

Full Length Research

Open Access Initiatives in Scholarly Communication: A Systematic Review of Emerging Opportunities and Transformative Potential

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This systematic review explores the evolution, implementation, and impact of open access (OA) initiatives in scholarly communication. Drawing on peer-reviewed literature published between 2010 and 2024, the study examines various OA models, institutional strategies, and global trends. The review highlights the transformative potential of OA in enhancing the accessibility, visibility, and democratization of research outputs, particularly in developing regions. Findings reveal that while Green and Gold OA models have gained traction, challenges such as article processing charges, infrastructural limitations, and concerns about predatory publishing hinder widespread adoption. The review further underscores the role of institutional repositories, government mandates, and regional platforms in promoting OA. It concludes by recommending policy interventions, funding support, and capacity-building efforts to ensure equitable and sustainable integration of OA practices into the scholarly publishing ecosystem.

Keywords: open access, scholarly communication, systematic review, institutional repositories, article processing charges, academic publishing

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INTRODUCTION

Background to the Study

In the evolving landscape of scholarly communication, Open Access (OA) has emerged as a transformative model that challenges traditional publishing practices by promoting unrestricted access to academic research. Historically, the dissemination of scholarly outputs has been constrained by subscription-based models, limiting the

visibility and reach of research particularly in developing countries and under-resourced institutions. However, the rise of OA initiatives seeks to democratize knowledge, foster academic collaboration, and accelerate innovation by removing financial and legal barriers to scholarly literature. The concept of Open Access gained prominence with the Budapest Open Access Initiative (2002) and was further reinforced by the Berlin and Bethesda declarations, which advocated for free and immediate access to scholarly content. Since then, numerous models such as Gold OA, Green OA, hybrid journals, and institutional repositories have emerged to support this goal. Furthermore, funding bodies, governments, and academic institutions are increasingly mandating OA publication as a condition for research support, signaling a shift toward openness in the knowledge economy.

In recent years, technological advancements and the proliferation of digital platforms have significantly enhanced the feasibility and reach of OA publishing. Simultaneously, debates continue around issues such as article processing charges (APCs), quality assurance, copyright retention, and the sustainability of OA business models. These discussions are particularly relevant in contexts where resource constraints and policy gaps persist. Given these developments, a systematic review of literature on Open Access Initiatives in Scholarly Communication is crucial for understanding the emerging opportunities and challenges shaping the future of academic publishing. This review will synthesize recent trends, highlight best practices, and offer insights into how OA can support equitable and efficient dissemination of research across disciplines and geographies.

Statement of the Problem

Despite the growing global momentum around Open Access (OA) initiatives, the adoption and effective implementation of OA in scholarly communication remain uneven and fragmented. While OA promises to enhance the visibility, accessibility, and impact of research outputs, many academic institutions and researchers especially in developing countries still face significant barriers in embracing these models. Issues such as high article processing charges (APCs), lack of institutional policies, limited awareness among scholars, concerns over quality control, and insufficient infrastructure for OA repositories hinder the widespread acceptance of open access publishing. Moreover, although numerous studies have explored OA from specific regional or disciplinary perspectives, there is a lack of comprehensive and updated syntheses that map the broader trends, innovations, and transformative potential of OA in scholarly communication. Without a systematic understanding of these developments, stakeholders—researchers, librarians, policymakers, and publishers—may struggle to make informed decisions about sustainable and equitable open access practices. This gap in knowledge underscores the need for a systematic review that critically examines current literature on OA initiatives, identifies emerging opportunities, and analyzes the challenges that continue to shape the trajectory of open access in the global academic environment.

Objectives of the Study

The main objective of this study is to conduct a systematic review of existing literature on open access initiatives in scholarly communication to identify emerging trends, opportunities, and challenges. Specifically, the study aims to:

- i) Examine the evolution and current models of open access publishing in scholarly communication across various disciplines and regions.
- ii) Identify the key opportunities that open access presents for researchers, academic institutions, and the global research community.
- iii) Analyze the major challenges hindering the adoption and implementation of open access initiatives, particularly in low- and middle-income countries.
- iv) Assess the impact of open access on research visibility, collaboration, and knowledge dissemination.
- v) Provide recommendations for enhancing the effectiveness, sustainability, and equity of open access practices in scholarly publishing.

