

Awareness and Utilization of Open Access Resources in Higher Education: A Literature Review

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ABSTRACT

The growth of Open Access (OA) has brought significant changes in the way scholarly information is accessed, disseminated, and used in higher education. Open Access resources, including OA journals, institutional repositories, research articles, theses, preprints, and other scholarly materials, provide users with opportunities to obtain academic information without traditional subscription barriers. This paper provides a review of the literature on awareness and utilization of Open Access resources in higher education. The reviewed literature indicates that awareness of Open Access has increased among faculty members, researchers, students, and other academic users; however, the level of practical utilization varies across institutions and geographical settings. The literature further shows that users utilize OA resources for accessing scholarly information, conducting research, teaching and learning, publishing research, self-archiving, and disseminating scholarly outputs. Institutional repositories play an important role in increasing the visibility and accessibility of institutional research. However, inadequate infrastructure, limited technical skills, copyright concerns, publication charges, lack of institutional support, and insufficient knowledge of OA publishing and self-archiving remain important barriers. The review highlights the need for institutional policies, training programmes, repository development, and greater support for effective utilization of Open Access resources in higher education.

KEYWORDS: Open Access, Open Access Resources, Higher Education, Awareness, Utilization, Institutional Repositories, Scholarly Communication, Open Science.

INTRODUCTION

Open Access has become an important component of contemporary scholarly communication and has changed the traditional ways through which academic information is accessed and disseminated. The increasing availability of Open Access journals, institutional repositories, electronic theses and dissertations, preprints, and other openly available scholarly resources has created new opportunities for students, teachers, researchers, and academic

institutions. In higher education, access to scholarly information is essential for teaching, learning, research, and the development of knowledge.

The availability of Open Access resources, however, does not necessarily mean that all academic users are equally aware of or actively utilize such resources. Awareness represents users' knowledge and familiarity with Open Access concepts, resources, publishing models, repositories, and related initiatives, whereas utilization refers to the actual use of these resources for academic and research purposes. The distinction between awareness and utilization is therefore important when examining the role of Open Access in higher education.

In this context, the present paper provides a review of the literature concerning awareness and utilization of Open Access resources in higher education. The literature is examined thematically to understand how academic users perceive, access, use, publish, share, and disseminate scholarly information through Open Access channels. The review also considers the major barriers and institutional factors influencing effective utilization of Open Access resources.

SOURCES CONSULTED

This paper encompasses a selective range of research studies on Open Access awareness and utilization in higher education. The literature includes studies published in national and international scholarly journals covering faculty members, researchers, students, academic libraries, institutional repositories, Open Access publishing, and Open Science practices. The reviewed literature was examined to identify major patterns, practices, barriers, and developments associated with Open Access in higher education.

STRUCTURE OF THE PAPER

The literature reviewed is organized into two related themes based on the major aspects identified from the literature and presented thematically within each area. The themes of the present study are as follows:

- Awareness of Open Access Resources
- Utilization of Open Access Resources

OPEN ACCESS AWARENESS IN HIGHER EDUCATION

Awareness of open access (OA) is an important prerequisite for the effective participation of higher education stakeholders in the changing scholarly communication environment. In higher education, OA awareness encompasses knowledge and understanding of open access publishing, open access journals, institutional repositories, self-archiving, OA initiatives, and the availability of freely accessible scholarly information. The literature indicates that awareness has increased among academics and academic libraries, although the depth of awareness varies considerably across institutions, countries, and specific OA models.

One of the earlier studies examining faculty awareness was conducted by Abrizah (2009) in a research-intensive university in Malaysia. The study surveyed 131 academics across 14 faculties, institutes, and centres and examined their awareness, experiences, and opinions regarding open access publishing and institutional repositories. The findings showed generally positive attitudes toward the open access principle and a willingness among many

academics to contribute research materials to institutional repositories. However, the study also identified concerns related to copyright ownership, plagiarism, publisher policies, preservation, and trust. The findings demonstrate that awareness of the general concept of OA does not necessarily imply detailed knowledge of repository practices and self-archiving procedures.

Singeh, Abrizah, and Karim (2013) further examined awareness of self-archiving among academics in five Malaysian research-intensive universities. Based on responses from 72 academics, the study found that many respondents had limited knowledge or experience of institutional repositories and were unfamiliar with self-archiving opportunities. At the same time, most respondents supported the principle of OA and expressed willingness to contribute material to institutional repositories under appropriate circumstances. The authors consequently emphasized the need for greater awareness-building and education concerning self-archiving and institutional repositories.

