Description

[vc_row][vc_column][vc_column_text]All researchers are familiar with the idea that publishing articles is a key part of advancing their career. However, only a few people think about publishing the raw data behind those articles. For many decades, research data has been viewed as proprietary. Others have thought that it is not very important to review raw data as long as the methodology and conclusions of the research are clear. However, these ideas are changing. Factors such as the reproducibility crisis and online access making it easier to view and sort data are leading the push towards new ways of data sharing among scientists and researchers. While data repositories have existed for some time, data journals are now rising as a new place to publish data. So should you publish your research data? If yes, should you do so in a data journal or a repository? In this article, we discuss these issues and highlight the leading data journals of today.

What is Research Data?

What do we mean when we talk about research data? In fact, there is no consensus around a definition. To put it simply, research data refers to the observations and information that a researcher collects during the process of studying a particular topic. When we talk about “research data,” we could be talking about raw, unprocessed data straight from a lab. We could also be referring to data which has been processed and calibrated, or even a published output. Either way, data is recorded factual output used in research. It can take the form of raw or unprocessed data files, software, code, protocols, methods, interview transcripts, models, or others depending on your field.

While standard academic articles tend to focus on the major findings and highlight interesting results, they do not generally include all of the data collected for several reasons. First, researchers tend to collect far more data than they can fit into a short academic article. Second, the general aim of academic articles is to present data within a context with respect to a researcher’s conclusions. Raw data, or even somewhat processed data, is often overwhelming and cumbersome to sort through. So what could be the benefits to publishing your data?

Why Should I Publish My Data?

There are several reasons a researcher should consider publishing their data. With the reproducibility crisis, sharing data can help the scientific community by allowing the replication of experiments. If you

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publish your data, others can review your data, methods, and analysis in detail, possibly giving rise to new lines of inquiry. This can also give rise to new collaborations and boost your reputation within the community. However, sharing data isn't just good for science—it's good for the community as a whole. When your data is publicly available, it can be used to guide government policy. Researchers outside of academia can also have access. You can save researchers additional expenses by allowing them to use your data for their own work. Finally, if your data is public, it can increase your citations. By publishing your data in a journal or a data repository, you can provide a means for others to properly cite your data and give you the credit you deserve.

Where Can I Publish My Data?

As mentioned above, there are two primary ways to publish your data: in data repositories, or in data journals. Data repositories are a more traditional place for researchers to publish their data. A data repository is usually limited to a university or research institution. It is not easy to access the data inside if you are not a member of that institution. Many repositories require researchers to pay for access. There are some open access data repositories, such as the European Open Science Cloud, which do not require payment.

However, these days data journals are growing in popularity. What are the benefits of data journals and how are they different from data repositories? In fact, you can think of a data journal as a kind of bridge to data repositories. Many researchers publish their articles and then may place their data in a repository, but this data is not always easy to find or come across unless you are looking for it specifically. Data journals aim to make finding datasets easier and improve dissemination and citations at the same time. Data journals feature short data articles that describe data sets and link to full data in repositories. Most journals have a standardized form that is easy for authors to fill out and submit their data information. Data journals can be indexed in important medical journal databases including MEDLINE, meaning they can have a Journal Impact Factor just like normal academic journals.

Right now, some of the most well-known data journals include Data in Brief (Elsevier), Open Health Data (Ubiquity Press), Genomics Data (Elsevier), Scientific Data (Nature), and GigaScience (BMC). As these journals grow in popularity and number, lists of data journals are also becoming easier to find. The Thomson Reuters Data Citation Index tracks data citation metrics to enhance the reward for researchers who choose to publish in data journals. Which data journal is right for you will depend, of course, on your discipline and the type of data you wish to share. However, sharing your data will certainly offer you the benefits of additional citations and adding to the public pool of accredited knowledge.

Data Journals: Increasing Data Accessibility

In general, data journals make it easier for researchers to publish their data and make it accessible. In this way, they are helping to change the previous culture where data sharing was not common and citations was also poor. If you are producing original research, sharing your data can be a great way to increase your visibility in the field and contribute to a culture of shared data. This can ultimately lead to better science throughout the world.[/vc_column_text][/vc_column][/vc_row]

Category

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