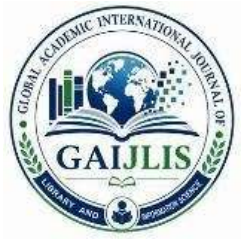
eISSN 3141-6152
GLOBAL ACADEMIC INTERNATIONAL JOURNAL OF LIBRARY AND INFORMATION SCIENCE (GAIJLIS) VOL: 3.1 (2026) PP 116-133



Received: 28.09.2026| **Accepted:** 07.11.2026 |**Published:** Nov. 2026 EDITION
Citation: Uzoegbu, F. M., Ozioko, R. E., & Onyenachi, J. C. (2026). **Technical and operational institutional repository management practices and the depository culture of lecturers in federal universities in South East Nigeria: A correlation analysis of digitization, software type and content upload approach policies.** GAIJLIS, 3(1), 116-133
https://globreshub.org/index.php/gaijlis **DOI**: https://doi.org/10.5281/zenodo.24221780

TECHNICAL AND OPERATIONAL INSTITUTIONAL REPOSITORY MANAGEMENT PRACTICES AND THE DEPOSITORY CULTURE OF LECTURERS IN FEDERAL UNIVERSITIES IN SOUTH EAST NIGERIA: A CORRELATION ANALYSIS OF DIGITIZATION, SOFTWARE TYPE AND CONTENT UPLOAD APPROACH POLICIES

Rev. Sr. Fiat Mary Uzoegbu*
University Library, Alvan Ikoku Federal University of Education, Owerri, Imo State, Nigeria.
Email: fiat.mary@alvanikoku.edu.ng

Prof. R. E. Ozioko
Department of Library and Information Science, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria. Email: ozioko.reuben@mouau.edu.ng

Prof. J. C. Onyenachi
Department of Library and Information Science, Michael Okpara University of Agriculture, Umudike, Abia State, Nigeria. onyenachi.joy@mouau.edu.ng

Abstract
This study investigated the relationship between three technical and operational institutional repository (IR) management practices, namely digitization policy, software type policy and content upload approach policy, and the depository culture of lecturers in federal universities in South East Nigeria. A correlational survey design was used. The population was 12,887 lecturers and 24 IR managers in five federal universities, and a sample of 388 was drawn using Yamane's formula with proportionate allocation. The Institutional Repository Management Practices Questionnaire and the Depository Culture of Lecturers Questionnaire were used for data collection and showed a pilot reliability coefficient of 0.85. A total of 369 copies (95.1%) were analysed. Pearson product moment correlation answered the research questions, and linear regression tested the hypotheses at the 0.05 level. Content upload approach policy had a very high positive relationship with depository culture (r = .839), while digitization policy (r = .689) and software type policy (r = .693) had high positive relationships. Each relationship was significant, and the three practices accounted for 70.4%, 47.5% and 48.0% of the variance in depository culture respectively. The study concludes that the way a repository receives, converts and processes lecturers' work is closely associated with whether lecturers deposit. It recommends clear self-deposit and mediated-deposit procedures supported by training, provision of digitization infrastructure and competent staff, and reliable, user-friendly repository software.

Keywords: *institutional repository; digitization policy; software type policy; content upload approach; depository culture; lecturers; South East Nigeria*

1. INTRODUCTION

Scholarly output that is not shared cannot contribute to the advancement of knowledge, and universities increasingly rely on institutional repositories (IRs) to ensure that the research of their staff is stored, discoverable and open to the world. Repositories gather the theses, articles, conference papers and reports produced in an institution and offer them to a global audience, which improves the institution's visibility and strengthens its claim to research productivity (Khan, 2021; Kumah, 2022). Their growth, however, is determined less by technology than by participation. Murray (2018) reminds us that the task of building a repository is not about technology but about the human activities that technology serves.

The participation of lecturers is captured in the concept of depository culture, the habit of routinely depositing scholarly works in a repository. Onwuka and Anyanwu (2018) describe it as the habitual submission, management and sharing of academic work for preservation and wider access, and Nwalo (2020) emphasises that it is reinforced when repository functions fit smoothly into the everyday workflow of academics. This second emphasis is particularly important for the present paper. A lecturer's decision to deposit is made at a practical moment: the work must be prepared in an acceptable form, uploaded through a system, and, where the original exists only on paper, converted to digital form. How easy or difficult those operations are depends on the technical and operational choices that the library has made.

Three such choices are examined here. A digitization policy governs the conversion of physical materials, such as printed theses, reports and legacy collections, into digital formats for inclusion in the repository. A software type policy determines the platform on which the repository runs, for example DSpace, EPrints, Fedora or Greenstone, and the standards it must meet. A content upload approach policy decides how content enters the repository, whether through self-deposit by authors, mediated deposit by library staff, or a combination of the two. All three affect the effort, skill and confidence required of a lecturer who wishes to deposit.

Nigerian federal universities have been encouraged to build repositories through accreditation requirements (National Universities Commission, 2020) and funding interventions (Tertiary Education Trust Fund, 2021), yet their performance has been uneven. Studies point to inadequate infrastructure, poor internet connectivity, unreliable electricity and shortages of skilled staff as persistent problems (Adewale et al., 2024; Asadi, 2019). If technical and operational practices are as influential as these problems suggest, they should be visible in the depository behaviour of lecturers. Yet there is little evidence that tests this relationship directly in South East Nigeria. This study therefore examined the extent to which digitization, software type and content upload approach policies are related to the depository culture of lecturers in the zone's federal universities.

