

Full Length Research

Institutional Repository Policies in University Libraries in Africa. A Survey

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The purpose of the study is to investigate the availability of institutional repository policies in university libraries in Africa. The study adopted IRs investigation method to collect data on IR policies from 75 IRs in three African countries. They are the countries with the highest IRs namely South Africa, Kenya, and Nigeria. The IRs visited revealed that only few institutional repositories among the 75 IRs in the three countries have IR policy statements. The study also revealed that South Africa has the highest country with IR policy statements, compared to Kenya and Nigeria. The findings of the study will provide important data and insight into the development of institutional repositories in university libraries in Africa, and generate suggestions for University Librarians, University management and policy makers for developing institutional repositories in Africa. The study reported availability of institutional repository policies in university libraries in Africa. The findings from the study will guide other university libraries in developing countries that have not developed IR in formulate IR policies.

Keywords: Institutional repositories, policies, university libraries, developing countries, Africa.

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INTRODUCTION

A recent emerging trend in academic libraries is the implementation of institutional repositories (IRs). Universities as institutions of higher learning place emphasis on research as one of their core functions apart from teaching and community services. An institutional repository could thus be viewed as a digital archive that provides the platform where the universities can archive their intellectual output. According to Lynch (2003, p.327)

a university-based institutional repository is a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members. It is most essentially an organizational commitment to the stewardship of these digital materials, including long-term preservation where appropriate, as well as organization and access or distribution.

Institutional repository has the potential of increasing the visibility, prestige, ranking and public value of researchers and universities (Anenene, Alegbeleye & Oyewole, 2017). Just few years ago, universities in Africa started developing institutional repositories to showcase their institutional resources, thereby increasing their visibility and better

performance in the ongoing web ranking of world universities in particular. For example, In the Centre for World University Ranking (CWUR), 2021-2022 rankings of the top 2000 universities, it is sad to note that only 15 universities from Africa made the list of the top 1000. Among the 15 Africa universities that made the list, seven are from South Africa (University of Cape Town – 269th position; University of Witwatersrand – 292nd position; Stellenbosch University – 435th position; University of KwaZulu-Natal – 483rd position; University of Pretoria – 580th position; University of Johannesburg – 676th position; and North-West University – 924th position), five universities are from Egypt (Cairo University – 546th position; Ain Shams University – 797th position; Mansoura University – 984th position; and Alexandria University – 999th position), one each from Morocco (Mahammad V. University – 946th position), Uganda (Makerere University – 934th position), and Tunisia (Tunis El Manar University – 952nd position) (CWUR, 2022). CWUR's rankings grade universities on seven factors. They are: quality of teaching, alumni employment, quality of faculty, research output, quality publications, influence, and citations. The methodology has been enhanced this year, with research now accounting for 70 per cent of the score (CWUR, 2022). This ranking together with the other factors is based on a visible institutional repository.

In many African countries, the development of institutional repositories have faced serious problems ranging from low Internet connectivity; software and hardware challenges; lack of highly skilled personnel; inadequate power supply; low bandwidth; legal copyright laws; poor funding; lack of organizational infrastructure and policies; project sustainability and many others (Ezeani & Ezema, 2011; Oguiche, 2018; Mutsunguma, 2019). Salau et al (2019) investigated the performance of electronic theses and dissertations (ETD) initiatives in the repositories of federal government-owned universities due to the poor global visibility of ETDs from Nigeria. The authors found that the ETD initiatives in repositories of Nigerian federal universities have not made remarkable progress as digital libraries based on policy, content and system architecture. The repositories housing the ETDs are also not compliant with the open archive initiative-protocol for metadata harvesting framework.

Despite the potential benefits associated with the use of institutional repositories (IRs) by universities, studies have shown that most universities in Africa have not keyed into this laudable innovation (Anenene, Alegbeleye & Oyewole, 2017; Oguiche, 2018; Bangani, 2018; Mutsunguma, 2019; Anene, Ozor, and Baro, 2020). This could be as a result of some factors like low level of awareness and unfavorable perception of IRs on the part of the management of universities, coupled with lack of fund, and lack of policy statements on submissions and restrictions, issues of copyright and preservation. It also appears that the daily research outputs from universities such as research papers, theses and dissertations, projects, and other valuable library information resources are not widely communicated to users and researchers all over the world. Therefore, a well-articulated institutional repository policy to develop IRs is the answer to research visibility and accessibility. In Nigeria, research outputs in form of theses and dissertations are completely buried in individual university libraries to the extent that it is only very few researchers in the university community that are aware of the existence of these materials (Ezema & Ugwu, 2013; Sadiku, Kpakiko & Tsafe 2018). For research outputs emanating from African universities to be visible, it has become imperative for university libraries in Africa to embark on formulation of policies regarding the development of institutional repositories to serve as a platform for the visibility of research outputs from the universities.

