) Asaba

ABSTRACT

The study provides an overview of the challenges faced by tertiary educational institutions in implementing digital research archives. The paper discussed current trends in digital research archives, as well as the benefits and limitations of these systems. The study investigated the challenges and implementation strategies for Colleges of Education in Delta State. It also examined case studies of successful digital research archive implementations, and offer recommendations for overcoming implementation challenges. This study adopted the descriptive-survey design type. The target population of the study comprised of all the final year students from the four Colleges of Education in Delta State. A survey questionnaire titled: Digital Research Archive Challenges and Implementation Survey Questionnaire (DRACISQ) was used to collect data from respondents. The cronbach reliability alphas (α) of 0.79 and 0.82 were obtained for the items on challenges and implementation strategies respectively. The Mean and standard deviation were used to analyse the result in the study. The result showed that poor funding, low provision of record keeping facilities, poor knowledge of record management practices and shortage of technical know-how are the challenges militating against the implementation of digital research archive in Colleges of Education in Delta State. The study recommended that some percentage of TETfunds annually giving by the Federal Government should be used to fund departments and various divisions of the Colleges of Education for Digital archiving and long term storage of data. The study concluded by proposing potential solutions to address the challenges faced by tertiary educational institutions in implementing digital research archives.

Keywords: Digital Research Archives, Tertiary Educational Institutions, Challenges, Implementation

AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.12 (2), May-August, 2024 https://ajemates.org

Introduction

Digital research archives have become an essential tool for tertiary educational institutions in managing and preserving their research output. These archives provide a centralized platform for storing, organizing, and disseminating research materials, including journal articles, conference papers, theses, and dissertations. By utilizing digital research archives, institutions can promote collaboration, enhance visibility, and facilitate access to their research output.

Despite the many benefits of digital research archives, implementing these systems can be a complex and challenging process. Tertiary educational institutions face a variety of challenges in establishing and maintaining digital research archives, including technical, financial, and organizational barriers. This paper will survey the challenges faced by tertiary educational institutions in implementing digital research archives, and discuss strategies for mitigating these challenges.

Tertiary institutions are academic institutions where post-secondary education takes place. They include institutions such as Universities, Colleges of Education, Polytechnics, Monotechnics, Distance learning centres and other institutions that teach correspondence courses. Tertiary institutions are seen as a catalyst for speeding up the rate of human, socio-economic and political development of a nation (Federal Republic of Nigeria, 2013). This is because a developed or an educated society is one that has quality manpower and each occupying his or her rightful position to enhance the growth of the society. Thus, the importance of tertiary institutions in a developing country like Nigeria cannot be overemphasized.

The goals of tertiary education as clearly spelt out by the Federal Republic of Nigeria (2013) under the National Policy on Education are to: (a) contribute to national development through high level relevant manpower training; (b) develop and inculcate proper values for the survival of the individual and society; (c) develop the intellectual capability of individuals to understand and appreciate their local and external environment; (d) acquire both physical and intellectual skills which will enable individuals to be self–reliant and useful members of the society; (e) promote and encourage scholarship and community service; (f) forge and cement national unity; and (g) promote national and international understanding and interaction.

In pursuance of the stated goals, Colleges of Education, Universities, Polytechnics, Monotechnics, and Distance learning centres are expected to teach, undertake research and development, as well as generate and disseminate knowledge. Consequently, academic libraries have always been allotted the role of curating information and providing access to resources to support the work of parent institutions; this role is broadening to include digital resources and to accommodate data management requirements (Tarver & Phillips, 2013). Schofield & Urban (2015) noted that both academic libraries and archives have increasingly used digital mediums to preserve materials and provide access to users, allowing them to serve more diverse, and much more distributed populations by digitizing collections with

unique or rare material that otherwise has limited circulation in order to improve long-term preservation and expand access to cultural materials. As a result of this, many academic institutions develop digital research archives or repositories

A repository is a set of services that a higher institution offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members (Akintunde, 2010). Examples of repositories include: institutional or faculty repositories, publisher's repositories, research repository, dataset repositories, learning object repositories, cultural heritage repositories among others (Musa, Shittu & Abubakar, 2014). An institutional repository is an online locus for collecting, preserving, and disseminating in digital form the intellectual output of an academic department of faculty of an institution such as a College of Education.