The study is significant to several groups. Librarians and repository managers can use its findings to decide how to sequence investments in digitization, software and deposit procedures. University management and funding agencies

can see whether spending on repository infrastructure is likely to be reflected in the behaviour of lecturers. Lecturers benefit if their institutions make deposit easier, and researchers gain evidence from a zone where such data have been scarce. The study is delimited to three technical and operational practices, to lecturers in the five federal universities of South East Nigeria, and to depository culture as the criterion variable.

1.1 Objectives of the study

The purpose of the study was to examine the relationship between technical and operational IR management practices and the depository culture of lecturers in federal universities in South East Nigeria. The specific objectives were to:

(a) investigate the relationship between digitization policy and depository culture of lecturers;
(b) determine the relationship between software type policy and depository culture of lecturers; and
(c) reveal the relationship between content upload approach policy and depository culture of lecturers in federal universities in South East Nigeria.

1.2 Research questions

RQ1. What relationship exists between digitization policy and depository culture of lecturers in federal universities in South East Nigeria?
RQ2. What relationship exists between software type policy and depository culture of lecturers in federal universities in South East Nigeria?
RQ3. What relationship exists between content upload approach policy and depository culture of lecturers in federal universities in South East Nigeria?

1.3 Hypotheses

The following null hypotheses were tested at the 0.05 level of significance. Ho1: There is no significant relationship between digitization policy and depository culture of lecturers. Ho2: There is no significant relationship between software type policy and depository culture of lecturers. Ho3: There is no significant relationship between content upload approach policy and depository culture of lecturers, all in federal universities in South East Nigeria.

2. REVIEW OF RELATED LITERATURE

2.1 Depository culture and the operational environment of the repository

Depository culture has been defined as the collective values, attitudes and practices that motivate academics to deposit their work consistently (Onwuka & Anyanwu, 2018). Aina (2017) stresses that it is shaped by personal, organisational and infrastructural factors, including awareness, perceived benefits, training and policy support, and Ezeani and Ezeani (2019) describe it as the expression of academic staff's knowledge, motivation and habitual practices. Oluwole and Awodele (2021) emphasise that it is a shared responsibility in which lecturers, librarians, students and administrators all take part. The operational environment of the repository, meaning the tools and procedures through which deposit takes place, is one of the infrastructural factors that

Aina identifies, and it is the focus of this paper.

Repositories in the federal universities of the zone illustrate the importance of this environment. Nwankwo (2024) indicates that the University of Nigeria, Nsukka, Nnamdi Azikiwe University and Michael Okpara University of Agriculture have established repositories for theses, research papers and other outputs. Open-source platforms such as DSpace and EPrints predominate because they are customisable and suit the resource constraints of Nigerian universities, and staff training and technical support remain ongoing priorities (Akpan, 2024). At the same time, content is concentrated in theses and dissertations, and lecturers' engagement is still at a nascent stage; Okpara et al. (2023) report that lecturers mainly use the repositories for lecture notes, seminar papers and background reading rather than for depositing their own work. Asadi (2019) identifies inconsistent power supply and limited bandwidth as constraints on usability. A lecturer working in such an environment meets the repository first as a system to be operated, and the quality of that operation shapes the decision to deposit.

Adoption research from other developing contexts points the same way. Nunda and Elia (2019) report that limited technical expertise and insufficient resources are among the principal factors affecting adoption in developing countries, and Okumu (2015) lists constraints in self-archiving among the influences on repository use even in more developed settings.

Together these studies suggest that technical and operational conditions are not peripheral but central to whether repositories are used.

Awareness of how to use the system is a further part of the operational environment. Okiki et al. (2020) observed that many lecturers in Nigeria first learn about repositories through formal communication channels and university websites, and Waithaka and Onyancha (2021) showed in Kenya that sustained interaction with librarians combined with formal training increased lecturers' understanding of repository procedures, deposit frequency and repository traffic. These findings imply that how a repository handles upload and support is communicated to lecturers, and not only what the system can do, influences use.

2.2 Digitization policy

A digitization policy guides the systematic conversion of physical materials into digital form for inclusion in a repository. Its purpose is to ensure that digitization projects meet standards of accuracy, authenticity and usability. The digitization guidelines of the Government of Canada (2025) describe digitized records as needing to be authoritative, legally admissible and accessible over the long term, and they set out stages from selection and preparation through imaging to quality assurance and metadata integration. Effective policies call for documentation and auditability of the whole process so that record integrity is preserved (Government of Canada, 2025).

Digitization policies also define the scope and selection criteria for conversion, balancing resource constraints against priorities. The repository policy of Moshi Co-operative University (2022), for instance, includes theses, reports and legacy collections while excluding material

lacking relevance or rights clearance, and it assigns roles to library staff, IT experts and subject specialists. Quality assurance is central: standards for image resolution, file formats, indexing and metadata allow digital surrogates to represent originals faithfully (Singeh et al., 2013), and the University of Houston Libraries (2017) apply test scans, calibration and periodic review to maintain quality. Obaro and Arumuru (2024) add that policies should provide for sustainable storage and access management of digitised content. For lecturers, digitization policy matters because much of the Nigerian scholarly record, including older theses, inaugural lectures and project reports, exists only in print, and a repository able to digitize this material gives the author's work a place in the digital record without requiring the author to do the conversion.