It is essential to note that quite a number of studies on IRs have been conducted in Africa and they are mostly related to electronic theses and dissertations, challenges to institutional repositories, digital preservation, etc. The existing literature shows that little is been said on institutional repositories policy development in African universities. The current study aims to fill the gap. Therefore, the present study is set to investigate availability of policy statements regarding institutional repository development in African Universities.

Research Questions

RQ1. Is there any access policy available in the IRs in Africa?

RQ2. Is there any submission policy available in the IRs in Africa?

RQ3. Is there any content policy available in the IRs in Africa?

RQ4. Is there any preservation policy to guide long-term or short-term preservation of content in the IR?

RQ5. Is there any copyright policy available in the IRs in Africa?

Literature review

The need for institutional repository

When digitized or born-digital materials are put on the web, they tend to increase the library's visibility as the users all

over the world access the materials. One major challenge of African scholarship is poor visibility of research findings coming out of the continent (Sadiku, Kpakiko & Tsafe, 2018; Mutsvunguma, 2019). Baro and Otiode (2014); Mutsvunguma, (2019) have reported the poor visibility of African scholarship thereby giving low impact to published works and other valuable information resources coming out from the continent. The fruits of research from the formal research programs of conventional universities and academic research institutions in African universities are under-utilized as the access to the theses and dissertations is very limited to users outside the university (Ezeani & Ezema, 2011; Baro & Otiode, 2014).

The IRs could contain theses, dissertations, projects, course notes, seminar papers, conference proceedings, administrative documents, learning objects and other forms of grey literature. One key criterion that is used to measure the quality of a university is the quality and quantity of research output (Anenene, Alegbeleye & Oyewole, 2017). The situation where the totality of the research output emanating from a particular university cannot be ascertained will make it very difficult to evaluate the university output and could also impede the collation and onward transmission of the researches that can benefit different segments of the society to the parties concerned. This reveals the need for the establishment of institutional repository policies such as submission policy, digital preservation policy, and copyright policy formulated to guide the development of IRs. Omeluzor (2014) stated that both institutions and contributors benefit from IR. Institutions benefit from IR as it; serves as tangible indicator of an institution's quality, thus increasing its visibility, prestige, and public value; increases the ranking of an institution both at local and international level; enhances learning, online teaching and research especially in universities; and presents an institution's intellectual capital to a whole lot of scholars.

Policy statements concerning IRs

With IR content growing rapidly, it is important to look at how policies have been developed to guide the issues like content submission, type of materials to be added to the institutional repository, digital preservation, access, and copyright issues. The study by Ukwoma and Ngulube (2019) identified the existence of an IR policy to serve as a guide to collection and submission of publications, continuity and sustainability of the IR project as one of the strategies employed to avoid must challenges faced in implementing institutional repositories. In United States, the Harvard University in its IR policy states that "Harvard University is committed to making its websites accessible. In accordance with this commitment, and with the knowledge that accessible digital content generally enhance usability for everyone, this policy is established to improve the user experience for those with disabilities" (<https://osc.hul.harvard.edu/policies>). At the Harvard University IR, there is also use of information policy which states – "we may also provide third parties, such as other repositories with information about the use of site content that is associated with the IP address of the user".

Submission policy

As to how content is deposited in the IR, the study by Li and Banach (2011) asked about three methods: author self-archiving, by third party on behalf of the author, and by repository staff. The study by Li and Banach (2011) revealed that content is deposited in the IR by using all three methods in 92 percent of the surveyed institutions.

Type of content to be added to the IR

In so many IRs, there are collection policies put in place to guide what content is to be submitted to the IR. The study by Li and Banach (2011) on 80 Association of Research Libraries (ARL) member institutions in the United States revealed that collection policies mostly include selection criteria (such as the nature and type of the materials that can be submitted), recommended file formats, and procedures such as withdrawal, access, and preservation). A wide variety of content may be included in the institutional repositories for the multiplicity of purposes and users depending on the policy. Though some repositories may contain materials that are not scholarly in nature depending on the policy, the main trust of IR is to preserve and make accessible the scholarly publications of an institution. Singeh, Abrizah and Karim (2013) reported that for repositories to be successful and sustainable, they must be populated with scholarly works of enduring value.

