

PUBLISH FAST OR PERISH: EXPLORING THE GROWTH AND IMPACT OF PREPRINT REPOSITORIES ON ACADEMIC RESEARCH IN NIGERIA

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Abstract

This study investigated publish fast or perish: exploring the growth and impact of preprint repositories on academic research in Nigeria. It looks at awareness, usage patterns, institutional support, challenges, and improvement strategies related to preprint repositories among Nigerian researchers in federal universities within the South-South zone. Employing a descriptive survey design, the study targeted librarians, postgraduate, and undergraduate students, selected through a multi-stage sampling process involving purposive, stratified, and proportionate random techniques. Data were collected using a validated 25-item questionnaire structured around the study's objectives and rated on a four-point Likert scale, with a pilot test yielding a reliability coefficient of 0.82. Questionnaires were administered in both physical and electronic formats, and responses were analysed using mean and standard deviation, with a decision benchmark of 2.50. Findings provide insights into the extent of engagement with preprint platforms, the level of institutional encouragement, the nature of encountered obstacles, and possible strategies for enhancing their adoption in Nigerian academic settings. The study concludes by emphasising the potential of preprints to advance scholarly communication while addressing quality assurance and ethical considerations.

Keywords: Publish Fast, Perish, Preprint Repositories, Academic Research

Introduction

Preprint repositories are increasingly recognized as transformative tools in academic publishing, enabling researchers to share findings rapidly without waiting for traditional peer review. In Nigeria, these platforms provide opportunities to accelerate knowledge exchange, enhance research visibility, and foster scholarly collaboration. By making research outputs publicly available prior to formal journal publication, preprints allow immediate access to data, methods, and results, facilitating timely engagement with emerging scientific challenges (Nwabugwu & Godwin, 2020; Xu, 2022). The ability to disseminate findings quickly promotes transparency, encourages early scholarly feedback, and helps establish professional networks that can improve research quality and impact (Flanagin, Fontanarosa, & Bauchner, 2020; Sarabipouret al., 2019).

Effective utilization of preprint repositories requires adequate digital infrastructure, institutional guidelines, and researcher competencies. Standardized metadata practices, version control, and linking preprints to subsequent peer-reviewed publications are crucial for maximizing visibility and credibility (Choi, Choi, & Kim, 2021; Yi & Huh, 2021). Training researchers on ethical considerations, intellectual property rights, and proper citation practices further strengthens adoption and ensures responsible use (Tang & Hu, 2019; Ginsparg, 2021). Within the Nigerian context, preprint repositories are particularly valuable across diverse disciplines such as health sciences, agriculture, and technology, as they enable



rapid sharing of research outputs and encourage collaborative initiatives (David & Abbas, 2020; Xie, Shen, & Wang, 2021).

Despite these advantages, several challenges limit the adoption of preprints in Nigeria. Many researchers remain unaware of preprint platforms or lack confidence in the credibility of unreviewed work, while some institutions provide limited technical support or formal policies governing preprint use (Leopold, 2021; Mullins, 2021; Flanagan *et al.*, 2020). Concerns over quality control, potential misuse of intellectual property, and the absence of formal recognition in academic evaluations further discourage engagement (Chiarelli, Johnson, Pinfield, & Richens, 2019; Tennant *et al.*, 2019). Addressing these issues is critical to ensure that preprint repositories contribute meaningfully to Nigeria's research ecosystem and enhance the global visibility of Nigerian scholarship.

The contemporary academic environment also emphasizes the “publish fast” model, reflecting pressures to disseminate research quickly to remain competitive. While rapid publication facilitates timely knowledge sharing and innovation, overemphasis on speed may compromise methodological rigor and the depth of scholarly inquiry (Nwabugwu & Godwin, 2020; Xu, 2022). Conversely, Leopold (2021) stated that failure to maintain consistent publication output—often termed “perish”—can diminish visibility, reduce funding opportunities, and limit career advancement, highlighting the systemic pressures influencing academic behavior (Mullins, 2021).

