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Investigating Institutional Factors and Use of Institutional Repositories by Lecturers in Federal Universities in Nigeria

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Abstract

The study investigated the relationship between institutional factors and use of institutional repositories by lecturers in federal universities in Nigeria with a view to establish the influence of institutional factors on the use of institutional repositories. The survey research design was adopted for the study. Questionnaire was used as the instrument of data collection from 540 lecturers that constitute the sample for the study. Findings from the study revealed organizational culture, environmental and motivational factors as the dominant and prevalent institutional factors that supports research in federal universities in Nigeria just as Inaugural lectures, Seminar papers, Photographs, Notebooks, Illustrations and Drawings and Newspapers were the most common types of information resources available in the institutional repositories of federal universities in Nigeria. Major purposes of using of institutional repositories by the lecturers are for preparing seminar/lecture notes, writing papers/proposals, seminars presentations, research works and preparing for lecture series. The study established; occasional use of institutional repositories by the lecturers and a significant positive relationship between institutional factors and use of institutional repositories such that an improvement in institutional factors would lead to increase in the use of institutional repositories. The study recommended the formulation and implementation of adequate university-wide policy that would encourage and supports the use of institutional repositories by the universities' management.

Keywords: Institutional factors, use of institutional repositories, Lecturers, Federal universities, Nigeria.

Introduction

Institutional repositories (IRs) are key to academic, research and community service of lecturers in universities and other higher educational institutions because they serve as the hub of information resources for effective delivery of the lecturers' schedule of duties. The main objective of establishing institutional repositories is to showcase institutional research output to the outside world. An institutional repository (IR) can be regarded as a service that university renders to its community members for the stewardship of scholarly publication generated by the faculty, staff, and research scholars which create global visibility for an institution's scholarly research as well as storing and preservation of other digital assets, including unpublished literature for long term use.

Institutional repositories have therefore witnessed a paradigm shift in scholarly communications that increases the visibility and add more prestige to the institutions. According to Leila and Mina (2018), the benefits of IRs can be summarised in two categories which are open access to scholarly publication and long-term preservation of the scholarly content. Institutional repositories provide tools that assist lecturers in disseminating their work to audiences within and outside the institution as well as enabling information seekers to find faculty and student work more easily by organising and indexing it thereby making it more visible to colleagues. The content of institutional repositories varies from one institution to the other. Some may include monographs, pre-prints of academic journal articles as well as electronic theses and dissertations, datasets, administrative documents,

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course notes, learning objects and conference proceedings. The federal universities which are the focus of this study have common features which also help content storage of institutional repositories and use by lecturers in these universities. Bamigbola (2017) submitted that content storage and utilisation are mainly for research and administrative purposes. A preliminary survey by this researcher shows that contents available in the repositories of Nigerian universities cut across many fields which include, faculty lectures, inaugural lectures, guest lectures series, seminar papers, encyclopedia and dictionary, newspapers, newsletters, journals, theses and dissertations, conference proceedings, textbooks, book of abstract, bulletins, posters realia, maps, photographs models banners, charts, illustrations and drawings, notebooks, patents and book chapters. Genoni, Merrick and Wilson (2014) reported that there is a growing appreciation that the content of institutional repositories needs to be more diverse than is appropriate for subject-based repositories, and that they should unite both formal and informal scholarly communication in a single archive.

The policy guiding the use of institutional repositories is supposed to state clearly the rule for copyright ownership and licenses both in depository and accessing the content of the institutional repository, including decision on issues such as how scholarly articles by academics, students project works, theses and dissertations, newsletters, inaugural lectures from the university are to be uploaded into the system. Researches have shown that these are lacking in developing countries around the world. Adeyemi, Appah, Akinlade and Bribena (2017) stated that the existing institutional repositories in Nigeria have no policy that guides their operation. Such policy document should cover such matters as what to accept or not to accept, copyright issues, self or mediated archiving, submission and withdrawal policies, types of material to accept and any other issue necessary to govern the operation of the institutional repositories for implementation. Ezema and Okafor (2015) highlighted that exclusive right to protect an author, composer or artist from having his work recorded, performed, displayed, translated, distributed or reproduced by way of copies, photocards, or other versions is not done except with express permission to promote the use of institutional repositories not only in developing countries but Nigeria in particular. The use of institutional repositories in the contemporary world requires that lecturers must be proficient in digital literacy, media literacy skill and have ICT competency among others, to determine the level of their performance in all their areas of academic and research activities.

Meanwhile, studies have shown that most institutions in Nigeria do not provide requisite institutional supports for lecturers while some lecturers at the same time do not avail themselves of the opportunities of attending staff development programs needed to engage in learning and research activities (Alhija and Majdob, 2017; Bamigbola, 2017). Aina and Adekanye (2013) and Bamigbola (2017) averred that lack of relevant and adequate skills on the part of some lecturers to gaining access to the intellectual output content of other lecturers and researchers in terms of print and non-print materials, through institutional repositories, could also undermine the use of institutional repositories. Institutional factors refer to elements that affect the use of institutional repositories. They are considered as external

and internal environment of an organisation which influences work processes which include support programs that an institution develops for faculty members, practice and standards (Dixon, 2015).

Mantikayan and Abdulgani (2018) reported that institutional factors like training, staff support, technical support and guidance, resources, awards, workload, research culture, tenure and promotion, financial awards, performance standards, peer and social recognition, and leadership factors like appreciation and orientation can influence the use of institutional repositories. In the same vein, Veliu, Manxhari, Demiri and Jahaj (2017) submitted that leadership is one of the institutional factors that influence the use of institutional repositories. The notion of transformational leadership style can therefore be interpreted as a leadership behaviour that changes and inspire followers to do work beyond self-interest for the good of the organisation by promoting intellectual development, self-confidence, team spirit and enthusiasm among followers, thus encouraging followers to focus more on collective well-being to achieve organisational goals (Aydin, 2013).

Dutta and Paul (2014) submitted that although lecturers have low awareness of the institutional repositories, they have more or less positive attitude towards and interested in contributing their work to institutional repositories of their respective universities. However, confusion about copyright issues discourages them to participate in it. It has also been emphasised that for an institutional repository to successfully serve its full potential, its constituents should not only be aware of its existence but understands its value, and willing to contribute their scholarship products. Literature has shown that despite the numerous advantages of institutional repositories, some institutional factors can hinder their full utilisation in developing countries, like Nigeria (Bamigbola, 2017).