Preservation policy

Developing preservation policies ought to be the first step toward guaranteeing preservation actions. The strategies for preserving IR content and the decisions about what content requires short, medium, or long term preservation should be driven by preservation policies. To be able to manage collections effectively and to design and select the appropriate long-term digital preservation solution, there must be an appropriate policy framework in place; this framework should include policies concerned with the preservation of the objects within the collection (Bunakov, et al. (2014). At the Harvard University, there is also IR policy on security of information which states – “This site has security measures in place to help protect against the loss, misuse and alteration of the information under our control”(<https://osc.hul.harvard.edu/policies>).

Copyright issues.

The principle of fair use recognizes the lawful use of copyrighted work without deeming it an infringement, notwithstanding that the copyright holder has not authorized the use (Chuma-Okoro, 2010). Repositories require that legal issues bordering on copyright be cleared. Acquiring the rights from content contributors and copyright holders to distribute the content freely is an integral part of collecting content.

METHODOLOGY

The study adopted IRs site investigation method. Data collection for the study was in two parts: First, OpenDOAR database (www.open_doar.org/) was searched to identify university libraries in three countries with the highest number of IRs in Africa and are listed in the database. The three selected countries are Kenya with 34 IRs, South Africa with 22 IRs, and Nigeria with 19 IRs. In total, 75 institutional repositories from the three countries in Africa were investigated. Secondly, each institutional repository in the various universities were searched to collect data on policy statements related to institutional repository. This will enable us know the type of policy statements formulated to guide the development of IR in those universities.

Data collection started in October 2021 and ended February, 2022. Data was analyzed using simple checklist on availability of the IR policies and example of some of the IR policy statements also added in the discussion section. Results are presented in tables.

Results and discussions

The OpenDoar database investigation of the three countries with the highest number of IRs revealed Kenya with 34 IRs, followed by South Africa with 22 IRs, and Nigeria with 19 IRs (OpenDOAR, 2022). The three countries were selected for to be used in this study because they have the highest number of IRs in the African continent.

In total, 75 IRs were identified and investigated further for availability of IR policies in the three countries. Details of the results are presented as Appendix I.

Access policy available in some of the IRs

Out of the 75 IRs investigated in the three African countries, only 17 (22.7%) IRs have defined policy on Access. At the Federal University of Technology, Akure, Nigeria, the access policy states that *records for theses and dissertations held in the institutional repository will be made available on the computer catalogue to the full text of the theses. Only abstract of theses and dissertations are uploaded. Users are to refer to the Unit of Host for original.* At the Covenant university, Ota, Nigeria, the access policy states that - *Anyone may access full items free of charge. Copies of full items generally can be: reproduced, displayed or performed, and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge.*

In South Africa, Cape Peninsula University of Technology, has access policy that reads - *In recognition of the global movements Open Science, Open Data and Open Access focused on promoting unlimited access to research outputs in all domains and digital formats in pursuit of the advancement of science, knowledge creation and dissemination and preservation, this policy intends to make published research generated by Cape Peninsula University of Technology more accessible and visible through institutional repositories hosted by the library.* At the University of Cape Town,

South Africa, the access policy in the IR states that - *In pursuit of this philosophy of sharing knowledge, the Vice-Chancellor formally signed The Berlin Declaration on Open Access to the Sciences and Humanities on 1 November 2011. This declaration commits UCT to following and promoting an open access approach with regard to scholarly communication and education. This policy provides the basis for the University to preserve the scholarly work of UCT scholars and to make this scholarship discoverable, visible and freely available online to anyone who seeks it.* At the University of Pretoria, South Africa, the access policy states that -*The University of Pretoria supports free access to research literature for all researchers worldwide and takes responsibility for the dissemination of its own research outputs.* At the University of the Free States, South Africa, the access policy that – *Kovsie Scholar is the University of the Free State's open access repository for published research articles and completed theses and dissertations by UFS researchers and students.*

In Kenya, University of Embu stated in their IR access policy that - *the University will archive the intellectual products created by faculties, research staff, conferences and students of the University. These materials will be made accessible to users both within and outside the institution through the University website.* At the Kenyatta university, Kenya, the open access policy states that – *Kenyatta University shall disseminate the output of its research and scholarship globally through its institutional repository under the Creative Commons license.*

Submission policy available in some of the IRs

Out of the 75 IRs investigated in the three African countries, only 15 (20.0%) IRs have defined submission policy. In Nigeria, the Covenant University IR submission policy states that - *items may only be deposited by accredited members of the institution, or their delegated agents. Authors may only submit their own work for archiving. Eligible depositors must deposit full texts of all their publications, although they may delay making them publicly visible to comply with publishers' embargos. The validity and authenticity of the content of submissions is the sole responsibility of the depositor. Items can be deposited at any time, but will not be made publicly visible until any publishers' or funders' embargo period has expired.* At the Ahmadu Bello University, Zaria, Nigeria, the submission policy reads - *University document may be deposited by only accredited members of Ahmadu Bello University, Zaria or their delegated agents. Authors may submit their own work for archiving.*

