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The Open Access Effect: Transforming Collection Development Using Open Repositories

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Abstract:

This paper explores the transformative impact of the Open Access (OA) movement on collection development in academic libraries, emphasizing the role of open repositories. This paper employed a qualitative research method through a systematic literature review. To achieve these objectives, literature was sourced from multiple academic databases, including Google Scholar, Scopus, Universities' Open repositories, and Web of Science. Key findings indicate a significant increase in hybrid, Gold OA, and Green OA journals, enhancing accessibility to scholarly materials and democratizing knowledge. The integration of OA resources into library collections has facilitated broader access to academic works, enabling libraries to reallocate funds from expensive subscriptions to support OA initiatives and improve digital infrastructure. The study highlights the positive effects of open repositories on collaboration, innovation, and equitable information dissemination. However, it also addresses challenges such as sustainability, quality control, copyright compliance, and digital preservation. Future directions suggest enhancing interoperability, embracing emerging technologies, expanding inclusivity and accessibility, supporting open science and data sharing, and strengthening community engagement.

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The Open Access Effect: Transforming Collection Development Using Open Repositories

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ABSTRACT

This paper explores the transformative impact of the Open Access (OA) movement on collection development in academic libraries, emphasizing the role of open repositories. This paper employed a qualitative research method through a systematic literature review. To achieve these objectives, literature was sourced from multiple academic databases, including Google Scholar, Scopus, Universities' Open repositories, and Web of Science. Key findings indicate a significant increase in hybrid, Gold OA, and Green OA journals, enhancing accessibility to scholarly materials and democratizing knowledge. The integration of OA resources into library collections has facilitated broader access to academic works, enabling libraries to reallocate funds from expensive subscriptions to support OA initiatives and improve digital infrastructure. The study highlights the positive effects of open repositories on collaboration, innovation, and equitable information dissemination. However, it also addresses challenges such as sustainability, quality control, copyright compliance, and digital preservation. Future directions suggest enhancing interoperability, embracing emerging technologies, expanding inclusivity and accessibility, supporting open science and data sharing, and strengthening community engagement.

Keywords: Open Access, collection development, academic libraries, open repositories, scholarly communication

INTRODUCTION

Open Access (OA) is a broad universal drive intended to grant free and unrestricted online access to academic research and scholarship. An open repository is a digital platform that offers free, instant, and permanent access to research productions such as journal articles, preprints, data, and other scholarly materials. These repositories are often maintained by institutions like universities, research organizations, or subject-specific communities. This means anyone can read, download, copy, distribute, print, search, or link to the research without financial, legal, or technical barriers. Therefore, the field of scholarly communication has seen a significant transformation since the introduction of open access (OA) (Okwu & Oladokun, 2023). The public's open access to research

has resulted in a paradigm change that has broad ramifications for libraries and their collection expansion plans. The driving force behind this change is open repositories, which are online databases that house academic publications.

Open Access repositories usage statistics are growing in importance, as a part of the measurement of research visibility and impact. Most open-access repositories are built upon free open-source software by the (usually non-profit) communities that use them (Fleming et al., 2021). Furthermore, open access repositories are those websites that are hosted by universities and other research organizations that allow everyone to download scientific research papers without any cost. Open repositories have undeniably revolutionized the way libraries approach collection development. By offering free access to a vast array of scholarly works, they challenge traditional collection-building models and present new opportunities for libraries to optimize their resources and better serve their users (Brunsting, et al., 2022).

In the evolving landscape of academic libraries, the Open Access (OA) movement has emerged as a powerful force reshaping how information is accessed and disseminated. Open Access refers to the practice of providing unrestricted online access to scholarly research, enabling anyone to read, download, and share academic content without subscription or payment barriers. Central to this movement are open repositories, digital platforms that store and provide free access to a wide array of scholarly works, including journal articles, theses, datasets, and other research outputs. Collection development, a core function of libraries, involves the systematic selection, acquisition, and management of library resources to meet the needs of its users. It ensures that libraries maintain a balanced and comprehensive collection of materials that support research, teaching, and learning. The importance of collection development cannot be overstated, as it directly impacts the quality and relevance of the library's offerings, enabling it to fulfill its mission of facilitating knowledge discovery and dissemination. However, one can state that open repositories are transforming collection development in significant ways. This transformation is not only broadening the scope of available resources but also enabling libraries to navigate financial constraints more effectively and adapt to the changing needs of their communities. This paper explores how open repositories are revolutionizing collection development, driving a shift towards more inclusive, collaborative, and sustainable library practices.

