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Small Grant Proposal

Mapping Open Access Societal Impact

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Executive summary

A proposal to create a comprehensive online resource documenting the usage of Open Access research outside academia including an evidence base, a world map showing instances of impact and a forum for discussing methods to measure the societal impact of Open Access.

Keywords

open access; societal impact of research; altmetrics

Problem Statement

The bulk of research *about* Open Access tries to investigate its effects on the academic community. Much research was done about things like the OA citation advantage and the impact of different publishing models on library budgets. Nowadays, Open Access advocacy remains to a large extent dependent on arguments about its benefits to academia. This unintentionally results in presenting the problem of access to research as one existing only within the boundaries of the research community. Needless to say, arguments like the taxpayer right to access research they fund are (and will continue to be) used to provide moral justification for open access. However, its underlying assumption is that access to research is something taxpayers see as valuable. There were several attempts to try to demonstrate and quantify this value. They were mostly on a narrow scale

and many of them contained mainly anecdotal evidence. There is a need to create a resource that would aggregate all these previous efforts, promote further investigation and act as a solid evidence base to support claims about OA's utility to taxpayers.

Proposed Project

The idea is to create a comprehensive online resource documenting the usage of Open Access research outside academia.

Expected Impact on the Open Access Movement

This project is expected to fulfill three main objectives. The first one is an aggregation of all currently available (formal and anecdotal) evidence on the impact of Open Access on society in one comprehensive resource. It will be the first to achieve this. The second objective is providing the ability to organize this evidence (as well as evidence yet to be produced) in a presentable, easy to navigate manner, which would help different communities utilize it for different purposes. The third objective is the production of advocacy material that can support the case for Open Access both with academics and with policymakers. For academics, it will encourage those who seek wider impact for their research endeavors. For policymakers, it will reframe the argument for Open Access as a social need (as opposed to a problem confined to the scholarly community), with implications on many segments of society. This would hopefully bring the Open Access debate higher on the policy agenda.

Implementation

Website Sections

Section 1: Open Access Impact Map

This will be an interactive (world) map of stories about the usage of OA research outside academia. It will be searchable by region, type of evidence (e.g. personal experience, case study) and type of user (industry, citizen scientist, patient group, etc.). Similar maps have been already created do demonstrate the impact of Open Data[*1] and Open Educational Resources[*2]. Open Access advocates lack a similar evidence base to utilize in their advocacy efforts.

Section 2: Evidence Base

This section is concerned with actual research done to investigate the usage of OA research. It will contribute two things. First, it will give summaries for all studies conducted so far about the usage of OA research in non-academic contexts. As much as possible,

summaries will be structured similarly to enable comparisons and to help in identifying gaps in research.

The second contribution will be a theoretical framework, based on previous studies in fields where the science/society interface is investigated (e.g. evidence-based practice, citizen science, public understanding of science) to provide context for the evidence base. The aim is to identify *all possible* venues for usage of academic research in society. Then, by fitting the available studies in the framework, we are in a better position to decide on where more research is needed. However, the main outcome will be constructing better arguments to support taxpayer right to access research and, perhaps more importantly, identifying which groups (among taxpayers) are likely to help in pushing OA advocacy forward.

Section 3: Research Ideas

Both the Map (Section 1) and the Evidence Base (Section 2) will be dynamic in the sense that they will constantly change based on input from the curators and the community (using an online form to submit new stories and studies). Section 3 will act as the community forum where ideas are born for new studies (or new sources for stories). Based on the framework form Section 2, it will have a webpage for each community (e.g. patients, NGOs, startups) that could potentially benefit from access to research. The page visitors can suggest methods on how to quantify the impact of OA on that group. Each idea can be rated and discussed (through comments) by all visitors. For example, one idea is to survey startup companies to determine the extent to which they use academic research to develop new products. Such idea can be uploaded to this section and made open for people to discuss issues like what type to companies to target, what measures of success to use, how to choose the sample, and how to link results to economic development.

Data Sources

There are several potential sources to gather information about the impact of OA on society. Except for *WhoNeedsAccess.org*, none of them was created with this as its sole purpose.

