

Abstract:

Open access is unrestricted access to academic, theoretical, and research literature that is scholarly and peer-reviewed. Two models of open access exist and have been identified as: 1) gold and 2) green. Gold open access is based on the principal of providing open access throughout all stages of the publication process. Green open access, also called self-archiving, is the second, and most frequently used form of open access publishing. This type of open access involves placing an already published article into a repository that is created by either an institution or an author in order to provide unrestricted access. Self-archiving is a more economic and efficient means of granting open access to scholarly literature. In spite of these advantages, gold open access continues to thrive. This paper questions the need for gold open access publishing, in light of the significant advantages associated with self-archiving.

Keywords: open access, self-archiving, publishing, repository, scholarly literature

Publishing is the act of making available through the written word, one's philosophies, observations, and behaviors (Mabe, 2012; Williams-Jones, Bélisle Pipon, Smith, Boulanger, 2014). Within the realm of academia, publishing is a required behavior and is most often used as an outcome measure to evaluate an individual's level of productivity within a specific area, as well as their impact on the larger global community in promoting and sharing new knowledge (Gargouri et al., 2010). Promotion and tenure are typically based on an academic's ability to publish. Publishing results in the general sharing of ideas and new knowledge to researchers, lay individuals, clinicians, and policy creators. It also assists in enhancing the prestige of authors, as well as support grant applications, and other forms of financial reward (i.e. stipend).

Background

On average, 2.5 million articles are published every year (Gargouri et al., 2010). However, not all articles are readily available to the global community. Blocked access by publishers have largely contributed to this, which has resulted in institutions and individuals having to pay to access articles. Institutions, as well as, individual who are not financially stable tend not to invest in paying to access articles, resulting in a limited number of articles being read. Thus, the impetus of sharing of ideas and new knowledge through publishing becomes limited to those institutions and individuals who can afford to pay to access articles (Swan, 2006). Even if an institution is capable of paying for manuscript access, no one organization can afford to pay to access all articles that are released, thus resulting in articles not reaching their full impact (in terms of usage and citations) as they are not accessible to all of their potential users (Gargouri et al., 2010). This has led to a call for an alternative model of publishing, in which all producers, distributors, and consumers of knowledge have free or open access to all articles published

(Price, 2012). This paper will present two models for open access publishing and will argue in favor of one approach in terms of relevance and feasibility.

Overview of open access

Open access is unrestricted access to academic, theoretical, and research literature that is scholarly and peer-reviewed (Gargouri et al., 2010). The word “open” denotes availability of literature free of cost. Thus, open access literature tends to be most often cited than non-open access literature. For papers to be disseminated in open access forums, two models can be considered. The first is called a gold model for open access publishing which is based on the principal of providing open access throughout all stages of the publication process. Related article processing charges (APC) are incurred by the author, and is imposed at the start of the publication process. The APC can average between \$ 1500.00 to over \$ 5000.00. Green open access, also called self-archiving, is the second, and most frequently used form of open access publishing. This type of open access involves placing an already published article into a repository that is created by either an institution or an author. The APC is not incurred by the author, rather has already been absorbed by the journal in which it has been published. It is the published article that is then uploaded onto a website or knowledge translation/dissemination based repository so it can be accessed, at no cost to the user (Gargouri et al.).

There is general agreement that any form of open access publishing strengthens academia as it enhances productivity, increases recognition and dissemination of findings and end products, and removes cost related barriers to accessing scholarly work (Swan, 2006). Furthermore, government funding agencies have moved towards mandatory open access publishing related to all works funded. These agencies have argued that research funded by taxpayers should be made publicly available as soon as possible.

Additionally, a number of research institutions and universities inclusive of Harvard, Stanford, University of Toronto, McGill University, MIT, and Oxford have a mandatory open access policy, in which the general public has free and immediate access to any works associated with individuals from these institutions. These policies are similar to the ones created by the National Institute of Health in the United States; the Wellcome Trust Grant Agency; and the Canadian Institute of Health Research in Canada. Presently, over 160 institutions worldwide have mandated open access publishing (Straumsheim, 2013). Moreover, in 2008 the council of the European Universities Association, which consists of more than 800 universities, in 46 countries, unanimously recommended that all research associated with European Universities be in some form of open access format (Straumsheim). Mandatory open access enhances accessibility, resulting in increased citation and article usage. As previously mentioned, there are two types of open access, gold and green open access publishing. The remainder of this paper will examine both forms in more detail and will make a case for the elimination of gold open access publishing.