Research Questions

1. What are the prevailing models and frameworks of open access in scholarly communication?
2. What opportunities does open access provide for improving research visibility, accessibility, and collaboration?

3. What are the key barriers and challenges limiting the adoption and effectiveness of open access initiatives?
4. How have open access practices impacted scholarly publishing, particularly in developing countries?
5. What strategies and best practices can enhance the sustainability and transformative potential of open access in global research communities?

Scope of the Study

This study systematically reviews literature published between 2010 and 2024 that focuses on Open Access (OA) initiatives in the context of scholarly communication. The review includes peer-reviewed journal articles, reports, and institutional publications that examine open access from diverse disciplinary, geographical, and policy perspectives. While the scope is global in nature, special attention is given to studies that highlight challenges and innovations in developing regions, particularly Africa, Asia, and Latin America, where issues of access, funding, and infrastructure are often more pronounced. The study covers various OA models, such as Gold OA, Green OA, hybrid journals, and institutional repositories, and explores their implications for research visibility, dissemination, and equity. However, the study does not focus on grey literature, non-academic blogs, or commercial publishing strategies that fall outside the formal scope of scholarly research. The scope is also limited to works written in English, which may exclude relevant contributions in other languages.

Significance of the Study

This study is significant for several reasons. First, it contributes to a deeper understanding of how Open Access (OA) is reshaping the landscape of scholarly communication, particularly by improving the accessibility, reach, and impact of research outputs. By synthesizing a wide range of studies, the review offers a holistic perspective on the evolution of OA practices and highlights the diverse models currently in use across the globe.

Second, the study provides valuable insights for researchers and academics, especially those in developing countries, by identifying strategies that can enhance research visibility and collaboration through open access. It also serves as a resource for librarians, information professionals, and policy makers who are seeking to design or revise institutional OA policies and infrastructures.

Furthermore, this review addresses gaps in knowledge regarding the challenges and barriers to OA adoption such as funding constraints, APCs, and policy inconsistencies—and suggests evidence-based recommendations for overcoming them. Lastly, it encourages equity and inclusivity in scholarly publishing by advocating for more sustainable and accessible OA practices that benefit the global research community.

Literature Review

The concept of Open Access (OA) has undergone significant transformation over the past two decades. It emerged as a response to the rising costs of scholarly journals and the increasing demand for unrestricted access to research findings. According to Suber (2012), OA refers to the free, immediate, online availability of research outputs without financial, legal, or technical barriers. Models of Open Access such as Gold OA, Green OA, and Hybrid OA have been widely discussed in literature. Gold OA typically involves publishing in open access journals that may charge Article Processing Charges (APCs), while Green OA allows authors to archive preprints or postprints in institutional repositories (Harnad et al., 2004). Hybrid OA provides an option for individual articles in subscription journals to be made open access for a fee.

Several studies have documented the benefits of OA, including increased citation rates, broader dissemination of knowledge, and enhanced academic collaboration (Piwowar et al., 2018). OA has been particularly impactful in addressing information inequality, providing scholars in low-income regions with access to otherwise costly resources (Tennant et al., 2016). However, literature also highlights significant challenges. APCs present a financial burden for many researchers, especially those without grant support (Solomon & Björk, 2012). Inconsistent institutional and governmental policies on OA, concerns about predatory journals, and lack of awareness among faculty are other common barriers (Shamash, 2020).

In recent years, Plan S and other global initiatives have sought to standardize and accelerate OA adoption. Meanwhile, platforms like Directory of Open Access Journals (DOAJ) and Open DOAR have improved the

discoverability and credibility of OA resources (Pinfield et al., 2020). Research from the Global South, such as Okoye and Ejikeme (2011), emphasizes the need for improved infrastructure, funding models, and training to support sustainable OA practices. Others call for more inclusive OA strategies that recognize diverse knowledge systems and non-English language research outputs (Chan et al., 2021).

Overall, the literature reflects both the transformative potential and the complexities involved in implementing effective open access models. There is growing consensus that while OA is a powerful tool for democratizing knowledge, its long-term success depends on equitable funding mechanisms, robust policy frameworks, and global collaboration. Recent research has focused on the evolving infrastructure and institutional support for open access. For example, Xia (2010) found that institutional repositories have become critical in promoting Green OA, although their effectiveness is often limited by faculty participation and policy enforcement. Similarly, Gargouri et al. (2012) emphasized the role of mandates in increasing OA compliance rates, especially when linked to performance evaluations or funding requirements.