In South Africa, the University of Cape Town (UCT) IR submission policy states that – *A student shall through self-submission upload the final corrected version of the thesis or dissertation into the University's PeopleSoft system prior to graduation, for final migration into the officially designated Institutional Repository (Open UCT). It is mandatory that authors deposit an appropriate version1 of Scholarly Publications into Open UCT. Authors who are obliged by grant funding conditions MUST ensure that the appropriate version of the scholarly publication is deposited into Open UCT. Where an author voluntarily deposits a Scholarly Publication to which open access is restricted by virtue of a publisher agreement, the author will be deemed when doing so to grant UCT a royalty-free, non-exclusive, non-commercial, worldwide licensee to publish this in a UCT Institutional Repository.* At University of the Free State, South Africa, the submission policy reads - *The University of the Free State policy on Masters and Doctoral Studies requires that the required number of copies of the thesis or dissertation be submitted to the Student Academic Services Department. In addition, each student must submit an electronic copy of the thesis or dissertation to the Library and the faculty.* At the Cape Peninsula University of Technology (CPUT), South Africa institutional repository, the submission policy states that - *Uploading can only be done by a library employee of CPUT who is an Institutional Repository specialist and has knowledge of metadata. Only in the case of research data sets is the author permitted to make their own submission, which will go through a review process to certify the quality of the metadata before it is made public.* At University of Pretoria, South Africa, the IR submission policy reads - *each student should submit paper and electronic copies of his/her thesis/dissertation to the Postgraduate Office of the relevant faculty.*

In Kenya, the Masinde Muliro University of Science and Technology (MMUST) IR submission policy states - *Items may only be deposited by accredited members, academic staff, registered students, and employees of the institution, or their delegated agents. Authors may only submit their own work for archiving. Each Faculty member shall provide an electronic copy of the final version of his/her scholarly work at no charge to the Library in an appropriate format (Such as PDF) not later than the date of its publication.* At the Kenyatta University, Kenya, part of the submission policy reads - *All depositors shall agree to a Kenyatta University, Kenya Deposit Agreement contained in the IR Policy.*

Content policy available in some of the IRs

Results in table 1 revealed that only 13 (17.3%) out of the 75 IRs have defined policy statement on type of content to collected. This shows that majority of the IRs do not have defined content policy. This finding agrees with findings of period studies in other regions. For example, the study by Gul, Bashir and Ganaie, (2020) reported that the content

management policies for the majority of the repositories is poor as all the policies score low in IRs of the South Asian region. Similarly, Abrizah, Noorhidawati and Kiran (2010) have studied the content management policies of Open Access Repositories in Asian universities and found that a huge score of the repositories have an “undefined” policy for content submission and preservation with a meager score of repositories having a defined “recorded content policy,” “recorded submission policy” and “recorded preservation policy.” “Recorded metadata re-use policy” and “recorded full-text data re-use policy” is also reflected in a low score of repositories. Ahmed, Alreyaee and Rahman (2014) have also reported that the majority of the repositories in Asian have an undefined policy for content submission and preservation. Ahmed, Alreyaee and Rahman (2014) found that a small percentage of ETD repositories had defined recorded content policies, recorded submission policies, and recorded preservation policies. Elahi and Mezbah-ul-Islam (2018) have also witnessed a weaker status of open access repositories in Bangladesh in terms of content management policies.

In the present study, Ahmadu Bello University, Zaria IR content policy states that *the Ahmadu Bello University, Zaria Institutional Digital Repository shall hold Theses/Dissertation etc. of postgraduate students of ABU, Zaria university community members’ publications including refereed research article at the pre-print and post-print stage of publications, Grey literature, including special collections, Conference Proceedings and seminar papers.* At the Covenant University, Ota, Nigeria, the IR content policy states that – *the University holds all types of materials. Deposited items may include: working drafts; submitted versions (as sent to journals for peer-review) accepted versions (author’s final peer-reviewed drafts); published versions (publisher-created files).*

