

Scholarly Community towards Open Source

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ABSTRACT

Scholarly communities are increasingly adopting open source practices in various areas including software, publishing and data analysis. The focus of this article is on the shift towards open source publication, specifically open access publication. Open access publication refers to the practice of making research articles and other scientific outputs freely available to the public through open access repositories or open-access journals. This practice has many benefits including increased visibility, improved access, enhanced collaboration, greater accountability, enhanced education and public understanding. The move towards open access has been driven by various factors including the proliferation of the internet, funder and policymaker requirements, concerns about high journal subscription costs and the availability of open access publishing platforms. Challenges to the adoption of open access include the need for a cultural shift and the potential for loss of income for some publishers. Despite these challenges, open access has the potential to transform the way that research is shared and disseminated, leading to greater impact and collaboration in the scientific community.

Keywords: Open access publication, Scholarly community, Barrier removal.

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INTRODUCTION

Scholarly community marching ahead towards open source. Whether it be the application of open source software or publishing or getting data, here the focus is about going towards the publication of open source platform publication.

What is Open Access (OA) publication?

OA publication refers to the practice of making research articles, data and other scientific outputs freely available to the public. This can be done through open access repositories or by publishing in open access journals.¹ OA publication is a way of making research more widely available and accessible, which can help to advance knowledge and facilitate collaboration in the research

community. The best definition of OA is probably the one formulated in the 2001 Budapest Open Access Archive Initiative: By OA to literature, we mean its free availability on the public internet, permitting any users to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited.²

Advantages of open access publication

There are many advantages to open publication, which refers to the practice of making research or other information available to the public without barriers such as subscription fees or paywalls. Some of the benefits of open publication include:

1. Increased visibility: Openly published work is more likely to be discovered and read by a larger audience, including other researchers, policymakers and the

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general public. This can lead to more citations and greater impact for the research.³

2. Improved access: Open publication allows anyone to access and read the research, regardless of their ability to pay for subscriptions or memberships. This is particularly important for researchers in developing countries or at institutions with limited resources.
3. Enhanced collaboration: Open publication makes it easier for researchers to share and build upon the work of others, which can accelerate the pace of scientific discovery.
4. Greater accountability: Making research openly available can help to ensure that it is subject to peer review and scrutiny, which can improve the quality and credibility of the work.
5. Enhanced education and public understanding: Open publication can help to make research more accessible to students and the general public, which can increase public understanding of scientific concepts and promote informed decision-making.

New era towards open access: Role of factors

The open access movement, which advocates for the unrestricted access to research and other scholarly work, has gained significant momentum in recent years. There are several factors that have contributed to this shift towards open access:

1. The proliferation of the internet has made it easier to share and access information online, and has helped to increase the visibility and impact of openly available work.
2. Many funders and policymakers now require or encourage the open publication of research that they support, in order to increase the impact and accessibility of the work.⁴
3. There has been growing concern about the high cost of subscription-based journals, and the impact that this has on researchers and institutions with limited resources. OA can help to reduce these barriers to access.⁵
4. The rise of OA publishing platforms, such as BioMed Central and the Public Library of Science (PLOS), has made it easier for researchers to publish their work openly.⁶

Overall, the move towards OA represents a significant shift in the way that research is shared and disseminated, and has the potential to greatly increase the impact and accessibility of scholarly work.

Limitations

While OA publication has many benefits, it is important to recognize that it is not a panacea for all of the challenges facing the research community. Some of the limitations of open access include:

1. Limited reach: While OA publications can be more widely read, they may not reach as many people as articles published in traditional, well-established journals with large subscribership. This can be especially true in fields where those journals are the primary source of information.
2. Quality concerns: Some people may be concerned that OA journals may not be as selective or rigorous in their review process as traditional subscription-based journals. However, many OA journals have established reputations for high-quality publishing, and the open review process can also help to ensure the quality and credibility of the work.
3. Intellectual property issues: There may be concerns about intellectual property and the potential for OA work to be misused or improperly cited. However, most OA publishers have policies in place to protect the rights of authors and ensure proper attribution of their work.
4. Funding challenges: Some researchers may be hesitant to publish their work openly because they are concerned it will not be considered as favourably when they apply for grants or other funding. However, many funders are now encouraging or even requiring OA publication as a way to increase the impact and visibility of the research they support.
5. Cost: Authors may be required to pay fees to publish their work openly, which can be a barrier for some researchers, particularly those at institutions with limited resources.

Despite these limitations, the move towards OA represents a significant shift in the way that research is shared and disseminated, and has the potential to greatly increase the impact and accessibility of scholarly work.