For Colleges of Education such as Federal College of Education (Technical), Asaba or College of Education Warri, such intellectual output may include materials such as research journal articles, before (preprints) and after (post prints) undergoing peer review and digital versions of long essays, theses and dissertations (Fasae, *et al*., 2017). It might also include other digital assets generated by normal academic life, such as administrative documents, course notes, or learning objects. Research repository for a faculty provides the institution with a mechanism to showcase its scholarly output, centralize and introduce efficiencies to the stewardship of digital documents of value, and respond proactively to the escalating crisis in scholarly communication (Akintunde, 2010). Arising from the definitions, it could be seen that a research archive or repository is institution-based that contains scholarly publications, organizes and provides access with minimal restrictions for its users. Hence, it may be defined as a type of digital library established by an institution, populated by the faculty staff, researchers, students and other members of the institution and to be consulted by both members of the faculty, the university and the outside world.

Year in year out, a large mass of students submit to their supervisors, their long essays, thesis, dissertation, and assignments. After a few weeks and months, these valuable intellectual resources, are seriously damaged by dusts, moisture, heat and other environmental conditions that they are left to face on the department shelves or cabinets they are kept by supervisors. In addition to this, institutions are gradually supporting paperless applications and drives such as Google Classroom and Google Drives which is opposed to the traditional procedure whereby supervisees submit three or more hard bond copies of their long essays or thesis to their department through your research supervisor is generally characterized by some problems such as large consumption of physical storage space, poor information retrieval, poor knowledge sharing of valuable intellectual resources, loss of intellectual property and inefficiency of knowledge management (Christian, 2008; Alemayehu, 2010; Nkiko, Bolu & Michael-Onuoha, 2015). Hence, the need for all institutions to establish an institutional repository was largely encouraged by the National

University Commission (NUC). However Federal College of Education (Technical) Asaba and so many other Colleges of Education do not have such facility at the moment.

It has been alleged that most Colleges of Education like Federal College of Education (Technical), Asaba and College of Education, Warri, Delta State are still in their infancy stage in archiving and disseminating their research work in totality through its institutional repository. It has been observed by the researcher that institution's repository is often an incomplete collection of materials that are inconsistently updated, difficult to maintain and use. This difficulty is often as a result of different workflows for depositing new research, datasets, and metadata (Alemayehu, 2010; Fasae, *et al*., 2017). In Nigeria, Colleges of Education, have multiple partial repositories for storing different kinds of materials - publications, data sets, clinical data and unpublished research. Due to the archival of different resource types or fields of research; the need for a long term strategy for storing and managing researches of students and staff is pertinent. Ukwoma (2019) submitted that without a long-term strategy for storing and managing research assets, a university can find its repository unprepared to adapt to changes in technology for capturing or creating assets. Without flexible technology to meet these strategic needs, the result is often the creation of multiple repositories within the same institution and across the same disciplines.

Higher institutions like Federal College of Education (Technical) Asaba ,Delta State and College of Education, Agbor, Delta, with a single central repository find themselves undifferentiated or poorly organized with a collection of content, due to a research asset management strategy that is lacking or absent entirely. To find any value in such a repository, a researcher searching for relevant output has to engage in slow, manual sift – and even then, the results are often incomplete. Such repositories make it challenging to link data and publications, to standardize the collection of research assets, and to consistently apply metadata to these assets. The discoverability of research done at the university and colleges is thus far from what it should be, causing both the institution and the original researcher to lose opportunities to fully showcase their contributions to the field – or at times to even know what they are (Akpokodje, &Akpokodje, 2015; Nkiko *et al*., 2015).

Another challenge in maintaining a useful institutional research repository is motivating faculty researchers and students to deposit their outputs and data, and to do so consistently (Adeyemi, Appah & Bribena, 2017). Generally, populating an institutional repository is accomplished by researchers/students filling out an online form. This takes time, patience, and an understanding of its value. Unfortunately, many lecturers, and members of each school in Colleges of Education, infrequently follow through on that step. In most cases, the deposit process is so cumbersome and largely ignored even by academic staff who would otherwise want to add their materials to the repository. Even when a few lecturers faithfully deposit their research output in the institutional repository, they often do so with incomplete metadata or with none at

all. For the uploaded material to be discoverable, library staff are thereby left with no option than to add or enrich the metadata associated with these entries manually. This often consumes a significant amount of time.