Objectives of the Study

1. To ascertain the relationship open access movement and collection development
2. Determine the impact of open repositories on collection development
3. To determine the benefits of open repositories in collection development
4. To identify the challenges associated with collection development in Open Repositories

METHODOLOGY

Research Design

This paper employed a qualitative research method through a systematic literature review to explore the transformative impact of open repositories on collection development in academic libraries. The primary objectives of the study were to ascertain the relationship between open access movement and collection development, determine the impact of open repositories on collection development, identify the benefits of open repositories in collection development, and recognize the challenges associated with collection development in open repositories.

Data Sources and Selection Criteria

To achieve these objectives, literature was sourced from multiple academic databases, including Google Scholar, Scopus, Universities' Open repositories, and Web of Science. The search focused on articles related to the study's title and objectives. Keywords such as "open access," "open repositories," "collection development," "academic libraries," and "scholarly communication" were utilized to ensure a comprehensive and relevant collection of literature. Articles that were directly related to the impact of open access and open repositories on collection development were included in the review, while those not related were excluded. More so, articles between 2020 and 2024 were duly considered for this search.

Data Analysis

The collected literature was subjected to thematic analysis. This involved identifying, analyzing, and reporting patterns (themes) within the data. The thematic analysis aimed to provide insights into:

- The relationship between the open access movement and collection development.
- The specific impacts of open repositories on collection development practices.
- The benefits of integrating open repositories into collection development strategies.
- The challenges and limitations associated with collection development in the context of open repositories.

Ethical Considerations

Throughout the study, the researchers adhered to all ethical procedures. This included ensuring the proper attribution of all sources and maintaining academic integrity. All references and citations were meticulously compiled and presented in the reference list following the APA 7th edition format.

LITERATURE REVIEW

The study reviewed literature on the relationship between open access movement and collection development, specific impacts of open repositories on collection development practices, the benefits of integrating open repositories into collection development strategies, and challenges and limitations associated with collection development in the context of open repositories.

Relationship between the open access movement and collection development

The Open Access (OA) movement has become a pivotal force in the realm of scholarly communication, fundamentally altering how academic research is accessed and disseminated. Open Access advocates for the free, immediate, and unrestricted online availability of research outputs, removing the financial and legal barriers that traditionally hinder access to scholarly information. Central to this movement is open repositories, which serve as digital platforms where academic works are stored and made freely accessible. Out of the 6,035 journals listed in Cabell's Journalytics, only 15% are traditional with no open-access features (Harker et al., 2022). The vast majority are hybrid (63%), while 12% are Gold OA and 8% are Green OA. Ulrich's Periodical Directory, known for its comprehensive and historical records of active and inactive titles, lists 45,351 active, peer-reviewed journals as of late December 2021. Among these, 14,431 (32%) are open access, as included in the DOAJ. Walt Crawford's latest analysis of Gold OA journals listed in the Directory of Open Access Journals covers trends from 2015 through 2020 (Crawford, 2021). During these six years, the publication of articles in Gold OA journals has increased from 10% per year through 2017 to nearly 19% in 2020. By 2020, while nearly 70% of DOAJ journals required no fees to publish, nearly two-thirds of all articles published in Gold OA journals involved some form of publishing fees.