Preprint repositories mediate these pressures by enabling faster dissemination without sacrificing openness. They allow researchers to share preliminary findings, receive early feedback, and collaborate across disciplines while maintaining accessibility and transparency (Anderson, 2020; Yi & Huh, 2021). By supporting a balance between speed and quality, preprints serve as complementary tools that enhance academic research's rigor, visibility, and societal relevance (Sarabipouret *al.*, 2019; Flanagan *et al.*, 2020; Xie *et al.*, 2021).

It is noted that, preprint repositories offer Nigerian researchers a pathway to accelerate knowledge dissemination, improve collaboration, and increase the impact of academic research. However, their potential can only be fully realized through targeted awareness campaigns, structured training, institutional support, and formal policies that integrate preprints into scholarly workflows (Chiarelli *et al.*, 2019; Tennant *et al.*, 2019; Nwabugwu & Godwin, 2020; Xu, 2022). When combined with careful attention to research quality and ethical considerations, preprints provide a sustainable mechanism for advancing both national and global knowledge production.

Statement of the Problem

Although preprint repositories provide rapid dissemination and increased visibility for research outputs, Nigerian academics encounter barriers such as low awareness of preprint platforms, limited institutional infrastructure, and inadequate policies for integrating preprints into formal research assessment frameworks. These constraints reduce the potential benefits of preprints, limit collaboration, and risk marginalizing Nigerian research in global scholarly discourse. The motivation for this study arises from the need to understand how preprint repositories can be effectively adopted and leveraged to enhance the visibility, accessibility, and impact of Nigerian academic research. By examining the challenges, opportunities, and institutional support for preprints, this research seeks to provide insights and practical recommendations that can strengthen the use of preprint platforms, accelerate knowledge sharing, and improve the global competitiveness of Nigerian research. Without targeted interventions informed by such research, the growth and effective utilization of

preprint repositories in Nigerian academia may remain stunted.

Objectives of the Study

The study seeks to:

1. Investigate the current adoption and usage of preprint repositories by Nigerian researchers.
2. Examine researchers' awareness, knowledge, and perceptions regarding preprint platforms.
3. Assess institutional support, policies, and infrastructure facilitating the use of preprints in Nigerian universities.
4. Identify barriers and challenges hindering the effective use of preprint repositories.
5. Recommend strategies to enhance the integration and impact of preprint repositories on academic research in Nigeria.

Theoretical Framework

Merton's Normative Theory of Science (1942/1973) outlines core principles communalism, universalism, disinterestedness, and organized skepticism—that guide ethical and collaborative scientific practice. In Nigeria's academic context, where rapid publication is often driven by career, funding, and institutional demands, these norms help explain the tension between speed and quality in research. Applied to preprint repositories, the theory underscores their role in fostering communalism through early sharing, transparency, and collaboration, while also highlighting challenges such as quality control, recognition, and ethical compliance. This framework enables a structured evaluation of how preprints shape research practices in Nigeria, balancing the benefits of faster dissemination with the need to uphold scientific integrity.

Publish Fast: The concept of “publish fast” refers to the increasing pressure on researchers to disseminate their findings rapidly. Competitive academic environments and career advancement tied to publication output have encouraged the rapid production of research articles. While timely publication can accelerate knowledge sharing and foster innovation, an excessive focus on speed may compromise thoroughness, methodological rigor, and the depth of scholarly inquiry (Nwabugwu& Godwin, 2020; Xu, 2022).

Perish: “Perish” captures the consequence of failing to publish at the expected pace within academia. Researchers who do not maintain a steady flow of publications risk diminished visibility, reduced funding opportunities, and limited career advancement. This systemic pressure can drive scholars toward prioritizing quantity over quality, potentially undermining ethical standards and long-term research impact (Flanagin *et al.*, 2020; Leopold, 2021; Nwabugwu& Godwin, 2020; Xu, 2022).