In addition, another challenge of adaptability in research repositories is scalability (Ukwoma, 2019). This arises when an institution grows in size or expands to include new fields of research, while the processes and protocols for deposit, management and storage were perhaps appropriate for a smaller institution, but can no longer efficiently handle the increasing workflow. In other cases, the goals for the institutional repository may have evolved over time, while the processes have not been revised accordingly. On the other hand, a repository requires consistency, discoverability and ease of use (Musa, Shittu & Abdulkadir, 2014). Furthermore, it has been observed by the researcher that many departmental lecturers find it difficult to keep track of what they have supervised overtime using the institutional repository. It is also to the researcher's knowledge that some supervisee (undergraduate and post-graduate students) who need previous researches done by their supervisors as a template to guide themselves on an area of research interest; are unable to access them on the institutional repository. This is largely due to inability to access previous related literature done on certain research areas in the department or faculty through a user friendly platform like their smartphones and personal computers.

It is expected that students and staff should be able to deposit their works to the institutional repository by themselves without difficulty; lecturers should be opportune to keep track of what they have supervised overtime, students should be able to view and perhaps get a full download copy of previous literature supervised in their institution. It is against this backdrop that this research study seeks to provide answered to the research question below:

Do funding, record keeping facilities, knowledge of record management practices, record management policy/institution regulations and technical know-how constitute challenges to the implementation of digital research archive in colleges of Education in Delta State?

Purpose of Study

The main purpose of the study was to examine digital research archive for colleges of education in Nigeria and to analyze the challenges and implementations strategies for Colleges of Education in Delta State. The specific purpose of the study was as follows:

1. examine the effect of poor funding on implementation of Digital Research Archive
2. ascertain the impact of low provision of technical facilities
3. examine how poor knowledge of digital research management practices and its effect on the implementation
4. examine the effects of shortage of staffs with technical know-how

AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.12 (2), May-August, 2024 https://ajemates.org

Research Questions

1. How does poor funding affect the implementation of Digital Research Archive?
2. To what extent does low provision of technical facilities affect the implementation of Digital Research Achieve?
3. How does poor knowledge of digital research management practices affect it's implementation
4. To what extent does the shortage of staff with technical know-how affects the implementation of digital research archive.

Research Method

This study adopted the descriptive-survey design. The target population of the study comprises all the final year students from four Colleges of Education in Delta state namely: Federal College of Education (Technical) Asaba, College of Physical Education, Mosogar, College of Education, Warri, Michael & Cecilia Foundation College of Education, Agbarha-Otor, Delta State. A sample size of 100 final year students from the three colleges (25 per college) were drawn from the population. A survey questionnaire titled: Digital Research Archive Challenges and Implementation Survey Questionnaire (DRACISQ) was used to collect from respondents. DRACISQ was divided into Sections A, B and C. Section A was used to collect the bio-data of students such as: the name of their schools and also to collect data on the challenges of Digital Research Archive.

The items in Section A are segmented into groups of five to capture the five (5) record management challenges as follows: funding (items 1-5); record keeping facilities (items 6-10); knowledge of record management practices (items 11-15); record management policy/institution regulations (items 16-20) and technical know-how (items 21-25). The response rating is a four point likert scale of: Strongly Agree - 4, Agree - 3, Disagree - 2 and Strongly Disagree - 1.Section B was used to collect data on the strategies (containing 8 items) for effective implementation of digital research archive in secondary schools.

The face and content validity of the instruments was ensured by experts in Computer Sciences. The reliability of the questionnaire was determined using Cronbach reliability method. The Cronbach reliability alphas (α) of 0.79 and 0.82 were obtained for the items on challenges and implementation strategies respectively.