Evidence from Pakistan presents a similar distinction between general awareness and detailed knowledge. Sheikh (2019), in a study of faculty members from 21 universities and higher education institutions in Islamabad, received 616 valid responses from 3,000 invited faculty members. The study found that 71.5% of respondents were already aware of scholarly OA; however, their awareness of particular OA resources and initiatives was relatively low. Thus, although general awareness of the OA concept was widespread, more specific knowledge concerning OA-related resources and publishing opportunities remained limited.

The Pakistani literature also provides evidence at the institutional library level. Sultan and Rafiq (2021) investigated OA awareness among university libraries in Punjab and Islamabad using a survey of HEC-recognized universities. Among the 57 responding libraries, awareness was particularly strong regarding HEC National Digital Library OA resources, OA journals, and the Pakistan Research Repository. In contrast, awareness of international OA initiatives and some OA publishing models, including the Budapest Open Access Initiative and Diamond OA, was comparatively lower. The study therefore indicates that awareness is not uniform across different components of the OA ecosystem; university libraries may be familiar with locally available resources while having less knowledge of broader OA models and initiatives.

A similar pattern is evident in Tanzania. Lwoga and Questier (2015) examined OA awareness, perceptions, and practices among faculty members in eight health sciences universities and interviewed 16 librarians. Their survey included 415 faculty members, with a response rate of 71.1%. The study reported that most faculty members were aware of OA issues. Nevertheless, the authors identified several barriers associated with OA, including limited awareness of particular practices, technical skills, ICT infrastructure, author-payment models, and concerns about copyright and plagiarism. Importantly, the findings suggest that awareness should be understood as a multidimensional construct rather than as simple recognition of the term “open access.”

The African higher education context also demonstrates considerable variation in OA awareness. Artigas, Gungula, and Laakso (2022) investigated OA among higher education institutions in Angola through an online survey of research management units. Of 44 institutions invited, 23 provided valid responses. The study reported moderate

institutional awareness of OA, while the incorporation of OA into academic processes remained relatively slow. This indicates that institutional awareness may exist without corresponding integration of OA principles into institutional research and academic processes. The authors also observed that OA had received limited attention in relation to academic career advancement.

Research from Southern Africa similarly highlights gaps in understanding. Van Wyk and du Toit (2016) examined digital scholarship curation in 16 public and private higher education institutions, with 10 institutions completing the questionnaire. Their findings identified gaps in understanding the nature and importance of interoperability in OA, as well as insufficient awareness of scholarship curation and the value of web visibility. These findings broaden the concept of OA awareness beyond knowledge of OA journals and demonstrate that awareness also includes understanding the technical, institutional, and scholarly communication dimensions of open access.

Institutional repositories represent another important component of OA awareness in higher education. Korkuvi, Budu, and Owusu-Ansah (2022) investigated institutional repository awareness and the visibility of university research output in Ghana. Their study involved 115 librarians and found that universities relied predominantly on mediated archiving rather than direct self-archiving. The authors emphasized the importance of strengthening awareness of institutional repositories among academics and students and recommended institutional strategies to encourage the deposit of scholarly outputs.

Evidence from Nigeria further supports the importance of institutional awareness. Omeluzor (2014) investigated institutional repository awareness and the willingness of faculty members to deposit research outputs in selected public and private universities. The study specifically addressed awareness of institutional repositories and faculty willingness to deposit pre- and post-publication research materials. This line of research demonstrates that awareness of the existence and purpose of an institutional repository is an important dimension of the broader OA awareness environment within universities.

The literature also shows that awareness is influenced by the institutional information environment. Fox and Hanlon (2015), examining OA uptake in Africa, identified limited educational support, inadequate national and institutional infrastructure, intellectual-property concerns, researcher perceptions, and language and literacy issues as factors associated with limited engagement with OA. Although their study addresses OA uptake more broadly, the findings are relevant to awareness because they demonstrate that awareness-building requires institutional support, information professionals, appropriate infrastructure, and educational interventions rather than simply making OA resources available.

Across the reviewed studies, a consistent distinction emerges between general awareness of open access and specific awareness of OA resources, models, and practices. Faculty members may know about the OA concept while having limited knowledge of institutional repositories, self-archiving, OA publishing models, international initiatives, copyright requirements, or specific OA resources. Sheikh (2019) illustrates this distinction clearly in Pakistan, where general awareness of scholarly OA was relatively high but awareness of specific OA resources and initiatives was

much lower. Similarly, Sultan and Rafiq (2021) found stronger awareness of locally relevant OA resources than of broader OA initiatives and publishing models.

