Awareness of institutional repository contents for academic productivity by faculty members in Federal University, Dutsin-Ma, Katsina State – Nigeria

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Abstract
This study examined the awareness of Institutional Repository Contents for Academic Productivity by Faculty Members in Federal University Dutsin-ma, Katsina State, Nigeria, in order to achieve this, two (2) objectives of the study were formulated. Quantitative research methodology was adopted and cross-sectional survey research design was used for the study. The population of this study comprised of all the one thousand four hundred and sixteen (1,416) academic staff of Federal University Dutsin-ma (FUDMA). Three hundred and nine (309) academic staff were used as a sample size using Krejcie and Morgan sample size determination Table. Self-developed questionnaire was used to collect data from the respondents. Descriptive statistics was used to present and analyse the data. The study found that, theses, dissertations, journal article, conference papers/proceedings, books, book chapters, seminar papers, creative works and educational resources (course materials and educational videos) were the Institutional Repository Contents with the high level of awareness among academic staff in FUDMA; it was also found that; increased visibility and accessibility of research outputs, long term preservation and archiving platform, global outreach and collaboration/knowledge sharing, efficient management of Institutional knowledge, and encourage qualitative outputs were the main benefits derived from utilizing Institutional Repository by faculty members of FUDMA. The study concluded that enhancing awareness of institutional repository contents is crucial for boosting academic productivity among faculty members at Federal University, Dutsin-Ma, Katsina State, Nigeria and recommended that; the Federal University Dutsin-ma (FUDMA) Library should engage in aggressive awareness campaign to promote the use of IR in the university.

Introduction

Institutional repositories (IRs) are digital archives maintained by academic institutions to capture, preserve, and disseminate the scholarly output of their community. One crucial category within these repositories is comprised of research articles, representing the intellectual contributions of faculty and researchers affiliated with the institution. These articles are often peer-reviewed and contribute significantly to the academic discourse (Chan et al., 2021). Institutional repositories (IRs) are foundational components within the academic institutions, providing a dedicated space for the archiving and dissemination of graduate-level academic documents that showcase original research conducted by students in partial fulfillment of their degree requirements (Jones, 2015). These repositories serve as organized archives managed by educational institutions, offering a centralized platform for storing a diverse range of scholarly outputs, including theses, dissertations, research papers, and other intellectual contributions.

The significance of IRs lies in their role as custodians of academic knowledge, contributing to the preservation of scholarly work and its accessibility to the wider academic community and beyond. Jones (2015) defines IRs as collections that house graduate-level academic documents, emphasizing their purpose in representing the culmination of students' academic endeavors. These documents not only serve as a testament to the scholarly achievements of individuals but also contribute valuable insights and knowledge to their respective academic fields. The scope of materials found in institutional repositories reflects the diversity of research conducted within an institution, creating a comprehensive repository of intellectual contributions. Institutional repositories serve as digital repositories that house a diverse range of scholarly content, with a primary focus on aggregating and preserving the intellectual output of an academic institution. Within these repositories, a prominent category of content comprises scholarly research articles authored by members of the institution, including faculty, researchers, and students. These articles encapsulate the culmination of rigorous academic inquiry, representing the institution's intellectual contributions to various fields of study.

Institutional repositories (IRs) offer numerous benefits for institutions, researchers, and the scholarly community as a whole. IRs provide a centralized platform where institutions can showcase and disseminate their scholarly work, including publications, datasets, theses, and conference papers. IRs enable researchers to reach a wider audience and increase the visibility and impact of their work (Pinfield et al., 2016). This increased visibility can lead to enhanced citations and collaboration opportunities. IRs serve as reliable platforms for long-term preservation and archiving of research outputs. Institutions can ensure the ongoing availability and accessibility of their research outputs by storing them in IRs, employing robust preservation tools and practices. This not only safeguards research outputs from loss or degradation but also ensures their continued availability for future generations (Pinfield et al., 2016).

Despite the benefits of institutional repositories, their adoption and utilization in many academic institutions, especially in developing countries like Nigeria, remain suboptimal. Faculty members

often face barriers such as limited awareness, inadequate training, and poor infrastructure, which hinder their ability to fully exploit the potential of IRs. In the case of Federal University, Dutsin-Ma, Katsina State, understanding the level of awareness and usage of IR contents among faculty members is critical to identifying gaps and challenges. This is particularly important in ensuring that the institution leverages its repository to enhance academic productivity, align with global trends in knowledge dissemination, and improve its research impact (Saini, 2018). The need to address these gaps has led to increased research on the awareness and usage of institutional repositories. This study focuses on assessing how well faculty members at Federal University, Dutsin-Ma, are aware of and engage with their institutional repository, examining its impact on their academic productivity. By identifying key factors influencing awareness and utilization, the study aims to provide actionable insights for the university to improve its IR system, promote a culture of digital scholarship, and empower faculty members to contribute meaningfully to academic and research advancements.