The researcher and two (2) trained research assistants administered the instrument to students. A cover letter to respondent was attached to each instrument to explain the purpose of the research exercise to respondents. The 100 copies of the questionnaire were distributed but 90 were duly filled and returned. This gives a return rate of 96.9percent. Research questions 1, 2 and 3 were analyzed using percentage (%), mean ($\bar{x}$) and Standard Deviation (S.D). A benchmark mean of 2.5 was used as the decision rule to adjudge respondents' agreement of disagreement on the items. This was obtained by adding up the four (4) likert type scale (Strongly Agreed = 4, Agreed = 3, Disagreed = 2 and Strongly Disagreed = 1) and dividing the sum of the scale (10) by the total number of scales (4)

AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.12 (2), May-August, 2024 https://ajemates.org

to give 2.50. Hence, a score of 2.50 or higher on any item was adjudged to be agreed upon while a score below 2.50 was taken as disagreed.

Presentation of Results

The results of the analysis are presented as follows:

Research Question: Do funding, record keeping facilities, knowledge of record management practices, record management policy/institution regulations and technical know-how constitute challenges to the implementation of digital research archive in colleges of Education in Delta State?

Table 1: Analysis of the Challenges affecting the implementation of digital research archive in colleges of Education in Delta State

S/n	Items	N=100		
		$\bar{X}$	SD	Remarks
	Poor funding			
1.	My unit does not have adequate funds to purchase fire proof cabinets	3.19*	.874	Agreed
2.	The funds allotted to my department/unit by the College is inadequate to run its various operations	2.97*	.983	Agreed
3.	My department/unit cuts down on their monthly budget to manage the finances available to them	2.38	.974	Disagreed
4.	Technical projects are rarely executed in my department/unit because of lack of funds	2.40	1.193	Agreed
5.	My department/unit sometimes have to source for funds to meet up with her operations	2.50*	1.171	Agreed
	Overall mean = 2.64*			
	Low provision of technical facilities			
6.	Some research management operations are rarely carried out because of lack of technical facilities	2.57*	1.091	Agreed
7.	The data management facilities in my department/unit is quit obsolete	2.54*	1.210	Agreed
8.	The data and research management facilities in my department/unit are inadequate for all the staff	2.52*	1.021	Agreed
9.	Sorting out completed researches takes a lot of time because modern computerized gadgets for record storage are not adequate in my school	2.51*	.977	Agreed
10.	Research archiving is difficult because the facilities needed to handle it are not adequate in my department/unit	2.56*	1.032	Agreed
	Overall mean = 2.52*			
	Poor knowledge of digital research management practices			
11.	I lack requisite knowledge of managing digital research	3.11*	.939	Agreed
12.	I sometimes need assistance on how to properly keep some research in digital/electronic format	2.55*	1.010	Agreed
13.	I often need the assistance of my colleagues on how to use electronic facilities to manage research collections	2.43	1.082	Disagreed
14.	I often need the assistance of my colleagues on sorting research collections	2.44	1.085	Disagreed

AJEMATES
African Journal of Educational Management, Teaching and Entrepreneurship Studies
VOL.12 (2), May-August, 2024 https://ajemates.org

15.	I often need the assistance of my colleagues on archiving research collections for decision making purposes **Overall mean = 2.57***	2.64*	1.212	Agreed
	Incoherent Digital resource management policy/institution regulations			
16.	I am not aware of the management policy governing digital resource management in my division/unit	1.94	1.019	Disagreed
17.	The constant change in digital resource management policy affects me at work	3.12*	.938	Agreed
18.	The digital resource management policy of my division has too many regulations that I cannot comply with	2.52*	.941	Agreed
19.	The constant change in digital resource management policy affects me at work	2.46	.879	Disagreed
20.	I find it disturbing to keep up with the digital resource management policy of my division **Overall mean = 2.39**	1.97	.951	Disagreed
	Shortage of technical know-how			
21.	I do not know of any technician that can help replace worn out part of technical facilities at work	3.21*	.872	Agreed
22.	The technician to fix damaged parts of my digital resource management facilities are inadequate	3.00*	.969	Agreed
23.	My department has very strict rules on the technician that can help in fixing out damaged digital resource facilities	2.58*	.968	Agreed
24.	The technician to fix damaged parts of my digital resource facilities in my college are not well experienced	2.45	1.196	Disagreed
25.	The technician to fix damaged parts of computers in my division are not easily accessible **Overall mean = 2.63 ***	2.55 *	1.100	Agreed