Another important theme is the role of academic libraries and information professionals in developing OA awareness. The studies from Tanzania, Ghana, Pakistan, and Nigeria collectively indicate that librarians can contribute to OA awareness through training, workshops, advocacy, repository support, and guidance concerning OA publishing and scholarly communication. Lwoga and Questier (2015), for example, explicitly examined the role of information professionals in supporting OA scholarly communication, while Korkuvi et al. (2022) emphasized the need for information specialists to strengthen awareness of institutional repositories within the academic community.

The literature further indicates that awareness is affected by concerns about copyright, plagiarism, publication costs, technical knowledge, and institutional policies. In Malaysia, copyright and plagiarism were identified as important concerns among faculty members considering institutional repository contribution. In Tanzania, copyright and plagiarism concerns, technical skills, infrastructure, and author-payment models were reported as barriers. In Pakistan, lack of awareness concerning OA publishing and publication fees were identified as important challenges.

Overall, the literature suggests that OA awareness in higher education should not be treated as a single-dimensional concept. It can be viewed across several interconnected levels: awareness of the OA concept; awareness of OA journals and information resources; awareness of institutional repositories; awareness of self-archiving; awareness of OA publishing models; awareness of international OA initiatives; and awareness of copyright and related scholarly communication issues. Existing studies indicate that awareness is often stronger at the general or resource level than at the level of detailed OA policies, publishing models, repository practices, and international initiatives.

The reviewed literature also reveals geographical variation. Studies from Malaysia and Pakistan demonstrate relatively strong awareness of the general OA concept but continuing gaps in specific OA practices and initiatives. Research from Tanzania reports high general awareness among health sciences faculty but identifies barriers that restrict deeper engagement. Studies from Angola, Ghana, Nigeria, and Southern Africa demonstrate continuing institutional and infrastructural challenges. These differences indicate that OA awareness is shaped not only by individual knowledge but also by national research systems, institutional policies, library support, infrastructure, academic incentives, and the availability of training.

Taken together, previous research establishes that awareness is a fundamental dimension of OA development in higher education, but the existing literature remains fragmented across faculty, librarians, institutional repositories, specific OA resources, and individual OA models. Many studies are geographically concentrated and employ institution-specific surveys, making direct cross-country comparison difficult. There is therefore a need for broader reviews that synthesize the different dimensions of OA awareness and examine how awareness has developed across higher education contexts. Such a synthesis can help identify recurring knowledge gaps and provide a clearer understanding of the areas in which universities and academic libraries need to strengthen OA awareness among their academic communities.

OPEN ACCESS UTILIZATION IN HIGHER EDUCATION

Open access (OA) has become an important component of scholarly communication in higher education by enabling researchers, faculty members, students, and other academic users to access scholarly literature without subscription barriers. The utilization of OA in higher education can take several forms, including accessing scholarly publications, using OA materials for teaching and learning, publishing research in OA journals, and depositing scholarly outputs in institutional repositories. Existing literature suggests that OA utilization is shaped by the accessibility of resources, institutional infrastructure, publishing practices, technical capacity, and the academic needs of users.

Faculty members constitute one of the major user groups of OA resources in higher education. Sheikh (2019), in a study of faculty members from 21 universities and higher education institutions in Islamabad, Pakistan, found that respondents used OA venues more frequently for accessing scholarly content than for publishing their own research. The study therefore demonstrates that OA utilization among faculty can be primarily consumption-oriented, with freely accessible scholarly literature serving as an important source for research and academic activities. Although the respondents expressed positive attitudes toward OA, publication fees and limited knowledge about publishing through OA venues represented challenges to broader participation in OA publishing.

The use of OA resources is also influenced by the availability of institutional and national information infrastructure. Sultan and Rafiq (2021), examining university libraries in Pakistan, reported that OA resources such as HEC National Digital Library resources, OA journals, and the Pakistan Research Repository constituted important components of the information environment of university libraries. The authors identified free access as a major opportunity associated with OA resources, particularly in the context of constrained library budgets. Their findings indicate that OA can support academic libraries in meeting users' information needs while reducing dependence on costly subscription-based resources.

At the institutional level, institutional repositories represent an important mechanism through which higher education institutions facilitate the dissemination and utilization of scholarly outputs. Korkuvi, Budu, and Owusu-Ansah (2022) examined institutional repositories in Ghanaian universities and found that universities predominantly relied on a mediated-archiving model for uploading research outputs rather than direct self-archiving. Their findings indicate that repositories provide an important infrastructure for making university research outputs visible and accessible, although the level of utilization is influenced by institutional procedures and the involvement of information professionals. The authors recommended stronger institutional strategies, including deposit requirements and increased promotion of repositories within the academic community.