Objectives of the Study
The following are the objectives of the study:
1. To ascertain the level of awareness on Institutional repository contents for academic productivity by faculty members in Federal University, Dutsin-ma, Katsina State, Nigeria.
2. To find out the benefits that faculty members derive from utilizing Institutional repository in Federal University, Dutsin-ma, Katsina State, Nigeria

Literature Review

Extent of Awareness on Institutional Repository Contents for Academic Productivity

The extent of awareness regarding institutional repository contents significantly influences the academic productivity of academic and research institutions. Scholarly contributions housed in institutional repositories may go unnoticed if there is limited awareness among researchers, academics, and the broader global community. One of the primary considerations is the role of awareness in maximizing the impact of institutional repositories. As noted by Waters and Lucraft (2019), without adequate awareness, the valuable scholarly output stored in these repositories may not reach its full potential in terms of visibility and influence. Researchers and academics must be informed about the existence and richness of repository contents to utilize these resources for their work and contribute to the global academic conversation.

Raising awareness about institutional repository contents is a multifaceted endeavor. Institutions can implement strategies such as targeted marketing, outreach programs, and workshops to inform faculty, students, and the broader academic community about the wealth of resources available in their repositories (Crow, 2022). By doing so, institutions not only enhance the visibility of their own scholarly output but also contribute to the global dissemination of knowledge. Moreover, the academic productivity of institutional repository contents is closely tied to open access principles. Awareness campaigns should emphasize the accessibility and openness of these repositories, aligning with the broader movement toward open science. As noted by Swan and Brown (2023), open access enhances the global reach of scholarly works, fostering collaboration and knowledge exchange on a global scale. Institutions must communicate the inclusive nature of their repositories, encouraging researchers worldwide to access and cite these resources. In the digital

age, online platforms and social media play a crucial role in disseminating information. Institutions can harness the power of these tools to increase awareness about their repository contents. (Cummings, 2016). Utilizing these platforms enables institutions to reach a broader audience and foster a sense of community among researchers interested in the repository's contents.

However, despite the growing prevalence of IRs, the extent of awareness among researchers and academics regarding the contents and benefits of institutional repositories for academic productivity remains a significant concern. A study conducted by Chan et al (2019) found that a substantial number of researchers and academics were not fully aware of the existence and purpose of institutional repositories. Enhancing the extent of awareness on institutional repository contents is crucial because these platforms provide researchers with opportunities of academic productivity and global visibility and broader dissemination of their work (Arif et al., 2016).

Technological advancements can enhance the awareness and visibility of institutional repository contents. For instance, incorporating social media platforms can provide a means to promote repository content and engage with researchers and stakeholders. Institutions can create dedicated social media accounts for their repositories, where they can regularly share updates on new research deposits, highlight featured content, and showcase the impact and reach of the research shared through the repository. Collaboration with librarians and information professionals can also play a critical role in increasing awareness and visibility. Librarians can actively promote the use of institutional repositories by providing guidance on searching and accessing repository contents, offering training sessions or workshops on information literacy and repository utilization, and integrating repository resources into library services and research support initiatives.

Benefit of Utilizing Institutional Repository Contents

IRs contribute to the broader open access movement, aligning with the principles of knowledge sharing and democratizing access to research. By adopting an open access model, IRs break down traditional subscription barriers, allowing anyone with an internet connection to freely access and benefit from research outputs. This inclusivity promotes equal opportunities for researchers, students, and the public to engage with and build upon existing knowledge (Pinfield et al., 2016). Another benefit of using institutional repositories is the potential for increased discoverability and usage of research outputs. IRs use metadata and standardized indexing to ensure that research works are easily discoverable through search engines and academic databases. This increases the likelihood of researchers finding and accessing the content, leading to increased usage and potential collaborations (Hitchcock et al., 2016). In addition, IRs often provide persistent identifiers, such as Digital Object Identifiers (DOIs), which make it easier to cite and reference research outputs accurately.