In the university, institutional factors are considered of utmost importance in institutional governance. For example, university research policies, organisational structure, funding, motivational factors, environmental factors, research collaboration, research rules and ethics and intellectual property management (patents, licenses, copyrights), among others could influence the use of institutional repositories. For instance, the implementation of research policy has to do with the movement of ideas and innovations from the academic sector to the society and involves series of policies geared towards the translation of research outputs into solving societal problems. To some scholars like Awan and Tahir, (2015); Manu (2015); Kasule, (2016), work environment is an important factor that influence lecturers' use of institutional repositories. The study of Awan and Tahir (2015) found that factors like supervisory support, relation with co-workers, training and development at workplace are helpful in developing a working environment that has positive impact on lecturers' interest in the activities of their institutions. This submission was corroborated by the report of Nzoka (2015) study. Institutional factors include provision of facilities and materials plus establishment of qualified human resources which are indices that determine productivities of lecturers in the university environment. Nzoka (2019).

Empirical evidence, Bamigbola (2018) and observations have revealed functionality of institutional repositories with relevant indigenous and local contents (resources),

accessibility to and use of institutional repositories and infrastructural facilities as having the tendency to influence research productivity of lecturers in federal universities in Nigeria. Studies such as Bamigbola, (2018) affirm that supportive institutional factors could have a positive influence on the use of institutional repositories because it is widely known and used in many countries around the globe but there is no evidence that institutional repositories are widely used in Nigeria. It is on this basis that this study intends to examine the institutional factors that determine the use and/or non-use of institutional repositories by lecturers in federal universities in South-West, Nigeria.

Objective of the study
The broad objective of the study is to investigate the influence of institutional factors on the use of institutional repositories by lecturers in federal universities in South-West, Nigeria. The specific objectives of the study are to:
1. find out the prevalent institutional factors for research in federal universities in Nigeria
2. identify the types of information resources available in the institutional repositories of federal universities in Nigeria
3. establish the purpose of use of institutional repositories by lecturers in federal universities in Nigeria
4. ascertain the frequency of use of institutional repositories by lecturers in federal universities in Nigeria;
5. find out the relationship between institutional factors and use of institutional repositories by lecturers in federal universities in Nigeria

Research questions
The following research questions were answered in the study:
1. What are the prevalent institutional factors for research in federal universities in Nigeria?
2. What are the types of information resources available in the institutional repositories in federal universities in Nigeria?
3. For what purposes do lecturers in federal universities in Nigeria use institutional repositories?
4. What is the frequency of use of institutional repositories by lecturers in federal universities in Nigeria?

Hypothesis
This null hypothesis was tested at 0.05 level of significance:
There is no significant relationship between institutional factors and use of institutional repositories by lecturers in federal universities in Nigeria.

Literature Review
Concept of Institutional factors
Institutional repositories (IR) are means to manage and preserve effectively an institutions knowledge base and intellectual assets results in the content of institutional repositories expanding beyond e-prints to include research data e-learning materials and other forms of institutional intellectual outputs, which are generally not published or preserved elsewhere. Institutional repositories have widely been used to disseminate and communicate scientific information (Okunu, 2015). Institutional repositories is a

concept for collecting, managing, disseminating and preserving scholarly works created in digital form by users in academic institutions. An institutional repository is an electronic store of web based scholarly digital documents owned by the institution (Mgonzo and Yonah, 2014) and consist of all electronic publications such as thesis, journals, books and conference papers (Okunu, 2015). Dulle (2010) and Adewumi (2012) observed that institutional repositories operate well in an open access environment which offers free access to digital content without restrictions. In recent years, institutional repositories have become effective in disseminating scientific data and scholarly communication (Okunu, 2015). Institutional repositories have become important in scholarly communication, institutional visibility, university ranking and feasible foundation of institutional knowledge management. (Alegbeleye and Oyewole, 2017; Kakai, 2018).

Institutional repositories provide access to its own digital documents. According to Bailey and Ho, (2015) institutional repository supports scholarly communication through the variety of materials it contains which include: a variety of materials produced by scholars from many units, such as e-prints, technical reports, theses and dissertations, data sets, and teaching materials. Institutional repositories according to Prosser (2019) enable institutions and faculty to offer long-term access to digital objects that have persistent value. They extend the core missions of libraries into the digital environment by providing reliable, scalable, comprehensible, and free access to libraries' holdings for the world as a whole. In some measure, repositories constitute a reaction against publishers that create monopolies, charging for access to publications on research they have not conducted, funded, or supported. In the long run, many hope faculties will place the results of their scholarship into institutional repositories with open access to all.

Institutional repositories have assisted in unlocking the grey literature, such as unpublished research reports, theses and dissertations, seminar and conference papers (Kakai, 2018). On the other hand, institutional repositories are increasingly becoming podiums for publishing original and peer-reviewed contents in an open access environment (Saini, 2018). The repositories are essentially being used for acquisition, preservation and dissemination of locally-generated scholarly information. Access to scholarly information from institutional repositories can increase the usage of scientific information and author citations and visibility (Ukwoma and Dicke, 2017).

Institutional repositories are important for universities in helping to manage and capture intellectual assets as a part of their information strategies. It makes research freely and broadly available to a worldwide audience (open access) with the use of technology and metadata standards to ensure research works are more suitable on the internet and the libraries take care to archive and preserve it for future generation.

Oguz and Assefa (2014) conducted a study on the faculty members perceptions towards institutional repository at regional university in the South-eastern U.S.A. The questionnaire which was the research instrument was delivered to 500 respondents online via surveymonkey.com. Findings revealed that little over half of the respondents had a favourable or positive perception

towards the IR. Results from the study of Dutta and Paul (2014) also showed that majority of the faculty reported a positive favourable perception regarding IR. In a recent study, Ukwoma and Dike (2017) studied 491 academics attitudes towards the utilisation of IRs in five Nigerian universities with IRs according to OpenDOAR. They reported that the fact that academics disagreed with the negative statements in the null hypotheses showed that they had a positive attitude towards submission of their publications. Moreover, regardless of the attitude and perception of those saddled with the responsibility of establishing IR and the users in universities, funding is a determining factor. Studies have established that in developing countries like Nigeria, funding of IR is an issue. Ivwighreghweta (2012) carried out a study in six universities in Nigeria where the opinions of 300 researchers and policy makers were sampled. Results showed that 150 (50%) and (47%) agreed and strongly agreed that funding was the major problem confronting the establishment of IRs in most Nigerian universities. However, for the institutions who have the required funds to establish IRs, it is very necessary to take cognisance of factors like perceived ease of use and usefulness. This is because these two factors could determine if eventually the IRs will be used or not.

