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Climate Research: Metrics, Ethics

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 udayton.edu/blogs/libraries/2022-11-21-openaccess.php



Monday November 21, 2022

By Simon Robins

What are the benefits of publishing open access? Who is publishing open access at UD? How can I publish open access? This blog seeks to connect these questions with answers.

Open Access Research for Climate Justice

Perhaps unsurprisingly, much of the research seeking to measure the benefits of publishing open access (OA) focuses on whether it increases citation counts (something which to date has yielded inconclusive results), while far fewer studies focus on how publishing OA affects readership. This focus may come from the fact that many of these studies are written by academics who are likely trying to understand how OA relates to more traditional measures of research impact, which is tied heavily to tenure and promotion. In academia, research citations still carry much greater credence as a measure of success and influence than full-text views.

However, publishing OA *has* been proven to increase readership (an earlier study backs this up), and this measurement might be a better reflection than citation counts of the global reach that research might have if it's published OA. Publishing open access might or might not result in more citations, but access to these articles will not be restricted to well-funded libraries and people with the financial means to purchase individual articles from publishers. Researchers and institutions worldwide can then use this OA research to seek solutions to complicated and pressing problems affecting their communities.

A good example of this comes from the ongoing pandemic when nearly all major publishers made existing and emerging COVID-19 research freely available. Making this body of research fully open, albeit for an undetermined amount of time (likely until the publishers deem the pandemic “over”), was done to solve a daunting problem, and researchers were encouraged to share their publications and data to hasten the discovery of lifesaving cures, vaccines and other remedies. The world over, this decision has proven to help other researchers, local health officials and drug companies with their response to the pandemic.

This year, the theme of Open Access Week, Open for Climate Justice, highlighted a similarly daunting problem: the climate crisis. Similar to how COVID-19 cases and deaths disproportionately impact marginalized communities, the climate crisis disproportionately affects people living in the Global South — a region typically defined as nations outside of Europe and North America. People living in these regions have historically had a far lower per capita rate of carbon emissions than people in Western nations, yet they bear the brunt of the most severe effects of the ongoing crisis. On top of this, compared to Western nations, these regions seldom have access to the resources or infrastructures required to combat the devastating effects of climate change, as resources such as government-subsidized research grants often come instead to preeminent research universities and corporations in highly developed and diversified economies.

This begs the question suggested by this year's theme: **Shouldn't publishers make the resulting body of research freely available to anyone with an internet connection?**

To highlight the benefits of making this type of research open, we thought it would be helpful to highlight a few recent studies by UD sustainability researchers and point to the ways in which the openness of their research — even if they had to pay to make it open — helped with dissemination of important ideas. A secondary goal of this blog post is simply to encourage all UD researchers to make their work open when they can.

Recent OA publications featuring UD faculty

At UD Libraries, the publisher Elsevier provides collection librarians with an internal dashboard containing usage data on the most downloaded peer-reviewed journal articles authored by UD researchers. This measures access to their work via Elsevier's ScienceDirect platform, which contains tens of millions of articles.

In late September 2022, "[Modernity is Incompatible with Planetary Limits: Developing a PLAN for the Future](#)," co-authored by Ben McCall, professor of sustainability and chemistry and former executive director of the Hanley Sustainability Institute, received by far the most downloads of any paper published by UD researchers on the ScienceDirect platform. This study is fully OA and has already been [shared hundreds of times](#) on social media since it was published 11 months ago. Had it not been published open access, some users would have encountered a paywall. This seamless access also meant that anyone who saw or heard [an NPR feature](#) about the article was able to read it.

Other popular OA publications featuring UD researchers include one on [improving the energy efficiency of industrial thermal systems](#) and another detailing the [cost analysis of transitioning UD to a carbon-neutral campus](#).

How to make your research open

Considering these benefits of publishing OA, it's worth briefly outlining the opportunities — and the barriers — to publishing open access at UD. The barriers are almost entirely financial; most publishers require authors to pay what's known as an "article processing charge" (APC) to make their work open. APCs can often be thousands of dollars — prohibitively expensive for many. Fortunately, for a handful of publishers, UD and OhioLINK have made it possible to waive these fees ([learn more about this program in a recent blog post](#)).

For those who publish in other journals and can't pay the APC, publishers often allow a researcher to make a version of their research — usually the final manuscript — available in an open access repository like UD's eCommons. For more information on this option, researchers are encouraged to email ecommons@udayton.edu or your liaison librarian at library@udayton.edu to request an appointment.

Ideally, authors would not have to pay to make climate-related research open. Until that day comes, the University Libraries recommend that UD researchers work with the available options provided by UD Libraries and OhioLINK.

— *Simon Robins is assistant professor and coordinator of electronic resources & discovery at the University Libraries.*

(Photo by Marcin Jozwiak on Unsplash)