The content to be digitized is mostly the work of postgraduate students and lecturers. Jones (2015) points out that electronic theses and dissertations represent original research by postgraduate students and contribute to the academic heritage of universities, and Ezema and Okafor (2016) argue that curating this content showcases the research capability of the institution as well as preserving it. Cunningham and Ware (2019) note that diversifying repository content keeps a repository relevant to the whole life cycle of research dissemination, but that systematic collection and metadata management of materials such as conference presentations remain a challenge in resource-constrained settings. A digitization policy is the mechanism by which these competing demands are prioritised.

2.3 Software type policy

A software type policy specifies the platforms used to establish, operate and maintain the repository, and ensures that the software chosen matches the institution's goals, users and technical capacity. Chan (2023) advises institutions to weigh interoperability, scalability, compliance with open standards such as OAI-PMH and ease of customisation, and notes that open-source platforms such as DSpace and EPrints are popular because they are flexible, supported by active communities and interoperable with external indexing services. Khurana and Singh (2020) compared repository software in a multi-criteria evaluation and reported that open-source platforms, led by DSpace, performed best and that software choice influenced deposit rates through user-friendliness.

Software policy is also about maintenance and governance. Lynch and Van Westrienen (2010) stress allocating sufficient IT resources and regularly updating and patching systems, and Ukwoma et al. (2019) argue that clear roles for system administrators and repository managers prevent downtime and data loss that would otherwise erode user trust. Customisation matters as well: institutions need platforms that can be configured for local metadata standards, submission workflows and interfaces (Singeh et al., 2013; Jacksonville State University, 2020). Adam and Kiran (2023) note that licensing, budget and technical expertise should guide the choice between open-source and proprietary options. In South East Nigeria, DSpace and EPrints dominate, but unreliable power and limited bandwidth reduce their usability (Akpan, 2024; Asadi, 2019).

Evidence from directory-based studies shows how widely open-source software is used. Nayak (2021) found that DSpace was used by 61.21% and EPrints by 16.36% of 214 repositories in the Shanghai Cooperation Organisation countries, and Kalbande (2019) reported that DSpace dominated the 84 Indian repositories listed in OpenDOAR and ROAR, with copyright fears, lack of awareness and training, and policy gaps hindering self-archiving. These data confirm that open-source platforms are the global norm, so that a university's software policy is chiefly a matter of governance, support and configuration rather than of which platform to choose.

2.4 Content upload approach policy

The content upload approach governs how materials are submitted. In self-deposit, authors upload their works directly, which promotes immediacy and ownership and reduces administrative workload but requires technical competence and familiarity with guidelines (Eromosele, 2022). In mediated deposit, trained repository staff upload content, enter metadata and verify compliance on the author's behalf, which secures quality and copyright compliance but may slow processing and reduce author engagement (Obaro & Arumuru, 2024). Many repositories, including some in South Africa and Kenya, use hybrid models in which self-deposit is encouraged but mediated support is available (Nneji, 2018).

Each model requires a clear policy. For self-deposit, the policy should provide training, help-desk support and automated validation; for mediated deposit, it should describe vetting, timelines and communication with authors (National Open University of Nigeria, 2024). Abdullahi and Saka (2016) note that in developing countries low digital literacy and technical challenges often make mediated deposit necessary, though it strains staff resources, while institutions whose researchers are ICT proficient benefit more from self-deposit. Singeh et al. (2013) conclude that awareness raising, incentives and infrastructure investment should accompany whichever approach is chosen. Posigha and Idjai (2022) observe that well-articulated and enforceable policies create an enabling environment for both approaches.

The choice between the approaches also has resource implications. Self-deposit places the burden on authors but needs fewer staff, while mediated deposit places it on the library and calls for trained personnel and adequate time. Uba and Okonkwo (2021) found that repositories in South East Nigerian tertiary institutions were managed by ICT professionals who were also librarians, and that funding shortages, absence of statutory deposit laws, poor author cooperation and plagiarism were among the main challenges. In such conditions, a documented policy on upload approach is a way of allocating scarce staff time and of setting expectations for authors.

2.5 Theoretical framework

The study draws on the Technology Acceptance Model of Davis (1989), which explains technology use through perceived usefulness and perceived ease of use. Software and upload approach decisions largely determine how easy a repository is to use, and digitization policies determine how useful it is as a home for existing work. Venkatesh and Davis (2000) extended the model with

social influence and cognitive instrumental processes, which is relevant where colleagues and library support shape adoption. Ranganathan's (1931) principle of saving the time of the reader applies equally to the depositor: a system that saves time encourages use. Whitley's (2000) theory adds that disciplinary and organisational norms mediate how technologies are taken up, and the open access model (Budapest Open Access Initiative, 2002; Suber, 2012) supplies the rationale for depositing at all. These perspectives lead to the expectation of positive relationships between the technical and operational practices studied and depository culture.