Lee (2015) confirmed the contribution of the IRs to making papers available and accessible. The results also revealed some impediments to the success of OA: including impediments linked to contractual arrangements between authors and publishers, impediments linked to policies, practices, and technologies governing the IRs, and the low level of faculty participation in the IRs. Ogbomo (2015) submitted that universities should encourage promotional activities geared towards creating awareness of IRs which will in turn enhance positive attitude towards IRs establishment in universities. Muhammad (2021) highlighted the benefits of open repository for both the university and the contributor. According to them, the benefits of an IR to authors among others include enhancing wide dissemination, impacting on scholarship, offering storage and access to a wide range of materials in addition to feedback and commentary from users.

Institutional factors are elements that affect the use of institutional repositories by staff or employees in any institution or organisation. These factors can be external and internal in the environment of any organisation and these influences work processes. Institutional factors may be regarded as support programmes that are developed for members in the organisation (Dixon, 2015). According to Mantikayan and Abdulgani (2018), institutional factors may be informed of training, staff support, technical support and guidance, workload, research, promotion, financial awards, social recognition, and leadership factors like appreciation and orientation which can influence employees such as lecturers' especially as it relates to their performance. Institutional factors may be regarded as criteria for identification of external and internal environmental output of an organisation as it performs at two different levels. Institutional factors at environmental level could be managed by an organisation if proper consideration and attention is given.

There are several institutional factors that can enhance or impede performance and one of such is the institutional policy. Policy is both related to and, different from a decision. A decision is a choice made from among alternatives. Policies are "made" and "implemented" in the same way that decisions are made and implemented. Policy according to Egonmwan (2009), can be described as the overall framework within which the actions of the government are undertaken to achieve its goals. It is a purposive and consistent course of action devised in response to a perceived problem of a constituency, formulated by a specific political process, and adopted, implemented, and enforced by a public agency.

On his part, Egonmwan (2018) sees policy as a formal document or framework in which a government or other institution outlines goals and the guiding principles and strategies for achieving those goals; and gives the authority to undertake actions in pursuit of them. Sound policies should include human and financial commitments, clear timelines, and the roles and responsibilities needed for achieving the stated goals, as well as benchmarks for ensuring accountability.

Leadership is one of the institutional factors that influence lecturers' performance (Aydin, 2013). There are different forms or styles of leadership ranging from transactional transformational style of leadership. Transformational leadership style is a leadership behaviour that changes and inspire followers to do work beyond self-interest for the good of the organisation by promoting intellectual development, self-confidence, team spirit and enthusiasm among followers, thus encouraging followers to focus more on collective well-being to achieve organisational goals.

Research Methodology
The research design that was adopted for this study is the survey research design of the ex post facto type. The target population for this study comprised all lecturers in the federal universities selected from the six geopolitical zones of Nigeria totaling 7,591 (See Table 1). One university was selected from each of the six geopolitical zones in Nigeria.

Table 1: Population of the Study.

S/N	Name of University	State	Geo-political Zones	Total Number of Lecturers
1	University of Ibadan, Ibadan	Oyo	South-West	1427
2	Ahmadu Bello University, Zaria	Kaduna	North-West	1321
3	University of Maiduguri	Borno	North-East	1111
4	University of Benin, Benin	Edo	South-South	1201
5	University Ilorin	Kwara	North-Central	1217
6	University of Nigeria, Nsukka	Enugu	South-East	1314
	Total			**7591**

National University Commission (NUC) Bulletin, February, 2021.

According to the National Universities Commission (NUC) (2021), there are 43 federal-owned universities in Nigeria, (NUC Bulletin, 2021). These universities were categorised into five generations based on their years of establishment. In selecting the sample size for this study, the multi-stage sampling procedure was adopted. Purposive sampling technique was adopted in selecting one federal university from each of the six geo-political zones in Nigeria which belong to the first generation of universities in Nigeria and with functional institutional repositories. Meanwhile, in the zones without a first-generation university, the oldest university with functional institutional repositories were selected. Thus, the universities selected were: University of Ibadan, Oyo State (South-West); Ahmadu Bello University, Zaria, Kaduna State (North-Central); University of Maiduguri, Borno State (North-East); University of Benin, Edo State (South-South); University of Ilorin, Kwara State

(North-Central) and University of Nigeria, Nsukka, Enugu State (South-East). Purposive sampling technique was used to select 5 faculties that are commonly available in all the selected universities. Thus, Faculties of Science, Agriculture, Social Science, Law and Arts were selected for the study. These faculties are popular ones in the universities and with vibrant academic programmes. Simple random sampling technique was used to select one department in the selected faculties. Therefore, Departments of Computer Science (Faculty of Science), Animal Science (Faculty of Agriculture), Sociology (Faculty of Social Science), Law (Faculty of Law) and History (Faculty of Arts) were selected. The total enumeration method was used to include all the lecturers in the selected departments to constitute the sample size for the study. Therefore, a total of 724 lecturers constitutes the sample size for the study (See Table 2).

Table 2: Sample size for the Study.

State	Groups	Faculty	Population
Borno State	University of Maiduguri		
	Department of Computer Science	Science	20
	Department of Animal Science	Agric.	18
	Department of Sociology	Social Sc.	17
	Department of Law	Law	19
	Department of History	Arts	15
Edo State	University of Benin		
	Department of Computer Science	Science	19
	Department of Animal Science	Agric.	15
	Department of Sociology	Social Sc.	18
	Department of Law	Law	19
	Department of History	Arts	21
Kwara State	University of Ilorin		
	Department of Computer Science	Science	16
	Department of Animal Science	Agric.	19
	Department of Sociology	Social Sc.	18
	Department of Law	Law	21
	Department of History	Arts	19
Oyo State	University of Ibadan		
	Department of Computer Science	Science	22
	Department of Animal Science	Agric.	35
	Department of Sociology	Social Sc.	20
	Department of Law	Law	18
	Department of History	Arts	17
Anambra State	University of Nigeria, Nzuka		
	Department of Computer Science	Science	20
	Department Animal Science	Agric.	12
	Department of Sociology	Social. Sc.	18
	Department of Law	Law	19
	Department of History	Arts	20
Kaduna State	Ahmadu Bello University, Zaria		
	Department of Computer Science	Science	17
	Department of Animal Science	Agric.	18
	Department of Sociology.	Social sc.	16
	Department of Law	Law	18
	Department of History	Arts	19
Total			724

Source: Field Survey, April 2021.