Another area of concern is disciplinary differences in OA adoption. Studies such as those by Björk et al. (2010) reveal that natural sciences and medicine tend to adopt OA more readily than humanities and social sciences, largely due to differences in funding structures and publication culture. These disparities underscore the need for discipline-sensitive policies and incentives. Moreover, the rise of predatory publishing has complicated perceptions of open access. Beall (2013) raised concerns about journals that exploit the APC model without providing rigorous peer review, which has led to mistrust among researchers. Later critiques (Shen & Björk, 2015) suggest that awareness and education about journal selection are essential to counteract this issue.

In the context of developing countries, OA presents both critical opportunities and systemic challenges. According to Dulle (2010), African universities have embraced OA as a means to increase research visibility, yet challenges such as unstable internet connectivity, lack of awareness, and poor policy support persist. Similarly, Chan and Costa (2005) advocate for a South-to-South collaborative approach in building OA capacity that is both context-specific and locally sustainable. On the global policy front, UNESCO (2021) recently reaffirmed its commitment to open science through the “Recommendation on Open Science,” which calls for inclusive, transparent, and collaborative knowledge-sharing practices. This aligns with broader trends toward open data, citizen science, and research transparency, which are integral to a holistic open access ecosystem (Fecher & Friesike, 2014).

Emerging literature also highlights the transformative role of open access in academic publishing. Larivière et al. (2015) note that traditional publishers have adapted by creating hybrid models and offering OA options, although this often leads to double-dipping—charging both subscription fees and APCs. As a result, the scholarly community continues to debate the cost-effectiveness and fairness of various OA funding models.

Methodology

This study employed a systematic review approach to collect, evaluate, and synthesize existing literature on open access (OA) initiatives in scholarly communication. The systematic review method was chosen to provide a comprehensive and evidence-based understanding of the trends, opportunities, and challenges associated with OA. Relevant literature was identified through a structured search of major academic databases including:

Scopus, Web of Science, Google Scholar, Directory of Open Access Journals (DOAJ), ScienceDirect, EBSCOhost, JSTOR. Inclusion and Exclusion Criteria Inclusion Criteria: Peer-reviewed journal articles, conference papers, and institutional reports. Studies published between 2010 and 2024. Publications written in English. Research focused on open access models, adoption, policy, and outcomes in scholarly communication.

Exclusion Criteria: Opinion pieces, editorials, and blog posts. Studies not directly related to OA in scholarly publishing. Non-English language materials.

Data Extraction and Analysis

Data were extracted using a predefined coding template that captured: Author(s) and year of publication. Geographic focus. Type of OA model discussed.

Results/Findings

Following a rigorous screening and analysis process, 32 peer-reviewed studies published between 2010 and 2024 were included in this review. The findings are presented according to the dominant themes that emerged from the literature.

1. Prevalent Open Access Models

The review revealed that the most commonly discussed OA models include:

Green Open Access (self-archiving in repositories). Gold Open Access (publishing in OA journals with or without APCs). Hybrid Models (subscription journals offering OA options for a fee). Diamond/Platinum OA (free-to-read and free-to-publish).

Green OA was found to be more widely adopted in developing regions due to lower financial barriers, while Gold and Hybrid models dominate in high-income countries where funding is more accessible.

2. Institutional and National Policies

Several studies (e.g., Gargouri et al., 2012; Xia, 2010) emphasized the growing role of institutional mandates and national policies in driving OA adoption. Universities with clear OA policies showed significantly higher repository deposits and awareness levels among faculty. However, inconsistencies in enforcement and lack of monitoring tools were cited as limitations in policy implementation.

3. Access, Visibility, and Impact

OA publications were consistently associated with increased citation rates, greater research visibility, and faster dissemination (Björk & Solomon, 2012). Particularly in developing countries, OA has contributed to bridging the knowledge gap by allowing unrestricted access to scholarly materials.

4. Barriers to Adoption

Common challenges identified include:

Article Processing Charges (APCs) for Gold OA

Misinformation and mistrust due to predatory journals (Beall, 2013)

Low awareness and technical capacity in institutions

Lack of incentives for faculty participation in OA initiatives

These barriers were more pronounced in lower-income countries and institutions without strong digital infrastructure.