Not surprisingly, the highest fees were associated with commercial publishers (The Big 9) and largely in the science, technology, engineering, and mathematic fields (STEM) (Crawford, 2021). Of the more than 45,000 active, peer-reviewed journals listed in Ulrich's, only 801 were published in African countries (1.7%). It should be noted that this rate of journal activity has not substantially changed since the early 1990s. Of these journals, about 30% were open-access, which is similar to the distribution of OA among *all* journals. Besides the lower productivity of this region, Crawford noted how "traditional publishers are nearly absent, with university and scholarly societies providing the bulk of publishing services. The distribution by country of institutional repositories and Green OA is a little different than that of Gold OA. As of December 28, 2021, there were 5,796 OA repositories registered with Open DOAR. Four countries account for 38% of all repositories: the United States, Japan, the United Kingdom, and Germany. Just 210 (3.6%) are from countries on the African continent, and the bulk of these are located in South Africa (48), Kenya (44), Nigeria (30), and Algeria (20) (Harker et al., 2022). While this current state may not be surprising, it is no less challenging when trying to rectify the global inequities of scholarly communication.

Open repositories have evolved significantly since their inception, driven by the need to enhance the accessibility and visibility of academic research (Bashir et al., 2022). As previously stated, the early 2000s saw the establishment of some of the first institutional repositories, such as MIT's DSpace and the University of California's eScholarship repository (Idiegbeyan-Ose et al., 2020). These platforms were designed to store a wide array of academic works, including theses, dissertations, articles, and datasets, providing a centralized and accessible location for scholarly content. The development of subject-specific repositories further propelled the Open Access

movement. Colom et al. (2022) observe that platforms like arXiv, which focuses on physics, mathematics, and computer science, and PubMed Central, which archives biomedical and life sciences literature, demonstrated the viability and benefits of freely accessible repositories. These repositories have not only expanded the reach of research but also facilitated greater collaboration and innovation within academic communities. In addition, technological advancements and the proliferation of digital content have further enhanced the functionality and reach of open repositories. The integration of open repositories with institutional and national research infrastructures has also strengthened the Open Access movement, promoting a more unified and accessible global research ecosystem (Kodua-Ntim & Fombad, 2020).

While synergizing the foregoing, collection development involves the systematic selection, acquisition, and management of library resources to meet the needs of its users. Traditionally, this process has been shaped by budget constraints, publisher agreements, and the need to balance physical and digital collections. However, Tennant et al. (2020) state that the rise of the Open Access movement and the proliferation of open repositories have significantly transformed collection development practices. One of the most profound impacts of the Open Access movement on collection development is the enhanced accessibility of scholarly materials. Koley and Lala (2020) indicate that open repositories provide free access to a vast array of research outputs, reducing the reliance on expensive subscription-based journals and databases. This shift has enabled libraries to broaden their collections and provide more comprehensive resources to their users, irrespective of budget limitations. For instance, institutional repositories like Harvard's DASH and MIT's DSpace offer extensive collections of research outputs that are freely accessible to the public (Sethi, 2024). These repositories not only enhance the visibility and impact of the research produced by these institutions but also democratize access to knowledge, allowing researchers, students, and the general public to benefit from cutting-edge research without financial barriers.

However, the high cost of journal subscriptions has long been a challenge for libraries, often leading to difficult decisions about which resources to acquire and which to forego (Dahl, 2021). The Open Access movement mitigates this issue by providing free access to high-quality research, enabling libraries to allocate their budgets more efficiently. Many libraries have responded by canceling costly subscription bundles, known as Big Deals, with major publishers and redirecting those funds towards supporting Open Access initiatives and acquiring other essential resources. This shift towards Open Access not only alleviates financial pressures but also aligns with the broader mission of libraries to provide equitable access to information. More so, open repositories facilitate greater collaboration among researchers by providing a platform for sharing and accessing research outputs (Beck et al., 2022). This collaborative environment enhances the visibility and impact of research, fostering a culture of open collaboration and innovation. Repositories like arXiv and PubMed Central have become indispensable tools for researchers, enabling them to share their findings quickly and efficiently with the global academic community (Zuo et al., 2021). The collaborative nature of Open Access also extends to the

relationship between libraries and researchers. Libraries play a crucial role in educating researchers about the benefits and practices of Open Access, assisting with the submission of works to repositories, and advocating for Open Access policies at institutional and national levels.