2.6 Empirical studies

Studies of digitization and preservation infrastructure link them to participation. Nyambe and Omeluzor (2019) found that only 40% of the twelve Nigerian university libraries they studied had formal digitization and preservation guidelines, with skill gaps and infrastructural deficits contributing to low deposit rates, and Adewale et al. (2024) attributed poor depository habits of Nigerian lecturers partly to limited infrastructure that could not support digitization practices. Tiemo and Ebiagbe (2016) reported high awareness of IRs among lecturers at Niger Delta University and their willingness to deposit where this enhanced academic visibility. Nayak (2021) found that open access repositories in the Shanghai Cooperation Organisation countries needed stronger digitization and preservation policies to sustain their growth.

On software, Nwachi et al. (2020) found that DSpace predominated in South East Nigerian universities but was hampered by poor internet and power supply, and that lecturers identified poor interfaces and inadequate training as challenges. Ibinaiye et al. (2023) reported that tertiary institutions in Nigeria that had adopted DSpace were highly engaged in depositing local content because of the policies they had put in place, and Khurana and Singh (2020) reported that software choice influenced deposit rates by 25 to 40 percent in their evaluation.

On the upload approach, Jain and Bentley (2021) reported that mediated deposit services increased content accrual in Indian institutions, while Nwalo (2020) found that user-friendly interfaces, clear submission guidelines and continuous user support improved depositing behaviour among 200 academic staff. Kim (2011) found that only 22% of faculty at a large United States university had deposited work and recommended streamlining deposit processes. Ukwoma and Ngulube (2019) listed insufficient technical skills among the major obstacles faced by Nigerian academics, and Sambo et al. (2022) listed poor ICT skills, intermittent power and limited bandwidth.

Studies in South East Nigeria show the context in which these practices operate. Orsu (2019) found among 418 lecturers that Google Scholar, ResearchGate and open access journals were the principal self-archiving platforms while institutional repositories were infrequently used, and that inadequate power supply, poor network infrastructure, limited awareness and insufficient funding were the main challenges. Baro and Nwabueze-Echedom (2023) reported high awareness and willingness to deposit among faculty at the University of Nigeria, Nsukka, despite poor internet, lack of training and fear about

copyright. Oluwole and Awodele (2021) found low actual deposit despite awareness among 300 academic staff in six Nigerian universities and recommended stronger institutional frameworks, advocacy and resource support. Taken together, these studies suggest that willingness is not the main constraint; the operational environment is.

Differences between types of depositor also matter for the choice of upload approach. Eastwood et al. (2023) found, from interviews and a survey of researchers at an American university, that self-archiving behaviour clustered into four personas, and that busy researchers deposited more when tools were automated while reluctant ones needed mediated deposit services. They concluded that a single approach does not suit all researchers and recommended persona-based outreach and policy alignment with funder requirements. This evidence supports hybrid upload policies in universities whose lecturers differ widely in digital skill.

Few of these studies tested relationships. Ladipo and Adepoju (2023) reported a significant correlation ($r = 0.533$, $p < 0.05$) between institutional factors and IR use among lecturers in federal universities, and Aina (2017) used regression to show that awareness, perceived usefulness and institutional support predict lecturers' propensity to deposit.

2.7 Research gap

The literature shows that technical and operational conditions are frequently cited as barriers, but it has rarely measured how digitization, software and upload approach policies are related to the depository culture of lecturers. Most studies are descriptive, are based on small or purposive samples, or deal with students and repository staff rather than lecturers. This study provides a statistical test of these relationships in the federal universities of South East Nigeria.

3. METHODOLOGY

The study adopted a correlational research design, which examines relationships among variables without manipulating them (Fraenkel et al., 2012). It covered the five federal universities in South East Nigeria: University of Nigeria, Nsukka (UNN), Nnamdi Azikiwe University, Awka (NAU), Federal University of Technology, Owerri (FUTO), Alex Ekwueme Federal University, Ndufu-Alike, Ikwo (AE-FUNAI) and Michael Okpara University of Agriculture, Umudike (MOUAU). These universities have IRs at varying stages of development, which makes the zone suitable for studying management practices and depository culture together.

The population of 12,911 comprised 12,887 lecturers (UNN 5,000; NAU 1,500; FUTO 1,300; AE-FUNAI 887; MOUAU 4,200) and 24 IR managers. Yamane's (1967) formula at a 5% margin of error produced a sample of 388, which was allocated proportionately by purposive sampling: UNN 151, NAU 45, FUTO 39, AE-FUNAI 27 and MOUAU 126.

Data were collected with two questionnaires. The Institutional Repository Management Practices Questionnaire (IRMPQ), redesigned from Ukwoma et al. (2019) and Posigha and Idjai (2022), contains seven clusters of ten items each; the digitization, software type and content upload approach clusters are analysed here. The Depository Culture of Lecturers Questionnaire (DCLQ),

redesigned from Mirza et al. (2012), Vereijken et al. (2016) and Omeluzor (2014), contains 20 items. Responses were on a four-point scale from Strongly Agree (4) to Strongly Disagree (1), with a criterion mean of 2.5. Three experts, two from library and information science and one from measurement and evaluation, face-validated the instruments. A pilot study with 15 lecturers at Alvan Ikoku Federal University of Education, Owerri, which was not part of the main study, gave a Cronbach's alpha of 0.85; the pilot size exceeded the minimum of ten suggested by Saunders et al. (2003).