Gold Open Access

Gold open access publishing was the first established form of open access (Mabe, 2012). Its basic premise is that institutions and individuals should be able to access any published materials free of charge. This results in the elimination of subscription based databases (e.g. MEDLINE, PubMed, CINAHL) or other mediums. All publishing fees are charged directly to the author and varies depending on the journal. This has resulted in a number of significant issues, the most problematic being the credibility of journals (i.e. falsely claiming to be open access) (Straumsheim, 2013). Over the years, a number of illegitimate “gold open access journals” have emerged with the sole purpose of collecting fees. These journals have been

labeled predatory journals as they have non-existent editorial boards, reviewers are not elicited to engage in manuscript review, and the peer review process appears to be a sham (Straumsheim). For the most part, manuscripts are published without the need for revisions and APC are exorbitantly high. Most recently, the Committee on Publication Ethics, the Directory of Open Access Journals, the Open Access Scholarly Publishers Association and the World Association of Medical Editors have collectively drafted a document titled: Principles of Transparency and Best Practice in Scholarly Publishing (Straumsheim) in an attempt to distinguish the credible from predatory gold open access journals.

In addition, the ethical notion of paying to be published has raised many concerns. Fewer grants have resulted in limited access to funds, which has resulted in negative implications for junior academics, as they work towards acquiring tenure and/or promotion (Williams-Jones, Bélisle Pipon, Smith, Boulanger, 2014). Globally, close to 40 percent of researchers are not supported by grants (Mabe, 2012). Using the gold open access approach, publication funds will need to be created to enable these individuals to publish (Mabe, 2012), at an estimated cost of approximately £70 million a year (Price, 2012). Finally, manuscripts published using the gold open access approach tend to be more difficult to cite as they are formatted without page numbers.

Green open access

Due to the number of issues associated with gold open access, a self-archiving approach, also known as green open access, has emerged (Swan, 2006). Self-archiving is the act of making accessible, articles that have been published in traditional journals. For example, copies of a researchers' articles are either uploaded onto their own website [least effective way of self-archiving] or that of an institution's online repository (i.e. Knowledge Translation Portal) so that

it is made freely available to the public at large. The majority of journals (90%) explicitly permit authors to self-archive their articles as post-prints (after peer review, in the form of the author's final submitted manuscript) (Swan, 2006). The act of loading an article onto a website or institution's repository takes on average ten minutes (Swan, 2006).

Even though self-archiving is permitted by the majority of academic journals, and is a relatively quick act, only a quarter of all articles are self-archived every year (Gargouri et al., 2010). This may be due to a lack of understanding of open access publishing and/or the failure to recognize the various forms and options for open access publishing. For those institutions that have mandated self-archiving, a 100% compliance within 2 years of adoption has occurred (Gargouri et al., 2010). Scholars have frequently argued that research institutions should have an interest in "hosting, archiving, monitoring, measuring, managing, evaluating, and showcasing" (Gargouri et al.) the research output of their researchers through the use of their own institutional repositories, as well as in maximizing its uptake, usage, and impact. Thus, mandating open access self-archiving adds visibility and value at both the individual and institutional level.

Summary

In the current academic environment that is characterized by increased pressures to publish, and very low funding success rates; it is difficult to comprehend why gold open access still exists. Green open access serves to enhance the visibility of an academic's work, as increased downloads of articles tend to lead to increased citations. Thus, the more an author maximizes the number of downloads to his/her articles, the number of citations gradually begins to increase (Swan, 2006). Furthermore, as repositories become established, institutions should begin to advocate for their use among the research communities. Researchers should be able to see their articles being downloaded from their institutional repositories, and have the assurance

in knowing that their work is gaining an increased readership. In essence, green open access, serves to allow access to the research literature, while minimizing costs, and associated risks. Green is the cheapest option, as well as the most beneficial choice for universities that share the desire to provide unrestricted access to all literature with minimal risk.

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