According to Cox (2021), sustainability in collection development is crucial for the long-term viability of library resources. Zhu (2020) states that Open Access supports sustainable practices by promoting the reuse and sharing of knowledge. Zhu further adds that Open Educational Resources (OER) which are teaching, learning, and research materials that are freely available and openly licensed, exemplify the sustainable potential of Open Access. In so doing, libraries can integrate OER into their collections, reducing costs and promoting lifelong learning. Moreover, the sustainability of Open Access initiatives is often supported by institutional and governmental policies that mandate the open sharing of publicly funded research (Huang et al., 2020).

Specific impacts of open repositories on collection development practices

The advent of the Open Access (OA) movement and the subsequent rise of open repositories have fundamentally altered the landscape of academic libraries. Open repositories, which store and provide free access to a vast array of scholarly materials, have transformed how libraries approach collection development (Chiware, 2020). One of the most significant impacts of open repositories on collection development is the enhanced accessibility of scholarly resources. De Castro et al. (2022) observe that open repositories such as institutional repositories, subject-specific repositories, and preprint servers provide unrestricted access to a wide range of academic works, including journal articles, theses, dissertations, and research data. This increased accessibility benefits not only researchers and students but also the general public, who can now access high-quality research without the barriers of subscription fees (Fleming et al., 2021).

Islam et al. (2020) maintain that universities and research institutions have established repositories to archive and disseminate their research outputs. For instance, Harvard University's DASH and MIT's DSpace repositories offer extensive collections of scholarly works freely available to the public (Sethi, 2024). Platforms like arXiv for physics, mathematics, and computer science, and PubMed Central for biomedical literature, provide open access to subject-specific research, facilitating the rapid dissemination and discovery of new findings (Fraser et al., 2020). Given these, it is noted that the widespread availability of open-access resources has democratized knowledge, enabling researchers from developing countries, independent scholars, and the general public to access and benefit from cutting-edge research.

The proliferation of open repositories has necessitated a shift in collection development strategies within academic libraries (Walsh & Rana, 2020). Traditional collection development focused on the acquisition of physical and digital resources through purchases and subscriptions. However, Crayford et al. (2020) note that the rise of open access has introduced new paradigms and practices. With this, libraries are increasingly integrating open-access resources into their

collections. This involves curating and cataloging open-access materials alongside subscribed content, ensuring that users have seamless access to a comprehensive range of resources (Dahl, 2021).

The traditional model of collection development emphasized ownership of physical and digital materials (Cameron, 2021). Libraries purchased books, journals, and databases to build comprehensive collections that could be accessed locally. However, the rise of open repositories has shifted the focus from ownership to access (Tennant et al., 2021). More so, open access repositories provide a sustainable model for accessing scholarly materials without the need for ownership (Aspesi & Brand, 2020). This is to further explain that libraries offer their users access to a vast array of resources stored in open repositories, reducing the need to purchase or subscribe to expensive journals and databases. This shift allows libraries to provide broader access to information while managing budget constraints more effectively.

The integration of open repositories into collection development strategies has significant implications for library budgets and resource allocation (Kato et al., 2021). Grossmann and Brembs (2021) note that the cost of journal subscriptions and database licenses has traditionally consumed a substantial portion of library budgets. Consequently, this is why open access appears to be a viable solution to alleviate this financial burden. As a result, libraries can reallocate funds saved from subscription cancellations towards supporting open-access initiatives, such as funding for open-access publication fees, developing institutional repositories, and enhancing digital infrastructure (Brunsting et al., 2022). This reallocation not only supports the growth of open access but also ensures that libraries can continue to provide high-quality services and resources to their users. Many libraries are actively supporting open access through various initiatives, including institutional open access policies, open-access publishing funds, and membership in open-access consortia (Wise & Estelle, 2020).