Digital scholarship curation is similarly important for the utilization and visibility of institutional research. Van Wyk and du Toit (2016), examining 16 higher education institutions in Southern Africa, found gaps in the effective curation of scholarly outputs in institutional repositories. Their investigation showed that weaknesses in interoperability, collaboration, scholarship curation, and web visibility could affect the effectiveness of institutional repositories. The study consequently emphasized both social and technical dimensions of repository development.

These findings suggest that the availability of a repository alone does not guarantee effective dissemination and use of institutional scholarly outputs.

Research from Tanzania provides further evidence concerning the different forms of OA utilization among academics. Lwoga and Questier (2015) investigated OA behaviours among health sciences faculty members across eight universities and found that OA was used in scholarly communication, although dissemination of researchers' own materials through OA remained limited. OA journal publishing was more common than self-archiving, indicating that faculty members may participate in some forms of OA while making comparatively limited use of institutional repositories for disseminating their own research. The study also identified technical skills and ICT infrastructure as factors associated with OA practices.

The African higher education context demonstrates that institutional capacity can strongly influence the practical incorporation of OA. Artigas, Gungula, and Laakso (2022), in their study of higher education institutions in Angola, found that practical incorporation of OA into academic processes remained slow. Among the institutions responding to the survey, seven reported publishing scholarly journals and all of those journals were OA. However, institutional repositories were relatively scarce. These findings indicate that OA utilization can develop unevenly across different channels: institutions may publish OA journals while having less-developed repository infrastructure for disseminating other forms of scholarly output.

The utilization of OA is not restricted to research communication; it can also support teaching and learning in higher education. Zuliani and Lortie (2025) examined the use of Open Science tools in undergraduate environmental science education and identified open-access papers, preprints, open data, open-source software, published code, version-control tools, and open notebooks as resources that can be incorporated into undergraduate courses. Their study illustrates how OA and related Open Science resources can be integrated into teaching activities, allowing students to engage with research literature, data, code, and other openly available scholarly materials. Such use can connect classroom learning with contemporary research practices.

The educational value of freely accessible scholarly literature is also demonstrated by Gershenson, Polikoff, and Wang (2020). Their study examined the effect of removing paywalls from educational research journals. Using a natural experiment involving six high-impact journals of the American Educational Research Association, the authors found that making the journals temporarily open access increased article downloads by approximately 55% to 95% per month. The study provides empirical evidence that reducing access barriers can substantially affect the consumption of scholarly literature. In the context of higher education, this suggests that OA can increase the accessibility and use of academic research among students, faculty, and other scholarly audiences.

OA utilization also extends beyond simply downloading scholarly articles. The development of institutional repositories has created opportunities for universities to disseminate theses, dissertations, journal articles, conference papers, reports, and other research outputs. Korkuvi et al. (2022) demonstrated that repositories can contribute to the visibility of university research when research outputs are systematically deposited and made accessible. Similarly, Fox and Hanlon (2015), examining OA uptake among African researchers, reported relatively low visibility of

African researchers in institutional repositories and OA journals. They associated this situation with weaknesses in educational support, national and institutional infrastructure, publishing models, intellectual-property concerns, researcher perceptions, and language and literacy issues. These findings indicate that utilization depends on the broader scholarly communication environment rather than on the technical availability of OA alone.

Another important dimension is the relationship between OA utilization and scholarly publishing. Faculty members may use OA publications as readers while remaining less active as OA authors. Sheikh (2019) found precisely this pattern among Pakistani faculty, where OA venues were used more frequently for accessing scholarly content than for publishing research. Lwoga and Questier (2015) similarly identified differences between forms of OA scholarly communication, including journal publishing and self-archiving. Thus, OA utilization should not be conceptualized solely in terms of publication output; it includes both consumption and dissemination of scholarly information.

The literature consequently suggests that OA utilization in higher education can be understood through at least four major dimensions. The first is scholarly information access, in which faculty members and students use freely available articles, journals, and other academic resources. The second is research dissemination, particularly through OA journals and institutional repositories. The third is teaching and learning, where OA publications and broader Open Science resources are incorporated into academic courses and learning activities. The fourth is institutional scholarly communication, in which universities develop repositories and OA publishing platforms to increase the visibility and accessibility of their research outputs.

However, utilization varies substantially across these dimensions. A university may have extensive access to OA journals but limited institutional repository activity. Faculty members may frequently use OA articles for research but rarely self-archive their own publications. Institutions may publish OA journals while lacking comprehensive repository infrastructure. Similarly, students may use OA literature for coursework without actively engaging with other Open Science resources. The literature therefore indicates that OA utilization is a multidimensional phenomenon rather than a single behavioural construct.