* *Significant mean* ($\overline{X} \geq 2.50$)

Result in Table 1 showed that majority of the respondents have high rating on items 1, 2, 4, 5, 6, 7, 8, 9, 10, 11, 12, 15, 17, 18, 21, 22, 23, 24 and 25 at a mean score range of 2.50 to 3.19 but had low mean score rating on items 3, 14, 16, 24, and 19 at a mean score range of 1.81 to 2.46 respectively. However, result from the table further showed that the overall mean score of items 1 to 5 on poor funding is 2.64, items 6 to 10 on low provision of record keeping facilities2.52, items 11 to 15 on irregularities in poor record management practiced an overall mean score of 2.57, the overall mean score of items 16 to 20 on incoherent record management policy/institution regulations is 2.39 while items 21 to 25 on shortage of technical know-how challenge had a score of 2.63. Since the overall mean score for poor funding, low provision of record keeping facilities, poor knowledge of record management practices and shortage of technical know-how challenges were higher than the criterion mean of 2.50. Hence, the result showed that poor funding, low provision of record keeping facilities, poor knowledge of record management practices and shortage of technical know-how are the challenges militating against the implementation of

digital research archive in colleges of Education in Delta State.

Discussion

The result has shown that poor funding, low provision of record keeping facilities, poor knowledge of record management practices and shortage of technical know-how are the challenges militating against the implementation of digital research archive in Colleges of Education in Delta State. Perhaps, this is due to the low funding of higher institutions and high neglect of colleges of education by the government over time. The issue of poor funding, low provision of record keeping facilities, poor knowledge of record management practices is evident in the high infrastructural decay, high attrition of qualified personal and absorption of rare talents into other institutions such as private universities and even other promising sectors.

The result of this study agrees with that of Seniwoliba, Mahama & Abilla (2017) who found that the school administrators were ineffective in the management of school digital records and facilities as several records were managed manually through filing of hard copies in folders and keeping of records in metal cabinets. Only the Academic Affairs Section and the Finance Department had well developed software to store and retrieve information. In similar vein, the outcome of this survey corroborates that of Nanighe & Omenu (2016) who found that effective administration of school digital resources and data was adversely affected by poor management of digital record archives which was lacking in higher educational institutions in Bayelsa State.

Furthermore, the findings from this survey is quite consistent with that of Daluba (2015) who evaluated the state of infrastructural facilities and found that the infrastructural facilities were ineffectively managed by school administrators in the Colleges of Education in Benue and Kogi State. Hence, the successful implementation of digital record management systems was uncertain.

This was also in line with that of Ayoade (2013), Ereynimkounse & Ogiengbaen (2015) and also Nwangwa & Omotere (2016) who all found that record management policy practices in Colleges of Education in Nigeria affect the communication, dissemination of information and archival of vital digital resources. Based on findings, the researcher asserted that poor funding, inadequate record keeping facilities, poor knowledge of record management practices and lack of technical know-how are the challenges militating against the implementation of digital research archive in Colleges of Education in Delta State. This indicates that adequate funding, quality provision of record keeping facilities, promotion of staff knowledge on record management practices and training of technical know-how may be a sine qua non for digital research archive to be successfully implemented and maintained.

Conclusion

This paper examined digital research archive for Colleges of Education in Nigeria. Specifically, the study investigated the challenges and implementation strategies for colleges of education in Delta State, Nigeria. With the results shown above, the study concluded

that poor funding, low provision of record keeping facilities, poor knowledge of record management practices and shortage of technical know-how are the challenges militating against the implementation of digital research archive in colleges of Education in Delta State. It is also recommended that some percentage of TETfunds annually giving by the Federal Government should be used to fund departments and various divisions of the Colleges of Education for Digital archiving and long term storage of data.

Recommendations

Based on the findings, the following recommendations were made:

a) Some percentage of funds annually donated by the Alumni Association of the University should be used to argument whatever is provided by the government to fund departments and various divisions of the University for Digital archiving and long term storage of data.
b) Government should give staff development and in-service training opportunities to administrators to attend training programmes such as seminars, workshops, conferences and symposia to enhance their technical skills on how to manage technical resources for record keeping purposes. This can be done by sponsoring administrators on mandatory capacity development programmes.
c) University administrators should endevour to do away with obsolete record keeping facilities and encourage their staff to employ modern technology facilities for the management of data and research resources.