The instrument used for data collection was a structured questionnaire. The instrument tagged "Institutional Factors and Use of Institutional Repositories' Questionnaire (IFUIRQ) consists of three sections. Section A was designed to elicit information on the demographic information of the respondents such as name of institution, faculty, department, gender, age, designation and work

experience while Section B focused on institutional factors that could affect the use of institutional repositories and contains 25 items which were measured on a 4-point lkert scale format of Strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1. The 25 items on the scale were considered under 5 indicators of Organisational culture, Environmental factors, Motivational factors,

University policy and Funding. The scale was adapted from Osaikhiuwu (2014) which has reliability coefficient of 0.76 and Oshinaike (2020) with reliability coefficient of 0.79. Section C of the questionnaire which focused on the use of institutional repositories was designed to gather information on the use of institutional repositories by the respondents. The scale comprises 55 items. The scale has subdivisions on types of resources in the IRs, purpose of use and frequency of use. The sub section on types of resources in the IRs contains 23 items while the sub section on purpose of use has 9 items measured on a 4-point likert scale of Strongly Agree = 4, Agree = 3, Disagree = 2 and Strongly Disagree = 1. The section on frequency of use contains 23 items measured on a 5-point likert scale of Daily = 5, Weekly = 4, Monthly = 3, Occasionally = 2 and not used at all = 1. The scale was adapted from Bamigbola (2018) and Tapfuma and Hoskins (2019) with reliability coefficients of 0.77 and 0.75 respectively.

The trial test of the questionnaire was done by administering it on 30 lecturers of the Obafemi Awolowo University, who are not part of the main study. The test-retest method was employed using the Cronbach reliability technique to determine the reliability of the instrument. The reliability coefficients of each section of the questionnaire were as follows: Institutional factors (α=0.935) and Utilisation of institutional repositories (α=0.947). The construct validity of the instrument was maintained by restricting the questions to the conceptualisation of the variables and ensuring that the indicators of a particular variable fell within the same construct. Exploratory factor analysis (EFA) through principal component extraction method was used to statistically measure construct validity of the instrument. The KMO and the Bartlett test were used to determine the adequacy of the sample size. According to Kaiser (1974), if the result of the Kaiser-Meyer-Olkin (KMO) is greater than 0.5, this means that the questions actually measured the variables of the study (See Table 3).

Table 3: Construct Validity Tests of Research Instrument.

S/N	Variables	No of Items	AVE	KMO	Bartlett Test of Sphericity	Sig	Composite Reliability
1	Institutional factors	28	0.75	0.723	821.361	0.000	0.735
2	Utilisation of institutional repositories	57	0.77	0.711	822.716	0.000	0.713

Source: Pre-test study SPSS result (2021)

Rule of Thumb on Cronbach's Alpha Coefficient.

Cronbach's Alpha Coefficient Range	Strength of Associations
0.81 — 0.90	Very Good Reliability
0.71 — 0.80	Good Reliability
0.60 — 0.70	Fair Reliability
Less than 0.60	Poor Reliability

The data collected were collated and analysed with the use of descriptive and inferential statistics. Research questions 1-4 were answered using descriptive statistics of frequency, percentages, mean and standard deviation. In testing the hypothesis, Pearson Product Moment Correlation was used.

Data Analysis and Interpretation of Results
Analysis of Socio-Demographic Characteristic of the Respondents

Table 4: Demographic Information of Respondents.

Name of Institutions	Frequency	Percentage (%)
University of Ibadan	62	11.5
University of Ilorin	77	14.3
University of Maiduguri	87	16.1
University of Benin	90	16.7
University of Lagos	49	9.1
Ahmadu Bello University (ABU)	86	15.9
University of Nigeria Nsuka	89	16.5
Total	540	100.0
Gender	Frequency	Percentage
Male	292	54.1
Female	248	45.9
Total	540	100.0
Age group	Frequency	Percentage
25 to 34years	114	21.1
35 to 44years	173	32.0
44 to 54years	196	36.3
55years and above	57	10.6
Total	540	100.0
Designation	Frequency	Percentage
Assistant Lecturer	60	11.1
Lecturer II	157	29.1
Lecturer I	126	23.3
Senior Lecturer	149	27.6

Reader/Associate Professor	48	8.9
Total	540	100.0
Years of experience	Frequency	Percentage
1 to 5 years	83	15.4
6 to 10 years	169	31.3
16 to 20 years	167	30.9
20years and above	121	22.4
Total	540	100.0

The result showed that majority of the respondents were from the University of Benin 90 (16.7%,), University of Nigeria Nsuka 89 (16.5%) and University of Maiduguri 87(16.1%) while Ahmadu Bello University (ABU), University of Ilorin, University of Ibadan and University of Lagos (LASU) had 86 (15.9%), 77(14.3%), 62(11.5%) and 49 (9.1%) of the total respondents respectively. This showed a fair distribution of lecturers across the federal universities selected for the study. The Table further revealed that 292 representing 54.1% of the respondents were males while 248 (45.9%) were females. This implies that there are more male lecturers than female lecturers among the respondents surveyed for the study. The result on the frequency distribution of the respondents according to age range distribution showed that majority of the respondents were within the age range of 44 to 54 years with response rate of 196 (36.3%) while those within age range of 35 to 44 years were 173 (32.0%). Respondents within the age range of 25 to 34 years age range of 55 years and above constituted the least group with response rate of 57 (10.6%). It could be deduced from the result that majority of the respondents (483 or 89.4%) fall within the age range of 25-54 years. The implication that could be drawn from this result is that majority of the lecturers surveyed are in their active years of service and productivity.

Moreover, information from Table 4 revealed that 157 representing 29.1% of the respondents were Lecturer II, 149 or 27.6% were Senior Lecturer, while Lecturer I constitute 126 (23.3%) of the total number of respondents. Also, 60 (11.1%) were Assistant Lecturers, while 48 (8.9%) were Reader/Associate Professor. It could be further inferred from that result that majority of the respondents (492 or 91.1%) are in their early and middle career levels. The inference that could be draw from this is that most of the lecturers surveyed are in their early and middle career levels. The frequency distribution, according to years of experience of the respondents, showed that majority of the respondents with working experience range of 6 to 10 years were 169 (31.3%) while those with working experience of 16 to 20 years constitute 167 (30.9%) of the total respondents. Also, respondents with working experience of 20 years and above were 121 (22.4%). The implication to be draw from this result is that most of the lecturers surveyed (457 or 84.6%) had working experience of 6 years and above and as such can be said to have ample experience on their job.