Some notable events and people's contribution towards open access movement

There are many individuals and organizations that have made significant contributions to the OA movement. Some notable figures include:

1. Tim Berners-Lee: Berners-Lee is a computer scientist who is credited with inventing the World Wide Web (WWW). He has been a vocal advocate

for OA and has worked to make the web more open and accessible to all.⁷

2. Aaron Swartz: Swartz was a programmer and internet activist who played a key role in the development of the Creative Commons licenses and was a pioneer in the OA movement.
3. Open Access Scholarly Publishers Association (OASPA): OASPA is a non-profit organization that represents the interests of OA publishers and advocates for the wider adoption of OA publishing practices.⁸
4. Public Library of Science (PLOS): PLOS is a non-profit publisher that has played a significant role in promoting OA and making high-quality research freely available to the public.⁹
5. BioMed Central: BioMed Central is an OA publisher that has published over 100,000 articles in a range of scientific and medical journals.¹⁰
6. Sci-Hub is a website that provides access to scientific articles and books that are otherwise behind paywalls. It has been described as a part of the “open access” movement, which aims to make scientific and other scholarly research freely available to the public, rather than being restricted to those who can afford to pay for access. Sci-Hub has faced legal challenges from publishers, who argue that it is facilitating copyright infringement, but it has also gained support from many researchers and advocates of open access.
7. Project MUSE: This is a digital library of humanities and social science journals, books, and primary sources. It is operated by the Johns Hopkins University Press and funded by libraries.¹¹
8. JSTOR: This is a digital library of academic journals, books, and primary sources. It is operated by a non-profit organization and funded by libraries and other organizations.
9. arXiv: This is an open access repository of electronic preprints of scientific papers in the fields of mathematics, physics, computer science, biology, and other disciplines. It is operated by Cornell University Library.¹²
10. DOAJ (Directory of Open Access Journals): This is a directory of open access scientific and scholarly journals, covering all subjects and languages. It is operated by a non-profit organization and funded by sponsors and libraries.¹³
11. Open Library: This is an online library with a collection of more than 1 million free e-books. It is operated by the Internet Archive, a non-profit organization.

There are many other individuals and organizations that have contributed to the open access movement and continue to work towards making research and other scholarly work more widely available to the public.

Specific to medical field

PubMed: This is a database of biomedical literature and life science journals, operated by the National Institutes of Health (NIH) in the United States. It provides access to more than 30 million citations and abstracts from biomedical journals, and many of the full-text articles are available for free.¹⁴

Cochrane Library: This is a collection of evidence-based reviews of healthcare interventions, and the WHO Global Health Observatory, which is a database of health-related statistics and data from around the world.¹⁵

OA can be especially important in the medical field because it can help to ensure that the latest research and information is widely available to healthcare professionals, who can use it to improve patient care and treatment. It can also help to ensure that the general public has access to accurate and up-to-date information about health-related issues.

Relevance of open access in today's world

OA is becoming increasingly relevant in today's world, as the internet and digital technologies have made it easier to disseminate information and knowledge on a global scale. There is a growing recognition that research and other scholarly works should be made openly available, as it can increase the impact and reach of these works, and allow more people to benefit from the knowledge and information that they contain. OA can also make it easier for researchers to access and build upon the work of others, which can accelerate the pace of scientific and technological progress. In addition, OA is seen as a way to promote equity and inclusivity in the dissemination of knowledge. Many researchers in developing countries and other underserved communities do not have access to the expensive subscriptions or paywalls that are often required to access scholarly works, and OA can help to break down these barriers. OA can also make it easier for the general public to access and engage with research and other scholarly works, which can increase public understanding of science and other areas of knowledge.

Breaking the subscription barrier through open access

One example of breaking the subscription barrier through OA is the use of OA repositories. These are online platforms that host research and other scholarly works and make them freely available to anyone who

wants to access them. Many universities, research institutes, and other organizations have established their own OA repositories, and there are also a number of centralized repositories that collect and disseminate open access works from a variety of sources.

Another example is the use of OA journals. These are scholarly journals that publish research and other works and make them freely available online, often through the use of a Creative Commons license. OA journals can be a particularly effective way of breaking the subscription barrier, as they allow researchers to publish their work in a reputable, peer-reviewed forum without the need for readers to pay for access.

There are also a number of initiatives and programs that are aimed at promoting OA and breaking the subscription barrier. For example, the Research4Life program provides low-cost or no-cost access to a range of scientific and technical journals and databases to researchers in developing countries. The Open Access Scholarly Publishers Association (OASPA) is an organization that promotes the use of OA and provides a forum for discussion and collaboration among OA publishers.

Trend

There is a general trend among scholars, including young researchers, towards greater support for OA to scientific research. Surveys have shown that the majority of researchers believe that research should be freely available to the public, and many have published their own work in OA journals or made it available through OA repositories.

There are several reasons why OA is attractive to scholars. One is that it can increase the visibility and impact of their research, as it is more easily accessible to a wider audience. OA can also facilitate the reuse and sharing of research findings, which can lead to new collaborations and insights. Additionally, OA can make it easier for researchers in developing countries and other resource-limited settings to access the latest research and stay up-to-date in their field.

CONCLUSION

The shift towards open source publication in the scholarly community is a significant trend that has been driven by a variety of factors including the proliferation of the internet, funder and policymaker requirements, concerns about high journal subscription costs, and the availability

of open access publishing platforms. OA publication, which refers to the practice of making research articles and other scientific outputs freely available to the public, has many benefits including increased visibility, improved access, enhanced collaboration, greater accountability, and enhanced education and public understanding. While there are challenges to the adoption of OA, including the need for a cultural shift and the potential for loss of income for some publishers, the potential benefits of OA make it a promising direction for the future of research publication. OA has the potential to transform the way that research is shared and disseminated, leading to greater impact and collaboration in the scientific community.

CONFLICT OF INTEREST

The authors declare conflict of interest.

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