Preprint Repositories: Preprint repositories are online platforms that allow researchers to share manuscripts prior to formal peer review. Choi, Choi and Kim (2021) noted that preprint repositories facilitate rapid dissemination of findings, promote early scholarly feedback, and encourage interdisciplinary collaboration. According Anderson (2020), bypassing traditional publication delays, preprints provide an avenue for researchers to meet the demands of publish fast while maintaining accessibility and openness. Nevertheless, challenges include concerns about quality, recognition in formal evaluation, and the potential spread of



unverified results (Yi & Huh, 2021; Ginsparg, 2021; Xie *et al.*, 2021; Flanagan *et al.*, 2020; Mullins, 2021).

Academic Research: Academic research is the systematic, methodical investigation aimed at creating new knowledge, testing hypotheses, or solving complex problems. Chiarelli, Johnson, Pinfield and Richens (2019) observed that academic research relies on rigorous methodologies, critical analysis, and ethical standards to ensure reliability, validity, and societal relevance. The effectiveness of academic research is enhanced when outputs are accessible, transparently shared, and integrated into broader scholarly discourse (Tennant *et al.*, 2019; Nwabugwu & Godwin, 2020; Xu, 2022).

Research Methodology

This study employed a descriptive survey design to examine Nigerian researchers' engagement with preprint repositories, including their use, awareness, institutional support, challenges, and strategies for improvement. The research targeted librarians, postgraduate, and undergraduate students in federal universities within the South-South zone of Nigeria. A multi-stage sampling technique was used, comprising purposive selection of universities, stratification of respondents, and proportionate random sampling within each group. Data were collected through a structured 25-item questionnaire divided into five sections aligned with the study objectives and rated on a four-point Likert scale. The questionnaire's validity was established through expert review, and a pilot test yielded a Cronbach's Alpha of 0.82, indicating strong reliability. Questionnaires were distributed both physically and electronically, and the data were analyzed using mean scores and standard deviations in SPSS, with a score of 2.50 or above representing agreement and cluster means employed to detect overall trends across sections.

Related Literature Review

Smart (2022) examined the evolution, benefits, and challenges of preprints, with particular attention to their interaction with journals and strategies for adoption by authors, editors, and publishers. The study reviewed major preprint platforms, including arXiv, SSRN, OSF, bioRxiv, and medRxiv, and discussed journal acceptance models ranging from uneasy relationships to merger and overlay systems. Findings highlighted the advantages of preprints, such as rapid dissemination, increased visibility, and community feedback, alongside challenges including quality control, citation dilution, and information overload. While stakeholders acknowledged the growing relevance of preprints, the focus remained largely theoretical and descriptive. Unlike this earlier work, the present study empirically investigates the use, awareness, institutional support, challenges, and improvement strategies for preprint repositories among Nigerian researchers, including librarians, postgraduate, and undergraduate students. By collecting and analyzing quantitative data within federal universities in South-South Nigeria, the study addresses gaps in understanding researcher engagement, institutional facilitation, and contextual barriers, offering evidence-based insights to inform strategies for enhancing preprint adoption in the Nigerian academic environment.

Teixeira da Silva, Huang, and Nazarovets (2024) examined the impact of publishing embargoes, copyright transfer, and preprint versions on the dissemination of scholarly work, finding that while these factors generally do not prevent open sharing, structural policy issues and embargo periods of 6 to 36 months may limit wider adoption of preprints. Building on this,

the present study similarly recognizes the benefits of preprints, including rapid dissemination, increased visibility, and enhanced collaboration, but differs by empirically investigating use, awareness, institutional support, challenges, and strategies among Nigerian researchers in federal universities of the South-South zone. By focusing on researcher engagement and institutional facilitation within a specific national context, the study addresses gaps in understanding practical adoption and offers insights for improving preprint integration in Nigeria's academic environment.