Research Questions 1: What are the prevalent institutional factors for research in federal universities in Nigeria?

Table 5: Frequency Distribution of Respondents View on the Prevalent Institutional Factors for Research in Federal Universities in Nigeria (n=540).

S/N	Institutional factors	SA	A	D	SD	$\bar{\chi}$	Std. Dev	Decision
	Organizational Culture							
1	Work process and employee management is averagely okay	137 25.4%	215 39.8%	125 23.1%	63 11.7%	2.79	.953	prevalent
2	Work ethics is major factor that aids research productivity	114 21.1%	240 44.4%	130 24.1%	56 10.4%	2.76	.901	prevalent
3	Organisational climate in my institution is not conduce	117 21.7%	237 43.9%	120 22.2%	66 12.2%	2.75	.931	prevalent
4	Leadership style of my institution is exemplary	106 19.6%	217 40.2%	140 25.9%	77 14.3%	2.65	.952	prevalent
5	Institutional research culture in my organization is good	104 19.3%	216 40.0%	144 26.7%	76 14.1%	2.64	.947	prevalent
	Weighted Mean					2.71	.936	prevalent
S/N	Environmental Factors	SA	A	D	SD	$\bar{\chi}$	Std. Dev	Rank
7	There is access to research networks in my institution.	136 25.2%	191 35.4%	134 24.8%	79 14.6%	2.71	1.00	prevalent
8	Research environment in my institution is very conducive	110 20.4%	200 37.0%	166 30.7%	64 11.9%	2.66	.93	prevalent
9	There is adequate office space and facilities in my institution	93 17.2%	213 39.4%	175 32.4%	59 10.9%	2.63	.89	prevalent
10	My institution encourages and support creativity	89 16.5%	221 40.9%	168 31.1%	62 11.5%	2.62	.89	prevalent
11	There is opportunity for training and retraining to keep abreast of current development in my institution	85 15.7%	218 40.4%	165 30.6%	72 13.3%	2.59	.90	prevalent
	Weighted Mean					2.64	.92	prevalent
S/N	Motivational Factors	SA	A	D	SD	$\bar{\chi}$	Std. Dev	Rank

S/N		SA	A	D	SD	$\overline{\chi}$	Std. Dev	Rank
12	I have access to Academic leaders in research cluster	99 18.3%	256 47.4%	123 22.8%	62 11.5%	2.73	.89	prevalent
13	I have access to mentoring system and research assistance	104 19.3%	199 36.9%	159 29.4%	78 14.4%	2.61	.95	prevalent
14	There are opportunities for research collaboration	85 15.7%	216 40.0%	173 32.0%	66 12.2%	2.59	.89	prevalent
15	There is a good reward system in my organization for outstanding performance	69 12.8%	246 45.6%	152 28.1%	73 13.5%	2.58	.87	prevalent
16	There is good reward and incentive system in my institution such as traveling expenses for research activities.	83 15.4%	185 34.3%	162 30.0%	110 20.4%	2.45	.98	prevalent
	Weighted Mean					2.59	.91	prevalent
S/N	University Policy	SA	A	D	SD	$\overline{\chi}$	Std. Dev	Rank
17	My university has institutional policies for research activities	87 16.1%	220 40.7%	148 27.4%	85 15.7%	2.57	.940	prevalent
18	There is a unit dedicate to coordinate research activities in my institution	105 19.4%	171 31.7%	164 30.4%	100 18.5%	2.52	1.00	prevalent
19	My university have annual training and research activities for lecturers	82 15.2%	189 35.0%	135 25.0%	134 24.8%	2.41	1.02	prevalent
20	My university publishes annual research reports.	73 13.5%	202 37.4%	127 23.5%	138 25.6%	2.39	1.01	prevalent
21	Every department in my university must submit annual research report of lecturers to the research coordinating unit.	78 14.4%	193 35.7%	131 24.3%	138 25.6%	2.39	1.02	prevalent
	Weighted Mean					2.45	.99	
S/N	Funding	SA	A	D	SD	$\overline{\chi}$	Std. Dev	Rank
22	There is appropriate support for research collaboration.	101 18.7%	213 39.4%	111 20.6%	115 21.3%	2.56	1.024	prevalent
23	I have access to research fund any time every time.	72 13.3%	190 35.2%	162 30.0%	116 21.5%	2.40	.969	prevalent
24	Institutional funding of research reports is regular in my institution	84 15.6%	184 34.1%	121 22.4%	151 28.0%	2.37	1.052	prevalent
25	There is provision of access to international funding with condition attached	97 18.0%	160 29.6%	132 24.4%	151 28.0%	2.36	1.075	prevalent
26	There also provision for local grants which I have access severally	75 13.9%	196 36.3%	117 21.7%	152 28.1%	2.36	1.036	prevalent
	Weighted Mean					2.41	1.03	prevalent
	Overall Weighted Mean					2.56		prevalent

Sources: Researcher's field-report, 2021
Decision Rule: 0.1-1.0=Not prevalent, 1.1-2.0=Lowly prevalent, 2.1-3.0= Prevalent, 3.1-4.0= Highly prevalent.

Table 5 presents the result of institutional factors for research available in respondents' institutions and it shows that the respondents affirmed that there are institutional factors to support research activities in the institutions surveyed with mean value of 2.56. The breakdown of specific institutional factors availability was also investigated. On the organizational culture prevalent in federal universities in Nigeria, the result shows that 66.2% (2.79±0.95) of the respondents agree with the fact that work processes and employee management is averagely okay, 65.5% (2.76±0.90) agree that work ethics is major factor that aids research productivity and 59.6% (2.65±0.95) agree with the fact that leadership style of their institution is exemplary. It can be deduced from the result that the organizational culture in federal universities surveyed was supportive of research activities with mean value of 2.71. The implication to be drawn from this result is that Organizational culture in federal universities in Nigeria is conducive for and supportive of research activities of lecturers.

