DEVPOLICYBLOG

How I made my own open-access "research portal"

By Rohan Fox
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It is difficult – but not impossible – to access academic articles if you don't have access to journal subscriptions. In this blog, I go through my experience in trying to gain access to academic articles and data while working at the University of Papua New Guinea (UPNG), and how I tried to make the process as easy and efficient as possible. I hope that by sharing the story, and sharing the research portal that I created, that researchers *without* access to journal subscriptions have more of a chance to find the information they need.

The portal aggregates over 750 sources of online, open data, academic and government articles and makes them searchable through a customisable Google search tool. Most of the work was in finding these resources; putting them in the custom Google search tool was simple. I provide a link to an Excel sheet with all the sources below.

Why did I create the portal?

Perhaps this is obvious, but it is very difficult trying to do research if your organisation does not subscribe to hundreds or sometimes thousands of academic journals. This is certainly what I found when I was working at UPNG. A number of major publishers and other organisations have made an effort to either provide free or discounted rates for journal access to developing countries, in addition to publishing open-access journals. However, even with these initiatives, I found that libraries in PNG are under-resourced and due to this are often not always able to utilise and disseminate what is available. In addition to this, even if you are aware of all of the various initiatives, these resources are scattered around the web and often have to be searched individually (very time consuming!).

Nevertheless, this is how I started out. A number of major websites are particularly useful; Google search results returned lots of non-academic articles, but Google Scholar, Research Gate, Academia.edu and the Directory of Open-Access Journals were all good. A number of top universities and multilateral organisations also host various open-access portals:

Harvard, Cambridge, Stanford, UN, IMF, World Bank, ADB, and there are many more. Whenever I looked for information, I would get onto one or another of these sites and search each one for relevant publications. It wasn't perfect, but it filled a gap, and I shared information about these sites with my colleagues at UPNG.

After a while, both my colleagues and I found the process tiresome. Meanwhile, I'd also found many more websites that hosted high quality open-access publications. The list of websites to check individually had gone from around 10 to more than 50. I noticed that a few were generally better than the others, so I checked those all the time, and mostly ignored the rest.

How did I create the portal?

Through some research, I came upon Google's "custom search engine" (CSE) tool, which allows you to define the content and the sites you want to search. I realised I could use it to reduce the time spent having to search each site individually, so I got on to the developer site, inputted my list of open-access websites, and could soon start my own searches. I just had to type in a few keywords, exactly as you would on Google, and the search results would turn up free publications. I labelled the Google custom search site "The Open Access Research Portal", and used it every time I wanted to search for reports or academic literature. It wasn't perfect of course, but it made the whole process much more simple, faster and more targeted to my needs than any other search engine or website I had found.

Over time, I kept adding more sites, including content from 200 of the top universities in the world, over 100 other open-access repositories and over 100 government websites. The total list of sites searched now exceeds 750.

I know there are many researchers in PNG and elsewhere who face constraints on access to research. So I just wanted to write this story, and share the "Open Access Research Portal" publicly (click here) with others. Personally, I have found that, now that I have returned, I even use it in Australia, as it can search and bring-up reports from government websites, think tanks and NGO's that are not published in academic journals, while at the same time filtering out the background 'noise' of a regular Google search.

How well does it work in comparison to the search capacity of a Western university system?

There may be some bias towards economic development in terms of search capacity, as this is my personal area of interest and I included websites that include this type of content. I also added in PNG government websites, but haven't had the time to add government websites for all countries. However, most of the sites do have content from around the world. I did have to leave out a small handful of sites for various reasons. For example, the

major publishers all publish some open-access journals – but the way their websites are structured make it difficult to limit searches to their open-access content.

This Excel spreadsheet lists all the websites individually. If you are interested, do look at the list of sites. For those who want to have the ability to refine their search, (i.e. exclude specific words from search results, etc.) this webpage lists some useful syntax. In fact, if you wanted to customise your own search based on this list, you could quite easily log in to Google CSE, create a new custom-search, input the data from the Excel sheet as a starting point, and then add in any websites you choose.

I am certain that there are ways to improve on this model, and if you have any suggestions for improvement or links to alternative portals, I would be glad to learn about them. I'd also like to open up a discussion in the comment section below. If you are a researcher in Papua New Guinea—or any country for that matter, where you do not have access to subscription journals: do you struggle to access academic literature? What have you done to try and to overcome these constraints? Perhaps we can collectively learn a thing or two from each other's experiences.

Click here for the "Open Access Research Portal".

About the author/s

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Rohan Fox was a Research Officer at the Development Policy Centre. He lectured in the economics program at the University of Papua New Guinea in 2015, 2016 and 2020.