REFERENCES

Adeyemi, J. A. Appah, D. H. &Bribena, E. I. (2017). The Nigerian institutional repositories: opportunities and barriers. *Academia Journal of Educational Research*. 5(10), 297-305.

Akintunde, S. A. (2010). Blazing the trail: Institutional repository at the University of Jos. Nigerian Libraries: *Journal of the Nigerian Library Association*, 43:1-19.

Akpokodje, V. N., &Akpokodje, E. T. (2015). Availability and utilization of institutional repositories as indicators to institutional web ranking. *European Journal of Computer Science and Information Technology*. 3(2), 29-40.

Alemayehu, M.W. (2010). Researcher's attitude to using institutional repositories: A case study of the Oslo University Institutional Repository (DUO). http://hdl.handle.net/10642/426.

Ayoade O. B. (2013). *Access and use of information and communication technology for administrative purposes by institutional administrators in Colleges of Education in Nigeria: an example of Emmanuel Alayande College of Education, Oyo.* An unpublished M.Sc Thesis submitted to the Department of Computer Science, Emmanuel Alayande College of Education, Oyo.

Christian, G.E. (2008). Issues and challenges to the development of Open Access institutional repositories in academic and research institutions in Nigeria. A Research Paper prepared for the International Research Centre (IDRC) Ottawa, Canada.

http://ssm.com/abstract=1323387"http://ssm.com/abstract=1323387.

Daluba, N. E. (2010). Evaluation of infrastructural facilities and goals attainment in agricultural education programmes of colleges of education in Benue and Kogi State. *Approaches to International Journals of Research Development*, 2(2), 176-185.

Ereynimkounse, S. O. & Ogiengbaen, A. (2015). Factors affecting instructional media utilization in colleges of education in Edo and Delta of Nigeria. *Journal of the Counselling Association of Nigeria*, 5(1), 162-163

Fasae, J. K. Larnyoh, W. Esew, M. Alanyo, B. & Holmner, M. (2017). Institutional repositories and heritage materials in selected institutions within three African countries. Library Philosophy and Practice (e-journal). 1603. http://digitalcommons.unl.edu/libphilprac/1603.

Federal Republic of Nigeria (2013). National policy on education. (6th Edition). Abuja: NERDC.

Musa, A. U. Shittu, M. &Abdulkadir, A. (2014). Institutional digital repositories in Nigerian issues and challenges. *Journal of Humanities and Social Science*. 19(1), 16-21.

Nanighe, B. M. &Omenu, F. (2016). Records management in higher educational institutions in Bayelsa State: Implications for School Administration. *World Scientific News* 26: 11-20.

Nkiko, C, Bolu, C. & Michael-Onuoha, H. (2015). Managing a sustainable institutional repository: The Covenant University experience. *Samaru Journal of Information Studies*, 14(1 &2), 1-6.

Nwangwa, K.C.K & Omotere, T. (2013). The new roles of school managers in managing educational changes in Nigerian schools. *European Scientific Journal*. 19 (25):160-170.

Schofield B. L. & Urban J. M. (2015). Takedown and Today's Academic Digital Library. UC Berkeley Public Law Research.

Seniwoliba, A. J., Mahama, A. V. & Abilla, B. J. (2017). Challenges of records management in higher education in Ghana: The case of university for development studies. *International Journal of Educational Policy Research and Review*, 4 (3), 29-41.

Tarver, H., & Phillips, M. E. (2013). Lessons learned in implementing the Extended Date/Time Format in a large digital library. Proceedings of the *International Conference on Dublin Core and Metadata Applications*, 60-70. http://digital.library.unt.edu/ark:/67531/metadc174739/

Ukwoma, S.C. (2019). Obstacles to the utilization of institutional repositories by academics in higher institutions in Nigeria. Webology, 16(1), 138-150.

Unachukwu G. O & Nwankwo, C.A (2012). Principals' Readiness for the use ICT in School Administration in Anambra State of Nigeria, *Research Journal in Organizational Psychology & Educational Studies* 1(2) 114-120.