The researcher and research assistants distributed and retrieved the questionnaires in person over about three weeks. Of the 388 copies distributed, 369 (95.1%) were properly completed and analysed. Pearson product moment correlation answered the research questions: r of 0.80 and above was interpreted as a very high relationship and 0.60 to 0.79 as a high relationship, and R^2 was used to express the share of variance in depository culture explained. Linear regression tested the hypotheses at the 0.05 level, and a null hypothesis was rejected where p was below 0.05.

4. RESULTS

Results are presented by research question and corresponding hypothesis. The analyses were based on N = 369.

4.1 Research Question 1: Relationship between digitization policy and depository culture

Table 1 shows a correlation of r = .689 (p < .001) between digitization policy and depository culture of lecturers. This is positive and within the range of 0.60 to 0.80, indicating a high relationship. The R^2 of .475 means that digitization policy accounts for 47.5% of the variance in depository culture.

Table 1: Correlation between technical and operational practices and depository culture of lecturers (N = 369)

Practice	r	R^2	Variance explained (%)	Extent of relationship
Digitization policy	.689	.475	47.5	High
Software type policy	.693	.480	48.0	High
Content upload approach policy	.839	.704	70.4	Very high

Note: *All correlations significant at the 0.05 level (two-tailed): digitization policy and software type policy p < .001; content upload approach policy p = .003.*

For Ho1, regression analysis (Table 2) gave F = 118.260 (p < .001). The null hypothesis was rejected, so there is a significant positive relationship between digitization policy and depository culture of lecturers in federal universities in South East Nigeria.

4.2 Research Question 2: Relationship between software type policy and depository culture

Software type policy correlated with depository culture at r = .693 (p <

.001), a high positive relationship (Table 1). With R^2 = .480, software type policy accounts for 48.0% of the variance in lecturers' depository culture. For Ho2, regression analysis (Table 2) produced F = 105.050 (p < .001); the null hypothesis was rejected, indicating a significant positive relationship between software type policy and depository culture.

4.3 Research Question 3: Relationship between content upload approach policy and depository culture

Content upload approach policy correlated with depository culture at r = .839 (p = .003), a very high positive relationship (Table 1). Its R^2 of .704 indicates that 70.4% of the variance in depository culture is accounted for by the content upload approach policy of the universities. For Ho3, regression analysis (Table 2) gave F = 88.900 (p = .003), which is below the 0.05 alpha level, so the null hypothesis was rejected: a significant positive relationship exists between content upload approach policy and depository culture of lecturers.

Table 2: Regression test of the relationship between technical and operational practices and depository culture (df = 1, 367)

Hypothesis	Predictor	F	Sig. (p)	Decision
Ho1	Digitization policy	118.260	< .001	Rejected
Ho2	Software type policy	105.050	< .001	Rejected
Ho3	Content upload approach policy	88.900	.003	Rejected

Note: *Significance judged at α = 0.05.*

Overall, all three practices were significantly and positively related to depository culture. The relationship was very high for content upload approach policy and high for digitization and software type policies.

Table 3: Summary of hypothesis tests for technical and operational practices and depository culture

Practice	r	Null hypothesis	Conclusion
Digitization policy	.689	Ho1 rejected	Significant, high positive
Software type policy	.693	Ho2 rejected	Significant, high positive
Content upload approach policy	.839	Ho3 rejected	Significant, very high positive

Note*: N = 369; α = 0.05.*

5. DISCUSSION OF FINDINGS

Digitization policy showed a high and significant positive relationship with

depository culture (r = .689). Respondents agreed that digitization policy influences lecturers' participation and enhances their institutional value, guarantees long-term preservation of digitised content, addresses copyright and intellectual property matters, and promotes collaboration between lecturers and repository staff. It follows that where a university has a poor digitization policy or none, lecturers' depository culture is weakened. The finding agrees with Tiemo and Ebiagbe (2016), who linked awareness of IRs among lecturers to digitization that makes them academically visible, and with Adewale et al. (2024), who explained poor depository habits by infrastructure that does not support digitization. It is also consistent with the finding of Nyambe and Omeluzor (2019) that low deposit rates accompanied missing digitization guidelines. The relationship is the weakest of the three examined here, a point taken up below.

Software type policy was also highly and significantly related to depository culture (r = .693). The more adequately a university implements a software policy, the more its lecturers deposit. Respondents agreed that university policy on the use of DSpace, EPrints, Fedora, Greenstone and similar platforms promotes depository culture to a high extent. This supports Ibinaiye et al. (2023), who found tertiary institutions that adopted DSpace under a clear policy to be actively engaged in depositing. It is consistent with the view of Khurana and Singh (2020) that software choice affects deposit rates through user-friendliness, and with the finding of Nwachi et al. (2020) that despite the dominance of DSpace in the zone, poor interfaces and inadequate training remained a problem. In terms of the Technology Acceptance Model, reliable and easy-to-use software raises the perceived ease of depositing, which is a direct driver of acceptance (Davis, 1989).