On the environmental factors prevalent in federal universities in Nigeria, the result shows that most of the respondents agree that; there is access to research networks in their institution, research environment in their institution was very conducive and that there was opportunity for training and retraining to keep abreast of current development in their institution with response rates of 60.6% (2.71±1.00), 57.4% (2.66±0.93) and 66.1% (2.59±0.90) respectively while 39.4% were disagree and rated with (2.71±1.00). Overall, the result reveals that the lecturers in federal universities in Nigeria affirmed conducive environmental factors for research activities as shown with the mean value of 2.64. It can therefore be deduced from the results that lecturers in the federal universities surveyed are comfortable with the available environmental factors for research activities.

Also, on motivational factors prevalent in federal universities in Nigeria, result from the study show that 65.7% (2.73±0.89) agree that they have access to academic leaders in research cluster while 58.4% (2.58±0.87) and 56.2% (2.61±0.95) agree that that there is a good reward system in their organization for outstanding performance and that they have access to mentoring system and research assistance respectively. The overall result of motivational factors availability in the institutions surveyed revealed that the respondents surveyed agree that there are supportive

motivational factors with overall mean value of 2.59. It can therefore be deduced from the results that there are supportive motivational factors in federal universities in Nigeria.

On the university policy prevalent in federal universities in Nigeria, the overall result reveals that the respondents affirmed that there is supportive university policy in federal universities in Nigeria with mean value of 2.45. The breakdown of the components of the university policy reveals that 56.8% (2.57±0.94), 50.1% (2.52±1.00) 50.9% (2.39±1.01) agreed that; their university has institutional policies for research activities, there is a unit dedicated to coordinate research activities in their institution and that university publishes annual research reports respectively. The implication to be drawn from the result is that there is university policy that is supportive of research activities in federal universities in Nigeria. The mean and standard deviation used corroborated this claim. This was shown with the weighted average mean and standard deviation score of (Weighed Average mean =2.45, Grand mean=2.50). There was low university policy in federal universities in Nigeria.

The results on funding of research activities in federal universities reveals that the respondents affirmed the funding of research activities in their institutions with mean value of 2.41 using the decision rule. The breakdown of the components of the funding university reveals that 58.1% (2.56±1.02), 54.2% (2.36±1.03) and 49.7% (2.37±1.05) agreed that; there is appropriate support for research collaboration, there is provision for local grants and that there is regular institutional funding for research respectively. The implication to be drawn from the result is that there is funding for research activities in federal universities in Nigeria. The mean and standard deviation corroborated this claim. This was shown with the weighted average mean and standard deviation score of (Weighed Average mean =2.41, Grand mean=2.50).

Research Questions 2: What types of information resources are available in the institutional repositories in federal universities in Nigeria?

Table 6: Frequency Distribution of Respondents' View on the Types of Resources (n=540).

S/A	Types of Resources Available	Yes	No	$\bar{\chi}$	Std. Dev
1	Inaugural lectures	505 (93.5%)	35(6.5%)	1.94	.240
2	Seminar papers	506 (93.7%)	34(6.3%)	1.94	.243
3	Photographs	507 (93.9%)	33 (6.1%)	1.94	.240
4	Notebooks	506 (93.7%)	34 (6.3%)	1.94	.243
5	Illustrations and Drawings	504 (93.3%)	36 (6.7%)	1.93	.250
6	Newspapers	497 (92.0%)	43(8.0%)	1.92	.271
7	Bulletins	499 (92.4%)	41 (7.6%)	1.92	.265
8	Posters	499 (92.4%)	41 (7.6%)	1.92	.265
9	Maps	497 (92.0%)	43 (8.0%)	1.92	.271
10	Charts	495 (91.7%)	45 (8.3%)	1.92	.277
11	Patents	497 (92.0%)	43 (8.0%)	1.92	.271
12	Guest lecture series	404 (91.5%)	36(8.5%)	1.91	.279
13	Faculty lectures	487 (90.2%)	52(9.8%)	1.90	.298
14	Conference Proceedings	488 (90.4%)	52(9.6%)	1.90	.295
15	Realia (Real objects)	485 (89.8%)	55 (10.2%)	1.90	.303
16	Models	478 (88.5%)	62 (11.5%)	1.89	.319
17	Banners	482 (89.3%)	58 (10.7%)	1.89	.310
18	Textbooks	473 (87.6%)	67 (12.4%)	1.88	.330
19	Theses and Dissertations	472 (87.4%)	68(12.6%)	1.87	.332
20	Book of Abstracts	465 (86.1%)	75(13.9%)	1.86	.346
21	Newsletters	458 (84.8%)	82(15.2%)	1.85	.359
22	Journals	455 (84.3%)	85 (15.7%)	1.84	.365
23	Book chapters	401 (74.3%)	139(25.7%)	1.74	.438
	Weighted Mean			1.89	.296

Sources: Researcher's field-report, 2021

Table 6 reveals the types of information resources available in the institutional repositories in federal universities in Nigeria. Findings show that 93.5%, agree that Inaugural lectures, Seminar papers, Photographs and Notebooks are the most types of information resources available while 6.5% disagreed with a rate (1.94±0.24). In addition, 93.3% agreed that Illustrations and Drawings are types of information resources available while 6.7% of the respondent disagreed with a rate of (1.93±0.25). Also, Table 6 shows that 92.0%, agreed that Newspapers are type of information resources available while majority 8.0% were disagreed and rated (1.92±0.27). The results of the findings show that majority of the respondents agreed that there were different types of information resources

available in the institutional repositories in federal universities in Nigeria. The mean and standard deviation used corroborate this claim. This was shown with the weighted average mean and standard deviation score of (Weighed Average mean =1.89, Grand mean=1.50).

Research questions 3: For what purpose do lecturers in federal universities in Nigeria use institutional repositories?

Table 7: Frequency Distribution of Respondents' View on the Purpose of Use of Institutional Repositories by Lecturers in Federal Universities in Nigeria (n=540).