In Kenya, Masinde Muliro University of Science and Technology (MMUST), in its IR content policy states that - *The repository shall accept submissions of the following types of materials: journal articles; theses and dissertations; learning objects (past papers, lecture notes and presentations); conference and workshop proceedings; books and book chapters; technical reports, commissioned reports, and other un-refereed research outputs; newsletters of significant research groups; Other materials produced by academic/research staff and students and approved by Deputy Vice Chancellor (Planning, Research and Innovation), Directors of Schools/Deans of Faculties or Heads of Departments.* At the ST. Paul University, Kenya, the content policy states that *faculty, students and staff’s scholarly and creative collection are: published peer-review literature; creative works; unpublished scholarly and creatives works; classroom resources; journal articles; conference proceedings, symposia, public lectures; and patents.* At the University of Embu, Kenya the content policy states that -*The following types of materials shall be accepted into the Repository: theses and dissertations/research projects; scholarly research articles (published peer reviewed and pre-prints); open lectures; conference/workshop proceedings; books, monographs, chapters; image collections (paintings, pictures, drawings, illustrations, etc.); audio and audio-visual materials; technical reports and working papers; inaugural lectures, distinguished lectures, speeches; admissions lists; graduation lists; University policies; events programmes; valedictory presentations; University calendars; University magazines; forms; newsletters; and literary publications.*

In South Africa, The University of Pretoria (UP) in its policy on type of contents to be submitted includes - *produced, submitted and sponsored by UP Community, scholarly or research orientated works, and complete and ready for publication works.* In the policy, contents not to be submitted includes: *material of controversial nature, discriminatory nature; administrative; commercial; no relevant full text attached; temporary learning objects; full text digital articles and images of temporary nature, e.g. Reserved material (Millenium); and discussion material on web (Wiki or Blog).* At the Cape Peninsula University of Technology, South Africa, the content policy states that *the IR holds all research outputs produced by employees and students of the University. The policy does not cover University administrative records.* At the University of Cape Town, South Africa, the IR content policy states that - *The institutional repository (Open UCT) collects digital copies of scholarly articles, essays, books, peer reviewed conference papers, reports (where permitted by a funder of the research leading to the report), educational resources, scholarly multi-media material, audio-visual works and digital representations of pictorial and graphical materials.*

Preservation policy available in some of the IRs

Results on preservation policy available in the IRs revealed that only 14 (18.7%) out of the 75 IRs have defined preservation policy. This shows that majority of the IRs do not have defined preservation policy. This finding agrees with the findings of Roy, Biswas and Mukhopadhyay (2013) that content management policies are prominent in Indian open access institutional repositories with a weaker status in terms of preservation policies. Interestingly, Bhat (2009) evaluated the content management policies, preservation policies, and rights management policies in Open Access Repositories in the field of Computer Science and IT and found that majority of the repositories have a “collection policy” for the selection of content; well defined “submission policy” and “preservation policy.”

At the Covenant University, Ota, Nigeria, the preservation policy states that -*Items will be retained indefinitely. Covenant University Repository will try to ensure continued readability and accessibility. Items will be migrated to new file formats where necessary.* At the Ahmadu Bello University, Zaria, Nigeria the preservation policy states that –

Document shall be retained indefinitely. The Repository shall endeavor to ensure continued readability and accessibility through: Migrated to new file formats where necessary; Where possible, provision of software emulations shall be provided to access un-migrated formats.

In South Africa, Cape Peninsula University of Technology (CPUT) IR preservation policy states that - *As a signatory to the Berlin Declaration on Open Access to the Sciences and Humanities, CPUT affirms its role in the global community by contributing to the creation and preservation of knowledge and its wide distribution on open platforms without any restrictions on discoverability and visibility.* At the University of Pretoria, South Africa, the IR preservation policy reads - *mechanisms exist for the long-term preservation of UP theses and dissertations.* At the University of Cape Town, South Africa, the IR preservation policy states that - *The University of Cape Town will preserve the work of UCT Authors and maintain open dissemination, maximize visibility and discoverability through long term, robust and scalable digital platforms and services of the highest standards.*

In Kenya, The Masinde Muliro University of Science and Technology (MMUST) IR preservation policy states that - *Items will be retained within MMUST digital repository indefinitely; MMUST will endeavour to provide continued readability and accessibility of all items deposited in the repository.* At the ST. Paul University, Kenya, the preservation policy states that - *the university library shall endeavor to preserve and provide constant access to ST. Paul University IR by migrating it to new technological platforms when and if the obsolescence of current technologies makes it necessary to do so.*