Content upload approach policy had a very high relationship with depository culture (r = .839), and it accounted for 70.4% of the variance. This implies that depository culture is determined to a very large extent by whether the university has a clear policy for how content enters the repository; without it, depositing is likely to be limited. Respondents agreed that such a policy states the procedures for both self-deposit and mediated deposit by lecturers and repository staff and that it is regularly reviewed to reflect technological and institutional change. The result agrees with Ukwoma and Ngulube (2019), who found that the absence of clear provisions and insufficient technical skills were among the main obstacles to IR use in Nigerian higher education, and with Nwalo (2020), who found that clear guidelines, user-friendly interfaces and continuing support enhanced depositing. It also supports the view of Abdullahi and Saka (2016) that where digital literacy is low, mediated deposit is valuable, and the evidence of Jain and Bentley (2021) that mediated services increase content accrual.

A noteworthy pattern is that the upload approach policy, which governs the human-facing procedure of deposit, correlated much more strongly with depository culture than the digitization and software type policies, which are more infrastructural. One reading is that lecturers experience the repository mainly through the act of depositing, so that clarity of procedure and availability of support matter more to them than the back-end technology. Another is that respondents may rate procedures more confidently than

technical infrastructure, which many lecturers do not see. Either way, the finding suggests that investments in software and digitization are most likely to pay off in depository culture if accompanied by clear upload procedures and training. As in any correlational study, causation cannot be claimed, and the high coefficients may partly reflect shared perceptions of the repository among the same respondents.

The coefficients obtained here are considerably higher than the r = 0.533 reported by Ladipo and Adepoju (2023) between institutional factors, treated as a single block, and IR use among lecturers in federal universities across the country. Three explanations are plausible. The present study measured specific practices rather than a composite, which removes the dilution that comes from averaging strong and weak factors. It focused on a single geopolitical zone with a relatively homogeneous institutional context. And it measured depository culture rather than general use, which is closer to the behaviour that the practices are designed to influence. The comparison with Aina (2017), who found that institutional support was a significant predictor of lecturers' propensity to deposit, is also supportive, although Aina's design did not isolate particular operational practices.

The findings also have a bearing on the theoretical perspectives adopted. They support the Technology Acceptance Model (Davis, 1989), because the practices examined are those that determine how easy it is to deposit and how useful the repository is as a home for existing work. They are consistent with the extension of the model by Venkatesh and Davis (2000), in that facilitating arrangements and the influence of colleagues and library staff shape adoption. They agree with Ranganathan's (1931) principle of saving the time of the user, since a clear upload procedure and reliable software save the depositor's time, and with the open access model, because they are the practical means through which the principle of open access is turned into routine behaviour. The practical implication is that universities in the zone should treat the technical and operational environment of the repository as part of the culture-building task, not merely as back-office technology.

6. CONCLUSION

The study examined the relationship between digitization, software type and content upload approach policies and the depository culture of lecturers in federal universities in South East Nigeria. All three were significantly and positively related to depository culture. Content upload approach policy showed a very high relationship, while digitization and software type policies showed high relationships. The study concludes that the technical and operational arrangements through which a repository converts, receives and processes lecturers' work are significant correlates of depository culture, and that the procedure for uploading content is the most strongly associated of the three.

6.1 Implications

For librarians, the findings imply that digitization should be undertaken with the necessary devices, infrastructure and digitally competent staff in place before a policy is enforced, that the software the university adopts must be adequately provided and dependable, and that lecturers need regular training on

seamless upload. For university management and funding bodies, they imply that repository funding should cover staff capacity and software support as well as hardware.

The order in which these investments are made may also matter. Because the upload approach showed the strongest association, a library with limited funds may reasonably begin by documenting and publicising clear deposit procedures and by training lecturers, which costs little, and then proceed to digitization capacity and software upgrades, which cost more. This sequencing is a suggestion based on the pattern of coefficients and should be tested before it is relied upon.

6.2 Recommendations

(a) University librarians should provide adequate digital devices and infrastructure, and train repository staff, so that digitization can proceed and lecturers are digitally prepared to deposit.

(b) University management, through the librarian, should provide reliable, user-friendly repository software with the technical support needed for seamless deposit.

(c) Libraries should publish clear self-deposit and mediated-deposit procedures, review them regularly, and organise regular workshops and training for lecturers on uploading materials, with support from the Ministry of Education and relevant agencies.

(d) Funding agencies, including the Tertiary Education Trust Fund, should include staff training and software support, and not only hardware, in their repository intervention packages.

(e) Library management should review upload procedures, software performance and digitization workflows at regular intervals, using feedback from lecturers, so that practice keeps pace with technological and institutional change.

6.3 Limitations and suggestions for further study

The study used self-reported data collected at a single point in time, and some copies of the questionnaire were not returned, which may have introduced sampling error. It was limited to federal universities. Future studies could extend the work to state and private universities, compare self-deposit and mediated-deposit environments directly, and combine questionnaire data with repository usage statistics.

A further limitation is that the digitization, software type and upload approach constructs were measured through perceptions rather than through audits of the repositories themselves. Triangulating questionnaire responses with repository records, such as the number of deposits per lecturer, the software version in use and the proportion of mediated deposits, would strengthen the evidence on how far these practices drive behaviour.

REFERENCES

Abdullahi, I., & Saka, L. A. (2016). ICT application in academic libraries in Nigeria: Challenges and prospects. *Library Philosophy and Practice*. https://digitalcommons.unl.edu/libphilprac/1396/

Adam, U. A., & Kiran, K. (2023).

Driving forces behind the management of institutional repositories in Nigeria.Malaysian Journal of Library and Information Science, 28(1), 25–42.