Benefits of integrating open repositories into collection development strategies

Open repositories have become an integral part of the academic landscape, transforming how libraries manage and develop their collections (Tzanova, 2020). These digital platforms provide unrestricted access to a wide range of scholarly materials, significantly enhancing the scope and quality of library collections. One of the most significant benefits of open repositories is the improved discoverability and visibility of scholarly works (Macgregor, 2020; Majhi et al., 2023). Open repositories are indexed by major search engines and academic databases, making it easier for researchers, students, and the general public to find and access academic content (Gusenbauer & Haddaway, 2020).

Open repositories often include comprehensive metadata for each item, such as author information, keywords, abstracts, and citations (Quarati & Raffaghelli, 2022). Platforms like Google Scholar and institutional repository search engines leverage this metadata to provide

precise and relevant search results (Dong et al., 2023). Furthermore, the increased visibility of research outputs in open repositories leads to higher citation rates and greater academic impact. Studies have shown that open-access articles are cited more frequently than their subscription-based counterparts, as they are accessible to a broader audience (Vadhera et al., 2022; Xie et al., 2022). Repositories like arXiv and ResearchGate enable researchers to share their work with peers across the globe, regardless of institutional affiliations (Wenaas, 2021). Wenaas further explains that this kind of openness encourages collaboration and the development of research networks, where scholars can build upon each other's work, share insights, and advance collective knowledge. More so, preprint repositories allow researchers to share their findings before formal peer review, accelerating the dissemination of new knowledge (Fraser et al., 2021). Preprint platforms like bioRxiv and SSRN have become vital tools for researchers seeking to disseminate their work quickly and engage with peers (Sevryugina & Dicks, 2021). Scholars such as Lund et al. (2023) and Chakravorty et al. (2022) note that open repositories play a crucial role in reducing barriers to access for marginalized communities, including researchers from developing countries, independent scholars, and individuals without institutional affiliations.

According to Ochieng and Gyasi (2021), open repositories help bridge the digital divide by making scholarly content accessible to those who may not have the financial resources to pay for expensive journal subscriptions or database access. In addition, Ramachandran et al. (2021) observe that independent scholars who often lack the institutional support and resources available to their affiliated counterparts benefit immensely from open repositories. The authors further implied that open repository platforms provide access to essential research materials and enable independent researchers to conduct high-quality research and contribute to their fields. As noted by Ochieng and Dyasi (2021), open repositories are instrumental in supporting open education and research, promoting the free exchange of knowledge and resources in the academic community. Open repositories host a wide range of Open Educational Resources (OER), including textbooks, lecture notes, and instructional materials. Libraries integrate OER into their collections, enhancing the quality and accessibility of educational materials (McGowan, 2020).

Challenges and limitations associated with collection development in the context of open repositories

Open repositories have revolutionized the way academic libraries approach collection development by providing unrestricted access to scholarly materials (Roy et al., 2022). While the benefits of open repositories are substantial, they also present several challenges that libraries must address to ensure the effectiveness and sustainability of their collections. One of the primary concerns with open repositories is ensuring the quality and credibility of the materials they host. Unlike traditional scholarly publishing, which involves rigorous peer-review processes, open repositories often include a mix of peer-reviewed and non-peer-reviewed content (Majumdar, 2023; Tzanova, 2020). However, to address the lack of formal peer review, some open repositories have begun incorporating peer review mechanisms. For example, platforms like F1000Research

offer post-publication peer review, where articles are openly reviewed by experts after being made publicly available (Allen et al., 2020).

In addition, navigating copyright and licensing issues is a significant challenge in the context of open repositories (Nobes & Harris, 2023; Oladokun et al., 2024). The open access movement relies on open licenses, such as Creative Commons licenses, to allow free use and distribution of scholarly works (Borrego et al. 2021). In reaction, Crews (2020) suggests that libraries are expected to educate their users about the various types of open licenses and their implications. This includes understanding the permissions and restrictions associated with each license type, such as attribution requirements, non-commercial clauses, and share-alike provisions. Furthermore, ensuring compliance with copyright laws and regulations is crucial to avoid legal disputes (Crews, 2020; Ploman & Hamilton, 2024). To prevent this occurrence, libraries need to establish policies and procedures for managing copyright and licensing issues, including obtaining permissions for using copyrighted materials, respecting authors' rights, and properly attributing sources.