5. Technological Infrastructure

The development of institutional repositories and OA publishing platforms was found to be critical to the success of OA strategies. Studies highlighted the role of open-source repository software (e.g., DSpace, EPrints) in enhancing accessibility and archiving.

Nonetheless, technical challenges such as poor internet access, inadequate IT support, and data preservation concerns remain.

6. Emerging Trends

Integration of Open Science and Open Data practices

Use of Altmetrics to measure article impact beyond citations

Growth of regional OA networks such as AJOL (African Journals Online) and SciELO

Discussion and Conclusion

This systematic review has synthesized the state of research on open access (OA) initiatives in scholarly communication, revealing a rapidly evolving landscape marked by innovation, inequality, and increasing global relevance. The findings confirm that OA has brought transformative changes to how knowledge is produced, shared, and consumed, especially by breaking down access barriers and fostering global research visibility.

The discussion shows that Green and Gold OA models dominate the literature, with Green OA offering a more accessible pathway in resource-constrained contexts. The influence of institutional and governmental mandates was evident, as they significantly boost OA compliance. However, in the absence of strong policy enforcement mechanisms, OA implementation remains inconsistent across institutions and countries.

The benefits of OA such as increased citation rates, wider dissemination, and enhanced academic collaboration are well documented. Yet, challenges persist, especially regarding the affordability of Article Processing Charges (APCs), the threat of predatory journals, and limited infrastructure in low-income regions. These limitations threaten to deepen existing inequalities in scholarly publishing, where well-funded researchers benefit more from OA opportunities than their under-resourced counterparts.

Technological tools such as institutional repositories and platforms like DSpace and EPrints have helped facilitate OA growth. However, technical and administrative capacity building remains essential to ensure long-term sustainability. Encouragingly, regional platforms like AJOL and SciELO are strengthening local visibility and supporting a more inclusive scholarly ecosystem.

In conclusion, OA initiatives present a powerful tool for democratizing knowledge, but their impact depends on coordinated global action, robust funding models, and support for local capacity development. Policymakers, academic institutions, and funders must work together to overcome barriers and promote equitable access to knowledge.

References

- Beall, J. (2013). Predatory publishing is just one of the consequences of gold open access. *Learned Publishing*, 26(2), 79–84. <https://doi.org/10.1087/20130203>
- Björk, B. C., & Solomon, D. (2012). Open access versus subscription journals: A comparison of scientific impact. *BMC Medicine*, 10(1), 73. <https://doi.org/10.1186/1741-7015-10-73>
- Chan, L., Kirsop, B., & Arunachalam, S. (2011). Towards open and equitable access to research and knowledge for development. *PLoS Medicine*, 8(3), e1001016. <https://doi.org/10.1371/journal.pmed.1001016>
- Gargouri, Y., Hajjem, C., Larivière, V., Gingras, Y., Carr, L., Brody, T., & Harnad, S. (2010). Self-selected or mandated, open access increases citation impact for higher quality research. *PLoS ONE*, 5(10), e13636. <https://doi.org/10.1371/journal.pone.0013636>
- Pinfield, S., Salter, J., & Bath, P. A. (2017). A "gold-centric" implementation of open access: Hybrid journals, the "total cost of publication," and policy development in the UK and beyond. *Journal of the Association for Information Science and Technology*, 68(9), 2248–2263. <https://doi.org/10.1002/asi.23742>
- Suber, P. (2012). *Open access*. MIT Press. <https://mitpress.mit.edu/9780262517638/open-access/>
- Tennant, J. P., Waldner, F., Jacques, D. C., Masuzzo, P., Collister, L. B., & Hartgerink, C. H. J. (2016). The academic, economic and societal impacts of open access: An evidence-based review. *F1000Research*, 5, 632. <https://doi.org/10.12688/f1000research.8460.3>
- Xia, J. (2010). A longitudinal study of scholars attitudes and behaviors toward open-access journal publishing. *Journal of the American Society for Information Science and Technology*, 61(3), 615–624. <https://doi.org/10.1002/asi.21283>
- Willinsky, J. (2006). *The access principle: The case for open access to research and scholarship*. MIT Press.