Copyright policy available in some of the IRs

Out of the 75 IRs investigated, only 14 (18.7%) IRs have clearly defined copyright policy statement. This is an indication that, most of the IRs in these Nigeria, South Africa and Kenya have undefined copyright policy. Some copyright policy statements in the IRs in Africa are as follows: In Nigeria, Ahmadu Bello University, Zaria IR copyright policy states that - *The author/owner shall grant Ahmadu Bello University the right to preserve and distribute the work via the Repository. Copyright in a work created in the normal course of employment belongs to Ahmadu Bello University unless there is an agreement which states otherwise.* At Covenant University, Ota, Nigeria, The IR copyright policy starts that - *Items can be deposited at any time, but will not be made publicly visible until any publishers' or funders' embargo period has expired. Any copyright violations are entirely the responsibility of the authors/depositors. If Covenant University Repository receives proof of copyright violation, the relevant item will be removed immediately.*

In South Africa, University of Cape Town in its IR policy states that- *In line with the provisions of the Intellectual Property Policy and institutional student rules, UCT is granted a right to publish student research theses (doctoral degrees) or dissertations (master's degrees). In terms of the Intellectual Property Policy, the copyright in Scholarly Publication is automatically assigned to the author(s) unless UCT has assigned ownership to a third party in terms of a research contract.* At the University of Pretoria, South Africa, the IR copyright policy states that - *The University of Pretoria is the copyright holder of all its theses and dissertations. A request for copyright to be ceded to the student can be made after graduation.*

In Kenya, ST. Paul University in its IR copyright policy states that - *Authors will retain copyright for the materials they add to the IR. They are responsible for obtaining copyright permission for any published material they submit. The university will have partial claim on copyright for theses/research supervised by its appointed lecturers and/or theses/research work it has funded.* At the Kenyatta University, Kenya, the IR copyright policy states that - *Each University member shall grant to the Kenyatta University permission, upon submission to the IR, to make available his or her scholarly works. The University shall be granted a nonexclusive, irrevocable, worldwide license to exercise all rights under copyright relating to each authors' scholarly works, and to authorize others to do the same, provided that the scholarly works are not sold for a profit.* At the Masinde Muliro University of Science and Technology (MMUST) Kenya, the IR copyright policy states that - *Each University member shall grant to MMUST permission to make available his or her scholarly works and to exercise the copyright in these works. More specifically, each faculty member grants to the University a non-exclusive, irrevocable, worldwide license to exercise any and all rights under copyright relating to each of his or her scholarly works, in any medium, and to authorize others to do the same, provided that these works are not sold for a profit.*

Table 1. A cross –tabulation of number of IRs in each country with number of IRs with policies.

Country	No of IRs in the country	No. of IRs with policies	%
South Africa	22	10	45.5%
Nigeria	19	4	21.1
Kenya	34	4	11.8
Total	75	18	24.0%

Results in table 1 revealed that only 18 (24.0%) IRs have policy areas such as access policy, submission policy, content policy, preservation policy, and copyright policy out of the 75 IRs studied. South Africa has 10 (45.5%) IRs with defined IR policies out of the 22 IRs been the highest among the three countries. While, Nigeria with 4 (21.1%) out of 19 IRs and Kenya also with 4 (11.8%) IRs out of 34 IRs with defined IR policies. The results show that majority of the IRs in the three countries lack IR policies. This indicates that IRs are developed without formulating policies to guide the collection and management of contents in the IRs. Majority of the IRs visited has no clear IR policy statements, rather, all the Universities with no clear IR policies only have a general statement of the institutional repository providing open access to contents. While in some of the IRs visited, a separate IR document is uploaded for users to see. In that document, policy statements are made on the different areas such as access policy, submission policy, content policy, preservation policy, and copyright policy. The study by Gul, Bashir and Ganaie, (2020) revealed that submission policy holds weak in IRs of the South Asian region as only 14 (20%) repositories have defined their submission policies while as a huge score (56; 80%) of the repositories have not defined their submission policies. Ukwoma and Ngulube (2019) concluded that having IR policy is one of the means of implementing IRs.

CONCLUSION

The IRs visited revealed that only few institutional repositories among the 75 IRs in the three countries namely Kenya, South Africa and Nigeria has IR policy statements. The study also revealed that South Africa has the highest IRs with policy statements compared to Kenya and Nigeria. IR policy provides guideline for the management of IRs. The first step in launching IRs is to set up policies regarding the content, the self-archiving procedure and digital preservation of the institutional output. Therefore, the administrators need to look into the issue of having a defined access policy, submission policy, content management policy, preservation policy, and copyright policy seriously so that IR content creation and management will have a well-defined outlook.