While adding to these challenges, Logullo et al. (2024) mention that sustaining open repositories requires reliable funding models and long-term financial support. Unlike traditional subscription-based models, open access relies on alternative funding sources, which can be unpredictable and insufficient (Cherla et al., 2021). Also, Tennant et al. (2020) reveal that securing consistent funding for open repositories is a significant challenge. Many repositories rely on grants, institutional support, and voluntary contributions, which may not be sustainable in the long term (Tlili et al., 2023).

According to Verluis et al. (2020), integrating open repositories with existing library systems and workflows presents technical and logistical challenges. Technical integration involves linking open repositories with library catalogs, discovery tools, and digital asset management systems (Candela et al., 2022). In addition, ensuring the long-term preservation of digital content in open repositories is a critical challenge (Logullo et al., 2024). The authors revealed that digital materials are susceptible to degradation, obsolescence, and loss over time. This is why Tenopir et al. (2020) suggest that managing research data and protecting user privacy are important considerations in open repositories. However, balancing the principles of open access with commercial interests is a complex challenge (Koch, 2021). While open access promotes unrestricted access to knowledge, commercial publishers often impose paywalls and subscription fees (Thiel, 2022). In so doing, libraries advocate for open access policies, negotiate fair agreements with publishers, and support alternative publishing models that align with the principles of open access.

DISCUSSION OF THE FINDINGS

The findings highlight a transformative relationship between the Open Access (OA) movement and collection development in libraries. The OA movement, advocating for unrestricted access to scholarly outputs, has profoundly impacted how libraries curate and manage their collections. Key findings include a significant increase in hybrid, Gold OA, and Green OA journals, as seen in Cabell's Journalytics and Ulrich's Periodical Directory (Harker et al., 2022; Crawford, 2021). This shift has led to enhanced accessibility of scholarly materials, democratizing access to knowledge and reducing reliance on expensive subscription-based journals (Koley & Lala, 2020; Sethi, 2024). Both Harker et al. (2022) and Crawford (2021) agree on the substantial growth in OA journals and the benefits of increased accessibility and visibility of research outputs. The literature consistently emphasizes the positive impact of OA on broadening access to scholarly materials and supporting equitable information dissemination. While there is general agreement on the benefits of OA, some authors highlight challenges such as the sustainability of OA models and the financial implications for libraries (Dahl, 2021; Tennant et al., 2020). There is a divergence in perspectives regarding the balance between supporting OA initiatives and managing budget constraints.

Open repositories have significantly influenced collection development strategies, shifting the focus from ownership to access. Libraries increasingly integrate OA resources into their collections, facilitating broader access to academic works (Walsh & Rana, 2020; Crayford et al., 2020). This shift has allowed libraries to reallocate funds from expensive subscriptions to support OA initiatives and enhance digital infrastructure (Brunsting et al., 2022). Authors like De Castro et al. (2022) and Fleming et al. (2021) agree on the enhanced accessibility and democratization of knowledge brought about by open repositories. There is consensus on the positive impact of open repositories on collaboration and innovation within the academic community (Beck et al., 2022; Zuo et al., 2021). Some authors argue that the shift from ownership to access presents challenges, such as ensuring the long-term availability of digital resources and managing the integration of OA materials with existing library systems (Cameron, 2021; Tennant et al., 2021). There are differing opinions on the extent to which libraries should balance traditional collection development practices with the growing emphasis on OA resources.

Integrating open repositories into collection development strategies offers several benefits, including improved discoverability and visibility of scholarly works, enhanced collaboration, reduced barriers for marginalized communities, and support for open education and research (Tzanova, 2020; Macgregor, 2020; Majhi et al., 2023). Open repositories provide unrestricted access to a wide range of academic materials, supporting a more inclusive and equitable academic environment (Ochieng & Gyasi, 2021). The finding consistently highlights the benefits of open repositories in improving the discoverability and visibility of research outputs, fostering collaboration, and supporting marginalized communities (Gusenbauer & Haddaway, 2020; Dong et al., 2023; Wenaas, 2021). Authors agree on the positive impact of open repositories on the dissemination and accessibility of knowledge. While there is general agreement on the benefits of open repositories, some authors caution against potential challenges, such as the sustainability of OA models and the need for effective management and curation of OA materials (McGowan,

2020; Ramachandran et al., 2021). There are varying perspectives on how to best integrate OA resources into existing collection development strategies.