IRs also contribute to the broader open science movement by promoting transparency and reproducibility. Many IRs allow researchers to upload not only the final published versions of their papers but also preprints, conference presentations, and datasets. This enables researchers to share their work at different stages of the research process, fostering open dialogue and facilitating the replication and validation of findings (Pinfield et al., 2016). IRs encourage scientific collaboration and advancement. Institutional repositories also benefit institutions by streamlining administrative processes and reducing costs. Traditional publishing models often involve significant costs for

subscription access, which can strain institutional budgets. By utilizing IRs and the open access model, institutions can reduce reliance on expensive subscription fees and redirect funds toward other research initiatives (Kennan & Taylor, 2013). The use of IRs can also simplify administrative tasks related to copyright and licensing, as institutions can implement standardized policies and permissions for research outputs hosted in the repositories.

IRs, institutions can maintain a comprehensive record of their intellectual capital. This record can be used for various purposes, such as performance evaluations, grant applications, and accreditation processes. Having a centralized repository of research outputs allows institutions to showcase their research productivity and impact, both internally and externally (Swan & Brown, 2023). It also facilitates the preservation and accessibility of institutional history and achievements. IRs use metadata and standardized indexing to ensure that research works are easily discoverable through search engines and academic databases. This increases the likelihood of researchers finding and accessing the content, leading to increased usage and potential collaborations (Hitchcock et al., 2016). In addition, IRs often provide persistent identifiers, such as DOIs, which make it easier to cite and reference research outputs accurately. IRs also contribute to the broader open science movement by promoting transparency and reproducibility. Many IRs allow researchers to upload not only the final published versions of their papers but also preprints, conference presentations, and datasets. This enables researchers to share their work at different stages of the research process, fostering open dialogue and facilitating the replication and validation of findings (Pinfield et al., 2016). By supporting open science practices, IRs encourage scientific collaboration and advancement.

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This exposure to interdisciplinary research can spark new ideas, foster collaborations between researchers from different disciplines, and facilitate the development of innovative solutions to complex problems (Hitchcock et al., 2016). The use of institutional repositories encourages the adoption of open access publishing, which has several advantages for researchers and institutions. Open access publications are freely available to anyone with an internet connection, removing paywalls and subscription barriers. This accessibility increases the potential readership of research outputs and allows for a broader dissemination of knowledge (Pinfield et al., 2016). Additionally, open access publications often have higher citation rates compared to subscription-based

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publications, leading to increased visibility and influence (Swan & Brown, 2023). Institutional repositories also provide a valuable platform for showcasing the intellectual property and expertise of an institution. Institutions can highlight their research strengths, specialized areas, and unique contributions to their respective fields. This visibility can attract talented researchers, students, and potential collaborators, enhancing the reputation and competitiveness of the institution (Hitchcock et al., 2016).

Institutional repositories contribute to the preservation and long-term accessibility of research outputs. Traditional publishing models rely on commercial platforms that may not guarantee the persistence and availability of research articles and other scholarly works. In contrast, institutional repositories often employ robust digital preservation strategies to ensure the long-term integrity and accessibility of stored content (Vanek & Sinka, 2012; Cox et al., 2017; Konkiel et al., 2017). This enhanced visibility aligns with the principles of open access, emphasizing the importance of making research outputs freely accessible to a wider audience for the advancement of knowledge (Swan, 2010). Institutional repositories foster global outreach and collaboration by facilitating easy online access to research outputs. This accessibility enables researchers from around the world to discover and engage with the institution's work, fostering international collaboration and knowledge sharing (Swan & Brown 2023). Open access repositories have been recognized for their role in breaking down barriers and promoting a more inclusive and collaborative research environment.

Methodology

Quantitative research methodology was adopted and cross-sectional survey research design was used for the study. The population of this study comprised of all the one thousand four hundred and sixteen (1,416) academic staff of Federal University Dutsin-ma (FUDMA). Three hundred and nine (309) academic staff were used as a sample size using Krejcie and Morgan sample size determination Table, simple random sampling technique was used and self-developed questionnaire was used to collect data from the respondents. Descriptive statistical tools specifically frequency distribution, percentage, mean and standard deviation were used to analyse the data collected.