Peng, Yue, Sun, and Ma (2024) examined the revision process of bioRxiv preprint papers and its relationship with academic impact, finding that most revisions occur within a year of publication and that extensive revisions, particularly in the introduction, significantly enhance a paper's influence. The study highlighted the role of expert review in improving research quality but focused primarily on quantitative aspects of manuscript revisions and their effect on impact. The present study builds on this by investigating the broader context of preprint adoption among Nigerian researchers, including their use, awareness, institutional support, challenges, and strategies for improvement. Unlike the earlier study, it examines researcher behavior and institutional facilitation within federal universities in the South-South zone, filling gaps in understanding practical engagement with preprints and providing evidence-based recommendations to promote their effective integration in the Nigerian academic landscape.

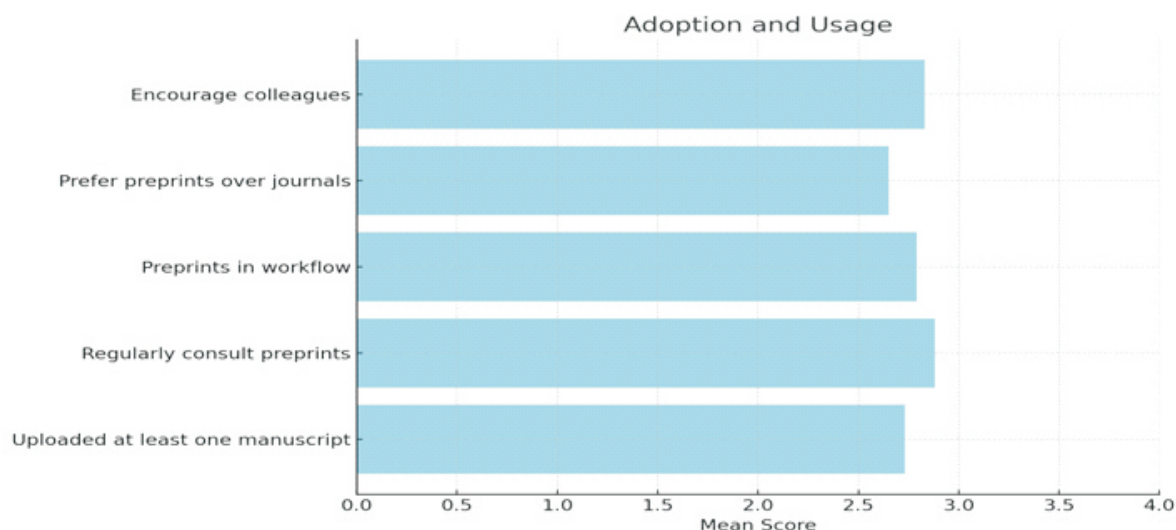
Saxena, Godfrey, and Yannesssa (2023) examined the pressures of the “publish or perish” culture, highlighting how the rapid increase in publications and the rise of pay-to-publish models have expanded access to research but also contributed to ethical concerns, low-quality outputs, and predatory journals. The present study aligns with this work in recognizing the pressures on academics to disseminate research quickly and the potential benefits and challenges of rapid publication. However, unlike the earlier study, which focused on global trends, ethical implications, and the consequences of accelerated publishing, the present study empirically investigates Nigerian researchers' actual use, awareness, institutional support, barriers, and strategies for improvement regarding preprint repositories. By focusing on librarians, postgraduate, and undergraduate students in federal universities in the South-South zone, the study fills a gap by providing quantitative evidence on researcher engagement and institutional facilitation, offering practical insights to enhance the adoption and effective integration of preprints in the Nigerian academic context.

The study by Wongvorachan (2025) and the present research both focus on improving the accessibility and dissemination of scholarly knowledge, highlighting the limitations of existing academic publishing systems, including restricted access, inequitable practices, and barriers to knowledge sharing. While the previous study is conceptual, proposing a framework for inclusive, transparent, and sustainable reforms, it does not provide empirical data on researcher practices or institutional support. In contrast, the present study employs a descriptive survey to investigate the actual use, awareness, institutional support, challenges, and improvement strategies for preprint repositories among librarians, postgraduate, and undergraduate students in South-South Nigerian federal universities. By doing so, it addresses gaps in the literature by generating quantitative evidence on researcher engagement and institutional facilitation, offering practical insights to promote effective adoption and integration of preprints within the Nigerian academic context.