S/A	Purposes	SA	A	D	SD	$\overline{\chi}$	Std. Dev	Rank
	I use IR for Preparing seminar/lecture notes	70 13.0%	223 41.3%	161 29.8%	86 15.9%	2.51	.911	Agree
1	I use IR for Writing papers/proposals	70 13.0%	226 41.9%	145 26.9%	99 18.3%	2.49	.937	Agree
3	I use IR for Seminars presentations	55 10.2%	238 44.1%	147 27.2%	100 18.5%	2.46	.908	Agree
4	I use IR for Research works	70 13.0%	183 33.9%	187 34.6%	100 18.5%	2.41	.935	Agree
5	I use IR for Preparing for lecture series	59 10.9%	186 34.4%	177 32.8%	118 21.9%	2.34	.940	Agree
6	I use IR for Developing course materials/notes	50 9.3%	184 34.1%	138 25.6%	168 31.1%	2.21	.989	Agree
	I use IR for Writing book reviews	59 10.9%	151 28.0%	148 27.4%	182 33.7%	2.16	1.015	Agree
7	I use IR for Grants write up	41 7.6%	149 27.6%	182 33.7%	168 31.1%	2.12	.937	Agree
9	I use IR for Obtaining general knowledge	58 10.7%	131 24.3%	134 24.8%	217 40.2%	2.06	1.036	Agree

Sources: Researcher's field-report, 2021
Decision Rule: 0.1-1.0=Strongly Disagree, 1.1-2.0=Disagree, 2.1-3.0=Agree, 3.1-4.0=Agree.

Table 7 reveals the purposes which lecturers in federal universities in Nigeria use institutional repositories for. Findings show that 54.3%, agree that they use IR for Preparing seminar/lecture notes while 45.7% disagreed with a rate of (2.51±0.91). In addition, 54.9% agreed that they use IR for Writing papers/proposals while 45.1% of the respondent disagreed with a rate of (2.49±0.93). Also, the results shows that 54.3%, agreed that they use IR for Seminars presentations while 45.7% disagreed with a rate of (2.46±0.90), 53.1% disagreed that they use IR for Research works while 46.9% of the respondents agree rated with (2.41±0.93). 54.7%, disagreed that they use IR for Preparing lecture series while 45.3% were disagreed and rated (2.34±0.94), also, 56.7% disagreed that they use IR for Developing course materials/notes while 43.3% of the respondents agree rated with (2.21±0.98). In addition, the result shows that 61.1%, disagreed that they use IR for

Writing book reviews while 38.9% disagreed with a rate of (2.16±1.01) and etc. The results further shows that majority of the respondents agreed that there is no purposeful usage of institutional repositories by lecturers in federal universities in Nigeria. The mean and standard deviation used corroborate this claim. This was shown with the weighted average mean and standard deviation score of (Weighed Average mean =2.30). Overall, the major purposes of use of institutional repositories by lecturers in federal universities in Nigeria are for: preparing seminar/lecture notes, writing papers/proposals, seminars presentations, research works and preparing for lecture series.

Research questions 4: What is the frequency of use of institutional repositories by lecturers in federal universities in Nigeria?

Table 8: Frequency Distribution of Respondents View on the Frequency of Use of Institutional Repositories by Lecturers in Federal Universities in Nigeria: Key (DA=5), Daily (WE= 4) Weekly, (MO=3), Monthly, (OC=2) Occasionally, (NU=1) Not used at all (n=540).

S/A	IR Resources	DA (%)	WE (%)	MO (%)	OC (%)	NU (%)	$\overline{\chi}$	Std. Dev
	Book chapters	110(20.4)	120(20.4)	76(14.1)	140(25.9)	94(17.4)	3.02	1.41
	Newsletters	107(19.8)	85(15.7)	88(16.3)	165(30.6)	95(17.6)	2.90	1.39
	Patents	119(22.0)	75(13.9)	59(10.9)	171(31.7	116(21.5	2.83	1.47
	Journals	100(18.5)	64(11.9)	110(20.4)	170(31.5)	96(17.8)	2.82	1.36
	Illustrations and Drawings	108(20.0)	96(17.8)	46(8.5)	148(27.4)	142(26.3	2.78	1.50
	Newspapers	112(20.7)	42(7.8)	104(19.3	167(30.9)	115(21.3	2.76	1.41
	Conference Proceedings	82(15.2)	55(10.2)	129(23.9	202(37.4)	72(13.3)	2.76	1.25
	Theses and Dissertations	74(13.7)	89(16.5)	96(17.8)	182(33.7)	99(18.3)	2.74	1.31
	Book of Abstracts	77(14.3)	58(10.7)	108(20.0)	217(40.2)	80(14.8)	2.69	1.25
	Notebooks	78(14.4)	100(18.5)	72(13.3)	139(25.7)	151(28.0)	2.66	1.42
	Charts	92(17.0)	71(13.1)	65(12.0)	178(33.0	134(24.8	2.65	1.41
	Seminar papers	73(13.5)	79(14.6)	71(13.1)	212(39.3)	105(19.4	2.64	1.31
	Textbooks	50(9.3)	80(14.8)	120(22.2	208(38.5)	82(15.2)	2.64	1.17
	Faculty lectures	59(10.9)	74(13.7)	94(17.4)	236(43.7)	77(14.3)	2.63	1.20
	Guest lecture series	52(9.6%)	82(15.2)	103(19.1	198(36.7)	105(19.4	2.59	1.23
	Posters	64(11.9)	64(11.9)	109(20.2	192(35.6	111(20.6	2.59	1.26
	Bulletins	41(7.6)	95(17.6)	85(15.7)	208(38.5)	111(20.6	2.53	1.21
	Inaugural lectures	45 (8.3)	72(13.3)	84(15.6)	251(46.5)	88(16.3)	2.51	1.16
	Maps	68(12.6)	69(12.8)	63(11.7)	197(36.5)	143(26.5	2.49	1.33
	Banners	54(10.0)	77(14.3)	72(13.3)	193(35.7)	144(26.)	2.45	1.29

Realia (Real objects)	52(9.6)	65(12.0)	84(15.6)	206(38.1)	133(24.6	2.44	1.24
Models	43(8.0)	75(13.9)	78(14.4)	200(37.0)	144(26.7	2.39	1.23
Photographs	36(6.7)	57(10.6)	80(14.8)	224(41.5	143(26.5	2.29	1.16
Weighted Mean						2.64	
Grand Mean						60.8	

Sources: Researcher's field-report, 2021

Table 8 revealed the frequency of use of institutional repositories by lecturers in federal universities in Nigeria. The study shows that 83.6%, of the respondents frequently use book chapters while 17.4% do not book with a rate of (3.02±1.41). In addition, 54.9% of the respondents frequently use newsletters while 17.6% of the respondent do not use it with a rate of (2.90±1.39). Also shows that 54.3%, frequently used patents while 21.5% did not used and rated (2.83±1.47). The results of the study further shows that majority of the respondents agreed that lecturers frequently use institutional repositories in federal universities in Nigeria. The mean and standard deviation used corroborate this claim. This was shown with the weighted average mean and standard deviation score of (Weighed Average mean =2.64, Grand mean=2.50).