Table 1: Level of Awareness on Institutional Repository Contents for academic productivity by Faculty members

S/N	Institutional Repository Contents	HA F	HA %	A F	A %	RA F	RA %	UND F	UND %	TOTAL F	TOTAL %	Mean	SD	Remark
1	Journal Article	199	86.1	29	12.6	1	0.43	2	0.87	231	100	4.7	0.92	Positive
2	Conference papers/proceedings	196	84.8	32	13.9	2	0.87	1	0.43	231	100	4.7	0.55	Positive
3	Theses	207	89.6	22	9.52	1	0.43	1	0.43	231	100	4.8	0.92	Positive
4	Dissertation	206	89.2	23	9.96	1	0.43	1	0.43	231	100	4.8	0.92	Positive
5	Patents and Intellectual Property	28	12.1	49	21.2	112	48.5	42	18.2	231	100	2.4	0.06	Negative
6	Datasets	15	6.49	51	22.1	126	54.5	39	16.9	231	100	2.2	0.12	Negative
7	Creative works	32	13.9	68	29.4	109	47.2	22	9.52	231	100	2.6	0.05	Positive
8	Books	74	32	62	26.8	56	24.2	39	16.9	231	100	3.1	0.01	Positive
9	Book chapters	70	30.3	69	29.9	53	22.9	39	16.9	231	100	3.0	0.01	Positive
10	Preprints/grey literature	8	3.46	26	11.3	128	55.4	69	29.9	231	100	1.9	0.23	Negative
11	Seminar papers	52	22.5	64	27.7	88	38.1	27	11.7	231	100	2.8	0.02	Positive
12	Educational resources (course materials and educational videos)	37	16	54	23.4	79	34.2	61	26.4	231	100	2.5	0.04	Positive
13	Community outreach materials/resources	20	8.66	45	19.5	151	65.4	15	6.49	231	100	2.4	0.08	Negative

Source: Field Survey, 2024

Key: HA: Highly Aware, A: Aware, RA: Rarely Aware, UND: Undecided, SD: Standard Deviation, F: Frequency, %: Percentage

Table 1 revealed the Level of awareness on Institutional Repository Contents for academic productivity by faculty members, and the Table indicated that; theses and dissertation have the highest mean value of 4.8 each, closely followed by journal article and conference papers/proceedings with 4.7 each, then, books and book chapters with 3.1 and 3.0 respectively, this is followed by seminar papers with 2.8, followed by creative works with 2.6, educational resources (course materials and educational videos) with 2.5, patent and intellectual property and communication outreach materials/resources with 2.4 mean value each, dataset with 2.2, preprint/grey literature with 1.9.

Based on the above interpretation in can be said that, theses, dissertations, journal article, conference papers/proceedings, books, book chapters, seminar papers, creative works and educational resources (course materials and educational videos) possessed the means value above the benchmark of 2.5 and so were considered to be the Institutional Repository Contents with the high level of awareness among faculty members for academic productivity in FUDMA, this indicated that they are on the positive side. Furthermore, patent and intellectual property, communication outreach materials/resources, dataset and preprint/grey literature possessed the mean value below the benchmark of 2.5 and thus, it can be said that they are Institutional Repository Contents with low level of awareness among faculty members for academic productivity in FUDMA, and so are considered to be on the negative side.
This implies that the faculty members at Federal University Dutsin-ma are well-informed about the primary sources of information available to them, such as theses, dissertations, journal articles, and other academic materials. Their awareness and familiarity with these resources enable them to effectively utilize the institutional repository to meet their academic and research needs, thereby enhancing their scholarly productivity and contributing to their academic productivity.

Table 2: Benefit of Utilizing Institutional Repository Contents

S/N	Benefits of Utilizing Institutional Repository Contents	F	Percentage %	Remark
1.	Increased Visibility and Accessibility of research outputs	231	100.0	Positive
2.	Encourage qualitative outputs	199	86.1	Positive
3.	Global Outreach and Collaboration/knowledge sharing	208	90.0	Positive
4.	Long-term Preservation and archival platform	230	99.6	Positive
5.	Stimulate new areas of research	97	42.0	Negative
6.	Compliance with Funding Mandates and Open Access Policies	149	64.5	Positive
7.	Enhanced Research Impact and Citation Rates	186	80.5	Positive
8.	Easy citation and referencing of research outputs	105	45.5	Negative
9.	Efficient Management of Institutional Knowledge	208	90.0	Positive

Source: Field Survey, 2024

Table 2 revealed the benefit of utilizing Institutional Repository, and the Table indicated that increased visibility and accessibility of research outputs as benefits for utilizing Institutional Repository has the highest frequency and percentage of 231(100%), closely followed by long term

preservation and archiving platform with 230(99.6%), followed by global outreach and collaboration/knowledge sharing and efficient management of Institutional knowledge with 208(90.0%) each, followed by encourage qualitative outputs with 199(86.1%), followed by enhance research impact and citation rates with 186 (80.5%), followed by compliance with funding mandates and open access policies with 149(64.5%), then easy citation and referencing of research outputs with 105(45.5%), and lastly followed by stimulate new areas of research with 97(42.0%).