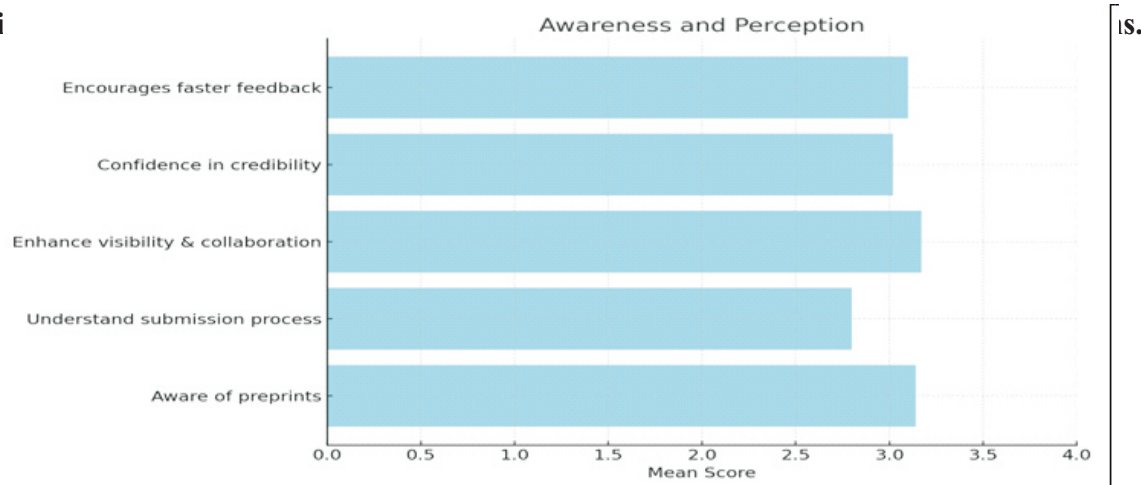
Result and Discussion of Findings

Fig. 1 The current adoption and usage of preprint repositories by Nigerian researchers



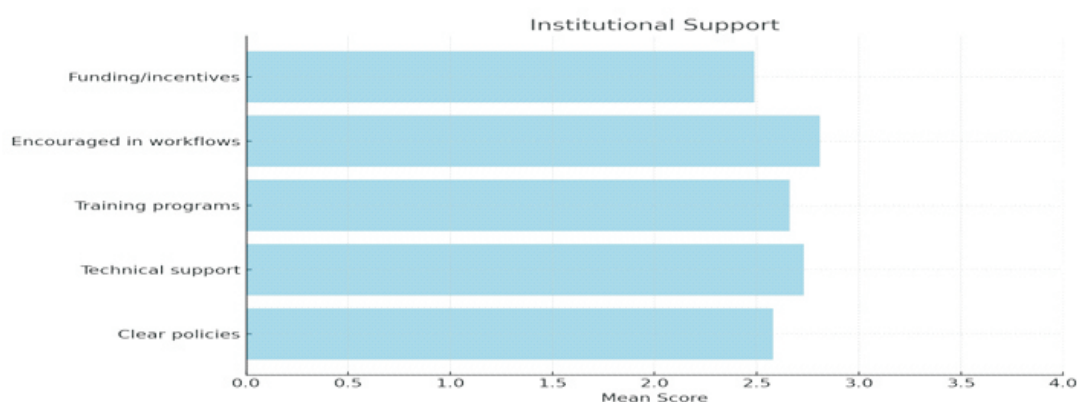
The results in Fig. 1, showing that Nigerian researchers are increasingly engaging with preprint repositories with an overall mean of 2.78, align closely with Smart (2022), who highlighted the growing acceptance of preprints as a mechanism for rapid dissemination, early feedback, and increased visibility. The highest ratings for using preprints to stay current ($\bar{x} = 2.88$) and encouraging peers ($\bar{x} = 2.83$) reflect a pattern of adoption consistent with the benefits of preprints noted in the literature, although the lower preference for preprints over traditional journals ($\bar{x} = 2.65$) underscores ongoing reliance on peer-reviewed publications for credibility, also discussed by Smart. The narrow standard deviations indicate consistent perceptions, supporting the idea that while preprints are embraced as complementary tools, they have not yet replaced conventional publishing in Nigeria.

