

Open Science Framework: An effective tool for researchers

SHAHARIMA PARVIN

USE of technologies can contribute a great deal to research works. Technology is opening up possibilities and making the world a smaller, more accessible place for researchers. In 2013, the Center for Open Science (COS) developed the Open Science Framework (OSF) which is a free and open source project management repository that supports researchers across their entire project lifecycle. OSF is an excellent tool for developing a research idea, designing a study, storing and analysing collected data, writing and publishing reports, and promoting this idea with other researchers around the world. OSF is also an effective research reproducibility platform which is being used for the complete life-cycle of a research project.

Researchers can use the OSF to organise and collaborate all research documentation which includes datasets, code, analysis, background literature and so on. OSF has sufficient cloud storage facility (unlimited number of individual files that are under 5 GB each) and integration with effective third-party applications such as Google Drive, Box, Dropbox, Amazon S3, GitHub, figshare, Mendeley, Zotero and so on to the project. Anyone can create an OSF account for free at <https://osf.io/>. First you need to login your account after creating account, then you can see a dashboard with the option to create a project. The project layout includes a wiki, a log of recent activity, and spaces to upload files, add tags, and create new subprojects depends on your requirements. After setting up a project for a particular paper or specific experiment or for the work of an entire lab, researchers can share it to the world or can make it private as well. The digital object identifiers (DOIs) are assigned for projects if they are made publicly available. The OSF provides built-in version control that records changes to project files and previous versions through OSF Storage. OSF Preprint option has an immense impact for researchers to receive rapid feedback on their research and find a broader audience for their work.

The most effective feature of OSF is that project members can assign different kinds of permissions which includes read only, read and write, and administrator. The project administrator can add more registered contributors as well as unregistered contributors. For unregistered contributors you just need to add full names and email addresses and a link to set up an OSF account. Registered con-

tributors can be added to a project by searching for their names in the OSF. Whenever, you share your project to the public, you have to be aware of license to retain, reuse, revise, remix and redistribute of your projects. OSF has various licensing options subsuming creative commons, MIT, Apache, Eclipse public license, GNU and so on. This license can be used for the entire project or different licenses can be assigned to different parts of the project.

Many institutions in USA have been using OSF for their research collaboration. The Psychology Reproducibility Study is worth mentioning. It is a collaboration research project between the University of Virginia and the COS and more than 270 researchers involved in this project and the entire research process for each study including data, analysis, publications, and comment was openly shared on the OSF. This project is considered as one good example of how health sciences researchers might integrate the tool into their research workflows.

Another example is the University of California-San Francisco (UCSF) Library. It is an assessment project made by team of librarians in 2015. The team of librarians selected the OSF because they needed a tool that would allow them to easily keep notes, upload files, collaborate, and share information on a particular topic. Besides, in 2014, COS has made its own project named "COS Reproducible Research Training" which assists OSF users to find information about its past and present onsite workshop offerings, as well as online materials to know more details of OSF opportunities.

Anne Allison, Associate Professor, Biology, Piedmont Virginia Community College, USA considers that OSF is the best platform to create a centralised hub of information where she can oversee a diversity of research projects across multiple classes as well as save her the time and energy necessary for managing these projects.

As, the fundamental functionality of the OSF is its capability to create and develop projects, connects and supports the research workflow, aiding researchers to rise the efficiency and effectiveness of their research. So, the researchers, academician in our country can use OSF for managing, collaborating as well as advancing their research or project's workflow.

*The writer is an Assistant Librarian,
East West University*