Several factors influence the extent to which OA resources are utilized in higher education. Accessibility and cost are among the most important factors. Gershenson et al. (2020) demonstrated that removing paywalls can increase article downloads, while Sultan and Rafiq (2021) identified free access as a major opportunity for university libraries. OA can therefore be particularly valuable where institutions face financial constraints or where users cannot obtain subscription-based resources.

Institutional infrastructure is another major factor. Institutional repositories, digital libraries, technical systems, internet connectivity, and library services provide the infrastructure through which OA materials can be accessed and disseminated. Lwoga and Questier (2015) identified ICT infrastructure and technical skills as important considerations, while Van Wyk and du Toit (2016) highlighted interoperability and technical aspects of institutional repository development.

Academic and institutional policies also affect utilization. Korkuvi et al. (2022) emphasized the potential role of mandatory deposit policies and the connection between research-output metrics and academic promotion. Such policies can encourage academics to deposit their research outputs and can strengthen the role of institutional repositories in scholarly communication.

Copyright, publication costs, and perceptions of OA publishing represent additional considerations. Faculty may readily use OA literature as readers while being more cautious about publishing their own work through OA journals. Sheikh (2019) identified publication fees and limited knowledge of OA publishing as challenges among Pakistani faculty. Fox and Hanlon (2015) similarly identified intellectual-property concerns and perceptions of researchers as factors affecting OA uptake in Africa.

The literature also demonstrates an important distinction between accessing OA resources and contributing to OA. Access-oriented utilization involves reading, downloading, and using freely available scholarly literature, whereas contribution-oriented utilization involves publishing in OA journals, depositing manuscripts in repositories, and sharing other research outputs. Sheikh (2019) provides clear evidence of this distinction, with faculty using OA venues more frequently for accessing scholarly content than publishing their own research. Lwoga and Questier (2015) likewise showed that different forms of scholarly dissemination may develop at different rates.

Overall, the reviewed literature indicates that OA has become increasingly integrated into higher education information and scholarly communication practices. Its utilization ranges from individual access to scholarly literature to institutional dissemination of research outputs and incorporation of Open Science resources into teaching. The evidence also indicates that the most visible benefit of OA is its capacity to reduce access barriers and broaden the availability of scholarly information. Nevertheless, effective utilization requires appropriate infrastructure, technical support, institutional policies, repository development, and sustainable publishing practices.

The literature further reveals several gaps. Existing studies are often geographically concentrated and frequently focus on particular stakeholder groups, such as faculty members, librarians, or research-management units. There is comparatively less integrated evidence examining students, faculty, librarians, and institutions together as users and contributors within the OA ecosystem. Furthermore, studies often examine one form of utilization—such as journal access, publishing, or repository deposit—rather than considering OA utilization as a multidimensional process. Future research can therefore benefit from examining how different OA channels are used across academic roles, disciplines, institutional types, and national contexts.

In summary, OA utilization in higher education encompasses the access, use, dissemination, and educational application of freely available scholarly resources. The reviewed literature demonstrates that faculty and students can benefit from OA literature for research and learning, while institutional repositories and OA journals provide mechanisms for disseminating university research. At the same time, the extent of utilization varies according to infrastructure, institutional policies, technical capabilities, publishing costs, copyright considerations, and the availability of library and institutional support. OA should therefore be understood not merely as a publishing model but as a broader component of the higher education scholarly communication and information-access environment.

CONCLUSION

Open Access has become an important component of scholarly communication in higher education, providing students, faculty, and researchers with opportunities to access, use, disseminate, and reuse scholarly knowledge. The literature reviewed indicates that awareness of Open Access is generally developing, but awareness does not necessarily translate into consistent utilization. Actual use varies across contexts and includes accessing scholarly articles, using institutional repositories, downloading and sharing research outputs, publishing through Open Access channels, self-archiving, and incorporating openly available resources into teaching and learning. Institutional repositories are particularly important for increasing the visibility, preservation, and dissemination of institutional research, although their effectiveness depends on researcher participation, appropriate policies, technical infrastructure, staffing, and sustained institutional support.

The literature further indicates that copyright concerns, publication charges, limited technical skills, inadequate infrastructure, uncertainty about resource quality, and insufficient institutional encouragement can restrict effective utilization. Recent research continues to identify researcher engagement, content acquisition, funding, technology, and rights management as important challenges for repositories. Therefore, higher education institutions need coordinated policies, awareness and skills-development programmes, stronger repository services, and supportive scholarly communication practices to convert awareness of Open Access into meaningful and sustained utilization.

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