1.   Research Papers - So far, a total of fourteen studies (including one dissertation and two book chapters) were identified. They mainly address the issue of using OA literature in non-academic contexts.
2.   Commissioned Reports - Nine reports have been already identified. They also address the same issue. Most notable are the 3-report series commissioned by UK's JISC about the impact of OA on the private, public and non-profit sectors.
3.   Open Access Tracking Project (OATP) - OATP is a project by the Harvard Open Access Project mainly trying to document the Open Access movement. It does so by tagging information about Open Access (news, commentary, research, etc.) from around the web using a set of tags that make it easy to understand those pieces of information in context. To date, the "oa.lay" tag is used in over 800 entries. Mining these entries can produce stories for the map or call the attention to more studies.

4. OAstories.org - Stories categorized under "Benefits to Teachers", "Benefits to users" or others can be used to demonstrate impact of OA on society.

5. Altmetric.com - Accessing data collected by Altemtrics (through their API) will be useful in identifying where OA research is being cited in Policy Documents and Wikipedia articles.

6. UK Research Excellence Framework (REF) - REF is a rich resource including university reports on different kind of impact they have on society. Positive impacts resulting from OA research can be extracted and adapted for the Map.

7. Previous Projects - Two projects have previously attempted to collect anecdotal evidence about the need to access research outside academia. These are WhoNeedsAcess.org and the Readers section of the "Open Access: 100 Stories of Impact" prepared by *bepress*. It will be necessary to include data from these two sources (and others that might potentially be identified later).

8. Editorials, Commentary and News Articles - Over 10 of these were identified so far. For example, the Guardian article titled "Academic publishers make Murdoch look like a socialist" has over 360 comments with many people sharing their experiences of suffering from the restricted access to academic research.

9. OA - Button processed article requests

10. Citations to scientific papers in medical protocols

Timeline

A period of one year is expected for the implementation of the project. The breakdown of stages and roles of different actors is outlined in Table 1. The project should later proceed as part of the an OA advocacy organization's website and curated by a team of 2-3 volunteers from the Open community (preferably working under a project coordinator). Volunteers can be appointed for 6-month terms, to encourage more participation. Subject to the availability of funds, those volunteers can receive tokens from the organization as an appreciation of their contribution.

Table 1.

Tentative Schedule for Implementation

Duration	Lead Researcher(s)	3 Researchers	Web Developer
1 month	initial planning, exchange of ideas & learning from similar projects		
2 months	identifying & summarizing studies (for Section 2)	mining other data sources and extracting relevant information	basic website design
1 month	reflecting on available data and discussions about the details of the website design		
2 months	framework development	tagging data for inclusion in the website's database	map and database programming
1 month	data entry and customization (Section 1&2)		
1 month	trial period (Sections 1&2) and discussions on the design of Section 3		
1 month	contributing content to section 3		design of Section 3

| 1 month | website launch and promotion campaign | |
| 2 months | final report, booklet and 1 pager [3] | |

Budget

The details of the budget are outlined in Table 2. It is to be noted that the salary for the Lead Researcher is calculated at slightly less than half the US national average salary for postdoctoral researchers. Salaries of the three Researchers are based on the amount of time they are expected to spend on the project relative to the Lead Researcher.

Table 2.

Preliminary Budget

Item	Description	Cost (in USD)
Personnel	Lead Researcher	18,000 (1,500 per month)
	Researcher 1	10,800 (900 per month)
	Researcher 1	10,800 (900 per month)
	Researcher 1	10,800 (900 per month)
	Web Developer	5,000-10,000
Altmetric.com Commercial API License	to identify usage of OA research	????
Final Report	Editing & Publishing	3,000-5,000
Booklet & 1-pager	Graphic Design	1,000-2,000
SUBTOTAL		67,400
Organization Overhead	10%	6,740
TOTAL COST		74,140

Acknowledgements

Endnotes

[*1] The Open Data Impact Map is a project of the Open Data for Development Network (OD4D). It contains publicly available data (free access and reuse) about organizations that use open government data from around the world.

[*2] The OER Impact Map is a project by the OER Research Hub containing information about the impact OER are making globally (both positive and negative).

[*3] to be published under CC-BY