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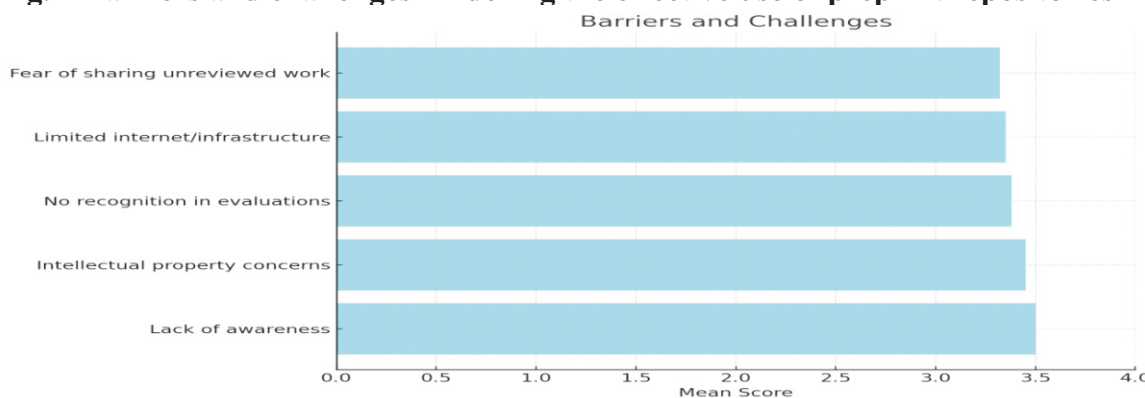
The findings in Fig. 2, regarding awareness and knowledge of preprint platforms (cluster mean = 3.05), correspond with Smart (2022) and Peng et al. (2024), who observed that preprints enhance research visibility and foster collaboration. The high agreement on the value of preprints for visibility ($x = 3.17$) and collaboration mirrors the perceived benefits of preprints as a means of rapid scholarly communication. However, the lower mean for understanding submission and review procedures ($x = 2.80$) indicates a knowledge gap, which aligns with Teixeira da Silva, Huang, and Nazarovets (2024), who emphasized that procedural complexities and policy inconsistencies can hinder broader adoption. Overall, these results suggest that while researchers are positively inclined toward preprints, capacity-building initiatives are necessary to bridge gaps in procedural knowledge.

Fig. 3 Institutional support, policies, and infrastructure facilitating the use of preprints in Nigerian universities



The results in Fig. 3, showing modest institutional support (cluster mean = 2.65), partially align with Smart (2022) and Wongvorachan (2025), who acknowledged that institutional and policy frameworks play a critical role in preprint adoption. While universities encourage integration into workflows ($x = 2.81$) and provide some technical support ($x = 2.73$), the lack of clear policies ($x = 2.58$), formal training ($x = 2.66$), and incentives ($x = 2.49$) highlights structural gaps consistent with Teixeira da Silva et al. (2024), who noted that ambiguous policies and weak institutional support can limit effective dissemination. These findings underscore the need for robust institutional frameworks and capacity-building programs to promote preprint utilization in Nigerian academia.