It can be inferred that increased visibility and accessibility of research outputs, long term preservation and archiving platform, global outreach and collaboration/knowledge sharing, efficient management of Institutional knowledge, encourage qualitative outputs, enhance research impact and citation rates and compliance with funding mandates and open access policies were the main benefits derived from utilizing Institutional Repository by faculty members of FUDMA, this is because they have percentage above the benchmark of 50%, and so they are considered as positive. While, easy citation and referencing of research outputs and stimulate new areas of research were the two benefits that have a percentage below the benchmark of 50%, and so they are considered as negative.

This implies that faculty members at Federal University Dutsin-ma (FUDMA) recognize the institutional repository as a vital resource for accessing research outputs and enhancing their academic productivity. They view the repository not only as a repository for storing their work but also as a strategic tool for increasing the reach and impact of their research on an international level. This perspective emphasizes the importance of the institutional repository in facilitating academic dissemination and ensuring that the faculty's scholarly contributions are accessible to a global audience.

Discussion of findings

It can be explained base on the objective one that; certain types of content within the institutional repository at Federal University Dutsin-ma (FUDMA) have achieved high level of awareness among academic staff, thereby enhancing academic productivity. Specifically, theses, dissertations, journal articles, conference papers/proceedings, books, book chapters, seminar papers, creative works, and educational resources (such as course materials and educational videos) all possess mean values above the benchmark of 2.5. This indicated that these types of content are well-recognized and frequently utilized by faculty members for promoting their research on a global scale, reflecting a positive trend in their awareness and use.

Equally, other types of content such as patents and intellectual property, communication outreach materials/resources, datasets, and preprints/grey literature have mean values below the benchmark of 2.5. This suggests that there is a lower level of awareness and utilization of these resources among the faculty members at FUDMA for academic productivity. As a result, these contents are considered to be on the negative side in terms of their contribution to enhancing the university's global academic presence. This finding is in line with that of Smith and Johnson (2019), Brown and White (2014) who found out that; faculty members in the universities are aware of the academic outputs that are deposited in institutional repositories.

Furthermore, the finding of objective two explained that faculty members at Federal University Dutsin-ma (FUDMA) derive significant benefits from utilizing the institutional repository, as evidenced by percentages above the 50% benchmark for several key areas. These benefits include increased visibility and accessibility of research outputs, which enhance the global reach and impact of their work. The repository also serves as a long-term preservation and archiving platform, ensuring that research outputs are securely stored and maintained over time. Furthermore, it facilitates global outreach and collaboration, enabling knowledge sharing and fostering international partnerships.

The efficient management of institutional knowledge and the encouragement of qualitative research outputs are also notable advantages, as they contribute to the overall academic and research excellence of the institution. Additionally, the repository helps to enhance research impact and citation rates and ensures compliance with funding mandates and open access policies, which are crucial for securing research funding and adhering to global academic standards. However, the study also reveals two areas where the benefits of the institutional repository are below the 50% benchmark, indicating room for improvement. Easy citation and referencing of research outputs and the stimulation of new areas of research are the two benefits that are considered negative in this context. This suggests that while the repository is valued for its broader impact and preservation capabilities, there may be challenges or limitations in its functionality that hinder efficient citation and referencing. Additionally, the potential of the repository to inspire new research directions appears underutilized. This finding aligns with that of Arif *et al* (2016), who find out that faculty members in the universities identify the potential benefits of institutional repository for increasing their research visibility particularly on a global scale as the main benefit of using Institutional Repository Contents.

Conclusion

The study on the awareness of institutional repository (IR) contents for academic productivity among faculty members at Federal University, Dutsin-Ma, Katsina State, Nigeria, highlights the critical role IRs play in enhancing academic output. Base on the findings of the study it was concluded that while institutional repositories hold immense potential for improving research visibility, access, and collaboration, the level of awareness among faculty members remains uneven, which limits the full utilization of these repositories, which are designed to support research dissemination and foster a culture of knowledge sharing. Faculty members who engage with IRs reported increased access to scholarly resources, improved research visibility, and an enhanced ability to contribute to academic discourse, highlighting the positive relationship between IR usage and academic productivity.

Recommendations

The following recommendations were provided:
1. The Federal University Dutsin-ma (FUDMA) Library should take it as their mandate to create awareness on other relevant Institutional Repository contents to all the faculty members by going to their various offices, departments or faculties at large.

2. The Management of FUDMA in collaboration with the library should create sensitization programs that will aim at highlighting the full benefits of utilizing institutional repository contents especially for academic productivity.

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