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APPENDIX I

Table 1. Availability of institutional repository policies in institutional repositories in Africa.

s/n	Universities	Country	Access policy	Submission policy	Content policy	Preservation policy	Copyright issues.	IR Address
1	Central University of Technology, Free State.	South Africa.	X	X	X	X	X	http://ir.cut.ac.za/
2	Cape Peninsula University of Technology	South Africa.	√	√	√	√	√	http://etd.cput.ac.za/ http://digitalknowledge.cput.ac.za/xmlui
3	Nelson Mandela Metropolitan University	South Africa.	X	X	X	X	X	http://vital.seals.ac.za:8080/vital/access/manager/Index
4	North-West University	South Africa.	√	X	√	√	X	https://repository.nwu.ac.za https://dspace.nwu.ac.za/
5	Rhodes University	South Africa.	X	X	X	X	X	http://vital.seals.ac.za:8080/vital/access/manager/Index http://commons.ru.ac.za/
6	Stellenbosch University	South Africa.	X	X	X	X	X	http://scholar.sun.ac.za/ http://digital.lib.sun.ac.za/
7	Tshwane University of Technology	South Africa.	X	X	√	X	X	http://tutvital.tut.ac.za:8080/vital/access/manager/index
8	University of Cape Town	South Africa.	√	√	√	√	√	http://open.uct.ac.za/ http://pubs.cs.uct.ac.za/
9	University of Fort Hare	South Africa.	X	X	X	X	X	http://ufh.netd.ac.za/
10	University of Johannesburg (UJ)	South Africa	√	√	X	X	√	http://etd.rau.ac.za/ https://ujdigispace.uj.ac.za/ https://ujcontent.uj.ac.za/vital/access/manager/Index
11	University of KwaZulu-Natal (UKZN)	South Africa	X	X	X	X	X	http://researchspace.ukzn.ac.za/jspui/
12	University of Limpopo	South Africa.	X	X	X	X	X	http://ul.netd.ac.za/ http://ulspace.ul.ac.za
13	University of Pretoria (UP)	South Africa	√	√	√	√	√	http://repository.up.ac.za/
14	University of South Africa (UNISA)	South Africa	√	√	X	√	√	http://uir.unisa.ac.za/
15	University of the Free State	South Africa	√	√	√	√	√	http://scholar.ufs.ac.za/ http://etd.uovs.ac.za/
16	University of the Western Cape	South Africa	√	√	X	√	X	http://etd.uwc.ac.za/xmlui/ http://repository.uwc.ac.za/xmlui/
17	University of the Witwatersrand, Johannesburg	South Africa	√	√	X	√	√	http://wiredspace.wits.ac.za/
18	University of Zululand	South Africa	X	X	X	X	X	http://vital.seals.ac.za:8080/vital/access/manager/Index
19	Vaal University of Technology	South Africa	X	X	X	X	X	http://vut.netd.ac.za/

20	Durban University of Technology, SA.	South Africa	X	X	X	X	X	http://ir.dut.ac.za/ http://openscholar.dut.ac.za
21	Walter Sisulu University	South Africa	X	X	X	X	X	http://vital.seals.ac.za:8080/vital/access/manager/Index
22	University of Venda	South Africa	X	X	X	X	X	http://univendspace.univen.ac.za/
23	Ahmadu Bello University, Zaria.	Nigeria	√	√	√	√	√	http://kubanni.abu.edu.ng/jspui/
24	AfeBabalola University	Nigeria	X	X	X	X	X	http://eprints.abuad.edu.ng/
25	Covenant University, Ota	Nigeria	√	√	√	√	√	http://eprints.covenantuniversity.edu.ng/
26	Federal University Ndufu Alike-Ikwo	Nigeria	X	X	X	X	X	http://dspace.funai.edu.ng/
27	Elizade University.	Nigeria	X	X	X	X	X	http://repository.elizadeuniversity.edu.ng
28	Ebonyi State University	Nigeria	X	X	X	X	X	http://ir.ebsu.edu.ng:8080/
29	Federal University Dutsin-ma	Nigeria	X	X	X	X	X	http://dspace.fudutsinma.edu.ng/jspui/
30	Federal University Lokoja	Nigeria	X	X	X	X	X	http://repository.fulokoja.edu.ng/
31	Federal University OyeEkiti	Nigeria	X	X	X	X	X	http://www.repository.fuoye.edu.ng/
32	Federal University of Technology, Minna	Nigeria	X	X	X	X	X	http://dspace.futminna.edu.ng/jspui/
33	Federal University of Technology, Akure	Nigeria	√	X	√	X	√	http://dspace.futa.edu.ng:8080/jspui/
34	Landmark University	Nigeria	√	√	√	√	√	http://eprints.lmu.edu.ng/
35	University of Ibadan	Nigeria	X	X	X	X	X	http://ir.library.ui.edu.ng/
36	University of Ilorin	Nigeria	X	X	X	X	X	http://uilspace.unilorin.edu.ng:8081/jspui
37	University of Jos	Nigeria	X	X	X	X	X	http://irepos.unijos.edu.ng/jspui
38	University of Lagos	Nigeria	X	X	X	X	X	https://ir.unilag.edu.ng/
39	University of Nigeria Nsukka	Nigeria	X	X	X	X	X	http://www.repository.unn.edu.ng
40	Ambrose Alli University Ekpoma	Nigeria	X	X	X	X	X	http://154.68.224.61:8080
41	American University of Nigeria (AUN)	Nigeria	X	X	X	X	X	http://digitallibrary.aun.edu.ng:8080/xmlui/
42	Chuka University, Kenya	Kenya	X	X	X	X	X	http://repository.chuka.ac.ke
43	DedanKimathi University of Technology, Kenya	Kenya	X	X	X	X	X	http://repository.dkut.ac.ke:8080/xmlui/
44	Egerton University, Kenya	Kenya	X	X	X	X	X	http://ir-library.egerton.ac.ke/
45	Embu University, Kenya	Kenya	√	√	√	√	X	http://repository.embuni.ac.ke/
46	Jomo Kenyatta University of Agriculture and Technology(JKUAT)	Kenya	X	X	X	X	X	http://ir.jkuat.ac.ke/
47	JaramogiOgingaOdinga University of Science and Technology, Bondo (JOOUST)	Kenya	X	X	X	X	X	http://ir.jooust.ac.ke