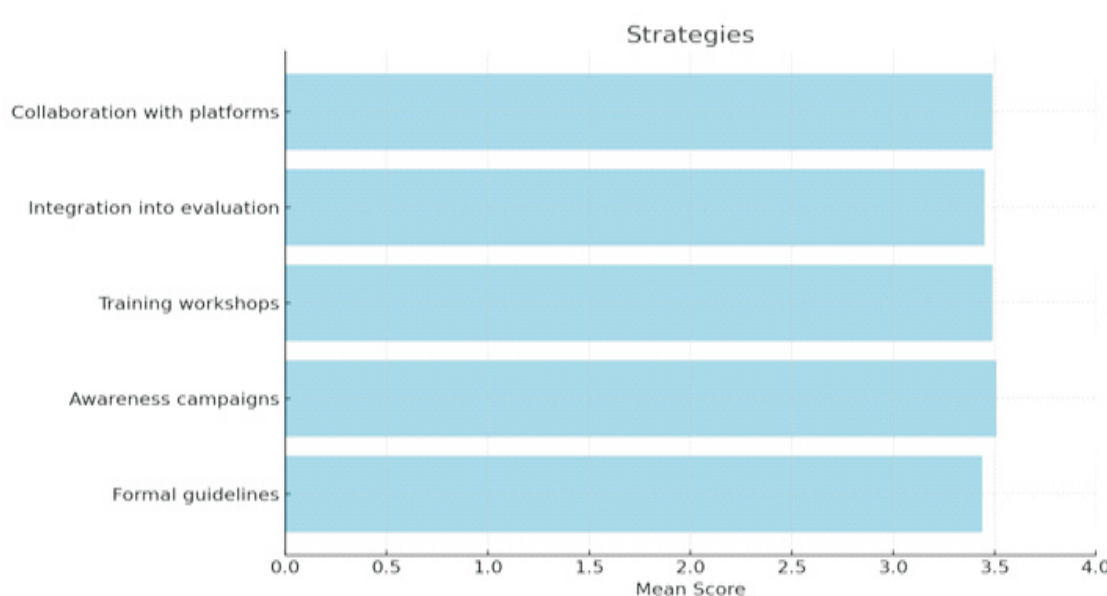
Fig. 4 Barriers and challenges hindering the effective use of preprint repositories





The findings in Fig. 4, reflecting barriers and challenges with a cluster mean of 3.40, echo the concerns identified by Saxena, Godfrey, and Yannessa (2023) regarding pressures in academic publishing and apprehensions surrounding credibility. The highest-rated barrier, lack of awareness ($x = 3.50$), along with intellectual property concerns ($x = 3.45$) and limited recognition in formal evaluations ($x = 3.38$), aligns with previous research emphasizing that uncertainties around adoption, career impact, and quality control can inhibit engagement. Limited internet access ($x = 3.35$) and fear of sharing unreviewed work ($x = 3.32$) further reinforce findings by Smart (2022) and Teixeira da Silva et al. (2024) that infrastructural and policy-related challenges remain key obstacles for preprint adoption in many contexts.

Fig. 5 Strategies to enhance the integration and impact of preprint repositories on



The results in Fig. 5, identifying strategies to enhance preprint integration (cluster mean = 3.54), align with recommendations from Wongvorachan (2025) and Smart (2022) on creating supportive frameworks for preprint use. High ratings for institutional guidelines ($x = 3.62$), awareness campaigns ($x = 3.58$), and training workshops ($x = 3.55$) indicate a recognition that structured policies and capacity-building are critical for adoption. Incorporating preprints into academic evaluations ($x = 3.50$) and fostering international collaborations ($x = 3.47$) reflect approaches suggested in the literature for legitimizing preprints and enhancing scholarly visibility (Penget *et al.*, 2024). Collectively, these findings support a multi-dimensional strategy that combines policy, training, evaluation recognition, and global engagement to strengthen preprint repository adoption in Nigerian universities.