Despite the numerous benefits, several challenges and limitations are associated with collection development in the context of open repositories. These include ensuring quality control and peer review, navigating copyright and licensing issues, sustaining funding models, integrating with existing library systems, and managing digital preservation and data privacy (Majumdar, 2023; Nobes & Harris, 2023; Logullo et al., 2024). Authors such as Roy et al. (2022) and Crews (2020) agree on the importance of addressing quality control, copyright compliance, and sustainable funding for open repositories. There is consensus on the need for robust policies and practices to manage these challenges effectively (Borrego et al., 2021; Crews, 2020). There is some disagreement on the extent to which libraries should prioritize OA initiatives over traditional collection development practices. While some authors advocate for a balanced approach, others emphasize the need for a more radical shift towards OA to maximize its benefits (Candela et al., 2022; Thiel, 2022). Additionally, opinions differ on the best strategies for integrating OA resources with existing library systems and ensuring long-term digital preservation (Tenopir et al., 2020; Koch, 2021).

CONCLUSION

The findings of this study reveal a transformative impact of the Open Access (OA) movement on collection development in libraries. The significant increase in hybrid, Gold OA, and Green OA journals has enhanced the accessibility of scholarly materials, democratizing knowledge and reducing reliance on expensive subscription-based journals. This shift has allowed libraries to reallocate funds from costly subscriptions to support OA initiatives and improve digital infrastructure. Open repositories have further influenced collection development strategies by shifting the focus from ownership to access, facilitating broader access to academic works, and supporting collaboration and innovation within the academic community.

The integration of open repositories into collection development strategies offers several benefits, including improved discoverability and visibility of scholarly works, enhanced collaboration, reduced barriers for marginalized communities, and support for open education and research. These repositories provide unrestricted access to a wide range of academic materials, fostering a more inclusive and equitable academic environment. However, the study also highlights several challenges and limitations associated with collection development in the context of open repositories. Ensuring quality control and peer review, navigating copyright and licensing issues, sustaining funding models, integrating with existing library systems, and managing digital preservation and data privacy are all critical concerns. While there is general agreement on the need to address these challenges, opinions differ on the best strategies for balancing traditional collection development practices with the growing emphasis on OA resources.

Future Directions for Open Repositories

As open repositories continue to evolve, several future directions can enhance their impact and sustainability. From the findings, future open repositories should focus on enhancing interoperability with other digital platforms and systems. Standardizing metadata schemas and protocols can facilitate seamless data exchange and integration across repositories. Encouraging collaboration among repositories, both regionally and globally, can lead to the development of shared infrastructures and services, reducing duplication of efforts and maximizing resources. Incorporating emerging technologies can significantly improve the functionality and reach of open repositories. Leveraging artificial intelligence (AI) and machine learning (ML) can enhance metadata creation, content discovery, and personalized user experiences. Blockchain technology can offer solutions for secure and transparent management of intellectual property and authorship records.

Future open repositories should prioritize inclusivity and accessibility. This involves ensuring that repositories are designed to be user-friendly for individuals with disabilities and those from diverse linguistic and cultural backgrounds. Developing multilingual interfaces and providing translations of key materials can broaden the reach of repositories. Additionally, efforts should be made to include more content from underrepresented regions and communities, promoting a more equitable global research ecosystem. The future of open repositories lies in supporting the broader movement of open science. This includes not only sharing research articles but also data, methodologies, and other research outputs. Developing infrastructures and policies that facilitate the sharing and reuse of research data can accelerate scientific discovery and innovation. Encouraging researchers to deposit their datasets in open repositories and providing adequate support for data curation and management are critical steps.

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