48	Kabarak University, Kenya	Kenya	X	X	X	X	X	http://ir.kabarak.ac.ke
49	KCA University, Kenya	Kenya	X	X	X	X	X	http://41.89.49.13:8080/xmlui/
50	Karatina University, Kenya	Kenya	X	X	X	X	X	https://karospace.karu.ac.ke/
51	Kenya Methodist University	Kenya	X	X	X	X	X	http://repository.kemu.ac.ke:8080/xmlui
52	Kenyatta University	Kenya	√	√	X	X	√	http://ir-library.ku.ac.ke/
53	Kibabii University	Kenya	X	X	X	X	X	https://erepository.kibu.ac.ke
54	Kisii University	Kenya	X	X	X	X	X	http://library.kisiiuniversity.ac.ke:8080/xmlui
55	Muranga University of Technology	Kenya	X	X	X	X	X	http://repository.mut.ac.ke:8080/xmlui/
56	Maasai Mara University	Kenya	X	X	X	X	X	http://mmarau.ac.ke:8080/xmlui/
57	Machakos University	Kenya	X	X	X	X	X	http://ir.mksu.ac.ke/
58	MasindeMuliro University of Science and Technology, Kenya	Kenya	√	√	√	√	√	http://ir-library.mmust.ac.ke/
59	Moi University	Kenya	X	X	X	X	X	http://ir.mu.ac.ke/
60	Mount Kenya University	Kenya	X	X	X	X	X	https://erepository.mku.ac.ke
61	Murang'a University of Technology	Kenya	X	X	X	X	X	http://repository.mut.ac.ke:8080/xmlui/
62	Pwani University	Kenya	X	X	X	X	X	http://elibrary.pu.ac.ke/ir/
63	Rongo University	Kenya	X	X	X	X	X	http://repository.rongovarsity.ac.ke
64	Strathmore University	Kenya	X	X	X	X	X	https://su-plus.strathmore.edu/
65	South Eastern Kenya University	Kenya	X	X	X	X	X	http://repository.seku.ac.ke/
66	St. Paul's University	Kenya	√	√	√	√	√	http://41.89.51.173:8080/xmlui/
67	Tangaza University College	Kenya	X	X	X	X	X	http://repository.tangaza.ac.ke:8080/xmlui/
68	South Eastern Kenya University	Kenya	X	X	X	X	X	http://repository.seku.ac.ke/
69	Technical University of Mombasa	Kenya	X	X	X	X	X	https://ir.tum.ac.ke
70	Catholic University of Eastern Africa	Kenya	X	X	X	X	X	http://ir.cuea.edu/jspui/
71	The Management University of Africa	Kenya	X	X	X	X	X	http://repository.mua.ac.ke
72	Technical University of Kenya	Kenya	X	X	X	X	X	http://repository.tukenya.ac.ke/
73	United States International University - Africa	Kenya	X	X	X	X	X	http://erepo.usiu.ac.ke/
74	University of Eldoret	Kenya	X	X	X	X	X	http://41.89.164.27:8080/xmlui
75	University of Nairobi	Kenya	X	X	X	X	X	http://erepository.uonbi.ac.ke