References

- Anderson, K. R. (2020). BioRxiv: Trends and analysis of five years of preprints. *Learned Publishing*, 33, 104–109. <https://doi.org/10.1002/leap.1265>
- Chiarelli, A., Johnson, R., Pinfield, S., & Richens, E. (2019). Preprints and scholarly communication: An exploratory qualitative study of adoption, practices, drivers and

- p>barriers [Version 2; peer review: 3 approved, 1 approved with reservations].
- F1000Research*
- , 8, 971.
- <https://doi.org/10.12688/f1000research.19619.2>
- Choi, Y. J., Choi, H. W., & Kim, S. (2021). Preprint acceptance policies of Asian academic society journals in 2020. *Science Editing*, 8, 10–17. <https://doi.org/10.6087/kcse.224>
- Flanagin, A., Fontanarosa, P. B., & Bauchner, H. (2020). Preprints involving medical research: Do the benefits outweigh the challenges? *JAMA*, 324, 1840–1843. <https://doi.org/10.1001/jama.2020.20674>
- Ginsparg, P. (2021). Lessons from arXiv's 30 years of information sharing. *Nature Reviews Physics*, 3, 602–603. <https://doi.org/10.1038/s42254-021-00360-z>
- Leopold, S. S. (2021, November 19). The dangers of undercooked science and a hungry public. *The Seattle Times*. <https://www.seattletimes.com/opinion/the-dangers-of-undercooked-science-and-a-hungry-public/>
- Mullins, M. (2021, November 1). Opinion: The problem with preprints. *The Scientist*. <https://www.the-scientist.com/critic-at-large/opinion-the-problem-with-preprints-69309>
- Peng, W., Yue, M., Sun, M., & Ma, T. (2024). Revision and academic impact: A case study of bioRxiv preprint papers. *Journal of Informetrics*, 18(1), 101484. <https://doi.org/10.1016/j.joi.2023.10148>
- Sarabipour, S., Debat, H. J., Emmott, E., Burgess, S. J., Schwessinger, B., & Hensel, Z. (2019). On the value of preprints: An early career researcher perspective. *PLoS Biology*, 17, e3000151. <https://doi.org/10.1371/journal.pbio.3000151>
- Saxena, S., Godfrey, T., & Yannessa, J. (2023). *Publish or perish: Time for a rethink* Retrieved from <https://doi.org/10.32388/FPZJKP>
- Smart, P. (2022). The evolution, benefits, and challenges of preprints and their interaction with journals. *Science Editing*, 9(1), 79–84. <https://doi.org/10.6087/kcse.269>
- Soares, J. B. P. (2022). Publication tips: How to write scientific articles that master the publication process and communicate your ideas efficiently. *The Canadian Journal of Chemical Engineering*, 100(9), 2718–2731. <https://doi.org/10.1002/cjce.24428>
- Teixeira da Silva, J. A., Huang, C.-K. (K.), & Nazarovets, M. (2024). Publishing embargoes and versions of preprints: Impact on the dissemination of information. *Open Information Science*, 8(1), 20240002. <https://doi.org/10.1515/opis-2024-0002>
- Tennant, J. P., Crane, H., Crick, T., et al. (2019). Ten hot topics around scholarly publishing. *Publications*, 7, 34. <https://doi.org/10.3390/publications7020034>
- Wongvorachan, T. (2025, May 26). *Rethinking academic publishing: A call for inclusive, Publication of the Academic and Research Libraries Section of the Nigerian Library Association* | 30



transparent, and sustainable reforms. Retrieved from: <https://doi.org/10.20944/preprints202505.1897.v1>

- Xie, B., Shen, Z., & Wang, K. (2021). Is preprint the future of science? A thirty-year journey of online preprint services. *arXiv:2102.09066v1 [cs.DL]* [Preprint]. <https://arxiv.org/abs/2102.09066>
- Yi, H. J., & Huh, S. (2021). Korean editors' and researchers' experiences with preprints and attitudes towards preprint policies. *Science Editing*, 8, 4–9. <https://doi.org/10.6087/kcse.223>