Adewale, T. A., Oladipo, T. S., & Akinwale, A. O. (2024). Institutional repository management practices in Nigerian universities: Challenges and prospects. *Library Philosophy and Practice*. https://ejournal.um.edu.my/index.php/MJLIS/issue/view/172

Aina, L. O. (2017). Developing a culture of institutional repository use in Nigerian universities.International Journal of Library and Information Science, 9(5), 58–69.

Akpan, E. (2024). Technical challenges and institutional repository management in Nigerian universities.Library Philosophy and Practice. https://ejournal.um.edu.my/index.php/MJLIS/issue/view/172

Asadi, M. (2019). Infrastructure challenges affecting institutional repositories in West African universities. *Digital Library Perspectives*. https://ejournal.um.edu.my/index.php/MJLIS/issue/view/172

Baro, E. E., & Nwabueze-Echedom, A. U. (2023). Faculty awareness and willingness to deposit local contents to institutional repositories in Nigeria: A case study. *Niger Delta Journal of Library and Information Science*, 4(1). https://doi.org/10.5281/zenodo.8332340

Budapest Open Access Initiative. (2002). Budapest Open Access Initiative. https://doi.org/10.4403/jlis-8692

Chan, L. (2023). *A guide to institutional repository software.* Open Society Institute.

Cunningham, S., & Ware, M. (2019). Diversification of institutional repository content: Trends and challenges. *Journal of Scholarly Publishing*, 50(4), 250–267.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology.MIS Quarterly, 13(3), 319–340.

Eastwood, M. M., Bowers, J., Cox, J., & Maness, J. (2023). One size does not fit all: Self-archiving personas based on federally funded researchers at a mid-sized private institution. *Journal of Librarianship and Scholarly Communication*, 11(1). https://doi.org/10.31274/jlsc.13886

Eromosele, S. O. (2022). Using open access institutional repository policy for content collection: An investigation.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/788

Ezeani, C. N., & Ezeani, I. C. (2019). Academic staff's knowledge and attitudes towards institutional repositories in Nigerian universities.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/

Ezema, I. J., & Okafor, V. N. (2016). Developing the content of institutional repository for academic libraries in Nigeria.Jewel Journal of Librarianship, 18(1), 2–15.

Fraenkel, J. R., Hyun, H. H., & Wallen,

N. E. (2012). *How to design and evaluate research in education (8th ed.).* McGraw-Hill.

Government of Canada. (2025). *Digitization guidelines.* https://www.canada.ca/en/library-archives/services/government/information-disposition/records/multi-institution-disposition-authorizations/digitization-guidelines.html

Ibinaiye, T. S., Abubakar, A. M., & Yawale, S. A. (2023). Management of local contents in institutional repositories in tertiary institutions in Nigeria: A survey. *African Journal of Library, Archives and Information Science*, 33(1), 12–28.

Jacksonville State University, Houston Cole Library. (2020). Institutional repository policy.Jacksonville State University. https://jsu.edu/library/pdfs/policies/InstitutionalRepositoryPolicy2020.pdf

Jain, P., & Bentley, G. (2021). Developing institutional repositories in academic libraries: Policies, practices, and challenges.International Journal of Innovative Research and Scientific Studies, 4(4), 1–12.

Jones, C. (2015). The role of electronic theses and dissertations in digital repositories.Library Trends, 63(3), 416–435.

Kalbande, D. T. (2019). Institutional repository in OpenDOAR: Status quo India. *Library Philosophy and Practice*. https://scholarworks.sjsu.edu/libphilprac/2562/

Khan, T. H. (2021). Institutional repositories in higher education institutions: A new opportunity for academic libraries. *International Journal of Digital Library Services*, 1(1), 1–9.

Khurana, K., & Singh, R. (2020). Choosing the right software for institutional repositories: A comparative study.Library Philosophy and Practice.

Kim, J. (2011). Understanding faculty satisfaction with and use of institutional repositories.Journal of the Association for Information Science and Technology, 62(11), 2239–2254. https://doi.org/10.1002/asi.21626

Kumah, C. (2022). Visibility and impact of institutional repositories on academic research in Africa.Library Philosophy and Practice.

Ladipo, S. O., & Adepoju, T. O. (2023). Investigating institutional factors and the use of institutional repositories by lecturers in federal universities in Nigeria.International Journal of Library and Information Technology, 4(1), 14–27.

Lynch, C., & Van Westrienen, G. (2010). Institutional repository deployment in the United States as of early 2010.D-Lib Magazine, 16(1/2). http://www.dlib.org/dlib/january10/lynch/01lynch.html

Mirza, M., Qazi, W., & Rawat, V. (2012). Institutional research culture scale: Development and validation. *Higher Education Research & Development*, 31(3), 333–349.

Moshi Co-operative University. (2022). Institutional repository policy. https://www.mocu.ac.tz/wp-content/uploads/2022/10/Institutional-Repository-Policy.pdf

Murray, A. (2018). What we talk about when we talk about institutional repositories. http://library.concordia.ca/about/staff/forum/What_We_Talk_About_When_We_Talk_About.pdf

National Open University of Nigeria. (2024). Institutional repository policy.NOUN.

National Universities Commission. (2020). Manual of accreditation procedures for academic programmes in Nigerian universities.National Universities Commission.