Decision Rule (Using Test of Norm):
The grand mean that shows the mean index is 60.8, and the classification was grouped into three (3) namely; Not used, Occasional use and Regular use

Table 9: Test of Nom showing the frequency of use of institutional repositories by lecturers in federal universities in Nigeria.

Interval	Mean index	Frequency of use of IR
1-38		Not used
39-77	60.8	Occasional use
78-115		Regular use

Table 9 focused on establishing the frequency of use of institutional repositories by lecturers in federal universities in Nigeria. The result reveals the prevalence of occasional use of institutional repositories by lecturers in federal universities in Nigeria.

Testing of Null Hypothesis
There is no significant relationship between institutional factors and use of institutional repositories by lecturers in federal universities in Nigeria

Table 10: Summary of PPMC Showing the Relationship Between Institutional Factors and Use of Institutional Repositories by Lecturers in Federal Universities in South-West, Nigeria.

Variable	Mean	SD	N	r	Sig.	Remark
Institutional factors	59.71	10.99				
Use of Institutional Factors	60.17	12.63	540	0.533	0.000	Significant

Table 10 above shows that there is a positive significant relationship between institutional factors and use of institutional repositories by lecturers in federal universities in South-West, Nigeria *(r = 0.53; p<0.05)*. Therefore, the null hypothesis is rejected. The positive relationship implies that an improvement in institutional factors brings about an improvement in the use of institutional repositories by lecturers in federal universities in South-West, Nigeria.

Discussion of Findings
It was revealed through the study that organizational culture, motivational factors, environmental factors, university policy and funding are institutional factors prevalent in federal universities in Nigeria. Organisational culture, environmental factors and motivational factors are the most prevalent institutional factors in the surveyed federal universities. This finding supports that of Uwizeye, Karimi, and Thiong'o, (2021) who have established that institutional factors are major determinants of achieving goals and objectives of every organization including tertiary institutions of learning. It is also in tandem with the work of Feyera, Atelaw and Hassen (2017) that discovered the relationship between performance of lecturers and prevalent institutional factors are close.
On the types of resources available in the institutional repositories of federal universities in Nigeria, the findings of the study revealed inaugural lectures, seminar papers, photographs and notebooks as the most dominant types of information resources available in the institutional repositories of federal universities in Nigeria. This finding supports that of Sanni (2018) which reported grey literature such as unpublished research reports, theses and dissertations, seminar and conference papers and Kakai, (2018) which highlighted e-prints, technical reports, journals, theses and dissertations, data sets, and teaching materials as major types of resources available in institutional repositories of universities. It is evident from the findings that institutional repositories in the selected federal universities in Nigeria contained majority of the resources that could serve as leverage for lecturers in carrying out their research responsibilities. This is an affirmation of the position of Adaeze (2020) that there are several resources in institutional repositories to assist lecturers in carrying out research activities. The result is also affirming the assertion by Onyebinama, Anunobi, and Onyebinama (2021) that the rich content could be available in the institutional repositories since faculty members are the major depositors of the content. The documents on IR are digital in nature, these digital documents consist of all electronic publications such as journals, theses, books and conference papers (Okumu, 2015).
Findings from the study further revealed the major purposes of using institutional repositories by lecturers as including, preparation of seminar/lecture notes, writing of papers/proposals, seminars presentations, research works

and preparation for lecture series. This corroborates Alegbeleye and Oyewole (2017) and Kakai (2018) who reported that institutional repositories have become important in scholarly communication, academic and research activities, institutional visibility, university ranking, feasible foundation of institutional knowledge management.

On the frequency of use of institutional repositories, this study found that the results of established occasional use of institutional repositories by most of the lecturers. This supports the findings of several authors that established that institutional repositories have been fairly accepted by faculty for research purposes. For instance, Bamigola and Adetimirin (2017) made a conclusion that development of IRs in Nigerian universities is on the increase and awareness of IR is on the increase. The test of hypothesis revealed that institutional factors have positive significant relationship with research productivity of lecturers in federal universities in south-west Nigeria. This discovery corroborated the work of Nguyen, Nguyen and Dao (2021) that established strong correlation of institutional factors with the use of institutional repositories by academics in higher educational institutions.

Summary and Conclusion
The study investigated the relationship between institutional factors and use of institutional repositories by lecturers in federal universities in Nigeria with a view to establish the extent to which institutional factors influenced the use of institutional repositories by lecturers in universities in Nigeria. Organisational culture, environmental factors and motivational factors were found to be the dominant and prevalent institutional factors to support research activities in federal universities in Nigeria. Inaugural lectures, seminar papers, photographs, notebooks, illustrations and drawings are the types of information resources commonly available in the institutional repositories of federal universities in Nigeria. Also, preparing seminar/lecture notes, writing papers/proposals, seminars presentations, research works, preparing for lecture series and developing course materials/notes are the major purposes for which lecturers in federal universities in Nigeria use institutional repositories. Occasional use of institutional repositories by the lecturers in federal universities in Nigeria was established and book chapters, newsletters, patents, journals, illustrations and drawings, newspapers, conference proceedings, theses and dissertations, book of abstracts, notebooks, charts, seminar papers and textbooks are regularly used by the lecturers in federal universities in Nigeria. A significant positive relationship was established between institutional factors and use of institutional repositories such that an improvement in institutional factors would positively improve the use of institutional repositories by the lecturers. It is evident that favourable institutional factors such as organisational culture, motivational and environmental factors are important in improving the use of IRs by the lecturers. Therefore, it is expected that improvement in the university policy and adequate funding for research in the universities would lead to improved use of institutional repositories.

Recommendations
The following recommendations are proffered on the basis of this study's findings:

1. University management should ensure the formulation and implementation of adequate university-wide policy that would encourage and supports the use of institutional repositories. Such policy should be one that can be easily translated to reality and devoid of any cumbersomeness.
2. The university management should organize for the lecturers regular training and retraining programme and workshops on the use of institutional repositories to equip them with the relevant and needed skills.
3. The university management should ensure ease of access to the IRs by the lecturers
4. Infrastructure to support effective functioning of IRs in the universities such as hardware stability and regular maintenance, faster internet access and stable power supply should be provided by the university management. This will improve access to IRs resources for lecturers' use.

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