Nayak, S. (2021). Promoting the educational research through an open access institutional repository of Shanghai Cooperation Organisation (SCO) countries: An analytical study.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/5064

Nneji, A. (2018). Institutional repository policies in university libraries in Africa: A framework for development. *International Journal of Academic Library and Information Science*, 6(1), 12–29.

Nunda, I., & Elia, E. (2019). Institutional repositories adoption and use in selected Tanzanian higher learning institutions. *International Journal of Education and Development Using ICT*, 15(1), 150–164.

Nwachi, C., Mole, A. C., & Dim, C. L. (2020). Challenges of lecturers in the use of institutional repositories in university libraries in the South East, Nigeria.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/3801

Nwalo, K. I. (2020). Enhancing user-friendly depository culture in institutional repositories: A case study.African Journal of Library, Archives and Information Science, 30(1), 33–42.

Nwankwo, O. (2024). Institutional repositories and research productivity in Nigerian universities: A South East Nigeria perspective. *African Journal of Library, Archives and Information Science*, 30(1), 33–42.

Nyambe, M. W., & Omeluzor, S. U. (2019). Institutional digital repository: From policy to practice in Nigeria. *Library Philosophy and Practice*. https://digitalcommons.unl.edu/libphilprac/

Obaro, G. O., & Arumuru, L. (2024). An investigation into institutional repository policies and practices in Nigerian university libraries.Informology, 3(2), 73–100.

Okiki, P. S., Osedo, E. E., & Okpah, G. E. (2020). Awareness and use of institutional repositories by lecturers at the University of Lagos.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/

Okpara, U., Nwonye, F., & Ezeani, I. (2023). Academic staff usage of institutional repositories in South East Nigerian federal universities.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/

Okumu, O. D. (2015). Adoption of institutional repositories in dissemination of scholarly information in universities in Kenya, with reference to the United States.University of

Nairobi.

Oluwole, F. K., & Awodele, O. I. (2021). Institutional repository and open access in Nigerian university libraries. *Library Philosophy and Practice*. https://digitalcommons.unl.edu/libphilprac/

Omeluzor, S. U. (2014). Institutional repositories (IR) awareness and willingness of faculty staff to deposit research work: A study of faculty staff in selected public and private universities in Nigeria. *Open Access Library Journal*, 1. https://doi.org/10.4236/oalib.1101139

Onwuka, E., & Anyanwu, J. (2018). Building a depository culture in Nigerian universities.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/

Orsu, R. U. (2019). Utilization of open access repositories for visibility of academic publications by lecturers in South-East Nigeria.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/

Posigha, B. E., & Idjai, C. R. (2022). Awareness and use of institutional repositories by postgraduate students in Nigerian federal universities.International Journal of Library and Information Science, 14(2), 25–37.

Ranganathan, S. R. (1931). *The five laws of library science.Madras Library Association.*

Sambo, A. S., Okonoko, V. N., & Akanbi, M. (2022). Challenges and strategies to the use of institutional repository among academic staff in university libraries in South-West Nigeria. https://uilspace.unilorin.edu.ng/handle/123456789/13666

Saunders, M., Lewis, P., & Thornhill, A. (2003). *Research methods for business students (3rd ed.).* Prentice Hall.

Singeh, F., Abrizah, A., & Karim, N. H. A. (2013). Institutional repositories for higher educational institutions: A review of challenges and opportunities. *Procedia - Social and Behavioral Sciences*, 103, 1178–1185.

Suber, P. (2012). *Open access.* MIT Press.

Tertiary Education Trust Fund. (2021). Annual report.Tertiary Education Trust Fund.

Tiemo, P. A., & Ebiagbe, J. E. (2016). Awareness and attitude of lecturers toward the establishment of institutional repository in Niger Delta University, Nigeria.International Journal of Library and Information Science, 8(3), 37–45.

Uba, A., & Okonkwo, P. (2021). Global visibility through institutional repositories: Challenges and strategies for local content resources in South-East Nigerian tertiary institutions. *International Journal of Digital Libraries*, 22(3), 321–338.

Ukwoma, S. C., & Ngulube, P. (2019). Obstacles to the utilization of institutional repositories by academics in higher education in Nigeria.Webology, 16(1), 138–150.

Ukwoma, S. C., Osadebe, P., & Dim, N. N. (2019). Institutional repository development in Nigeria: Roles of academic libraries. *Library Philosophy and Practice*.

https://digitalcommons.unl.edu/libphilprac/

University of Houston Libraries. (2017a). Digital policy for digitized resources. https://guides.lib.uh.edu/roar/uhir-guidelines-and-policies

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management Science*, 46(2), 186–204.

Vereijken, C. M., Visser-Wijnveen, G. J., & De Jong, A. (2016). Measuring research integration in higher education: Development and validation of student and lecturer questionnaires.Studies in Higher Education, 41(3), 504–518.

Waithaka, R., & Onyancha, O. B. (2021). Enhancing awareness and use of institutional repositories among academic staff in Kenya.Library Philosophy and Practice. https://digitalcommons.unl.edu/libphilprac/

Whitley, R. (2000). *The intellectual and social organization of the sciences (2nd ed.).* Oxford University Press.

Yamane, T. (1967). *Statistics: An introductory analysis (2nd ed.).* Harper & Row.