

OPEN SCIENCE MADE EASY

7 steps towards transparent and reproducible research

1. Create your own OSF account

Open Science Framework: (one possible) online platform to document and present your research process transparently



- Go to <https://osf.io/>
- Register: name, email, password
- Create new project: 'My Projects' → 'Create project' → Insert title → 'Create'
- The URL of the project will not be changed → can be referenced in your paper
- The account can be used for all the following aspects of Open Science (OS)
- When you are ready: Change project status from *private* to *public*

3. Open Materials

Make methods and materials transparent and available



- Upload documents describing all processes, methods and variables to your OSF project
- Add the OSF link in your paper
- Basic lists as well as detailed code books are feasible
- If possible upload the original questionnaires (be cautious with copyrighted materials!)

2. Pre-register your own studies

Describe your hypotheses, methods and analyses before running the study in your pre-registration



- In OSF: 'Project overview' – 'registrations' – 'New registration'
- Choose and complete a template
- Make it public immediately or use the embargo (up to 4 years) to postpone public access.
- Pre-registrations can ...
 - be brief or very detailed
 - be made before/during/after data collection
 - include confirmatory, but also exploratory and open research questions

4. Open Data

Make your research data publicly available



- Notify your participants in the informed consent form
- Make all primary data available that is necessary to reproduce your results
- Guarantee anonymity (if necessary delete variables, collapse, ...)
- Prepare your code book
- Upload your data files and code book to the OSF project, add the link in your paper
- Make your data citable (doi)
- Cf. the DGPs recommendation for open data sharing: http://bit.ly/dgpsdata_en

5. Reproducible Code

Make your analyses transparent and your results reproducible



- Prepare your final, well-commented analyses scripts (for example R code, SPSS syntax)
- Upload your scripts into your OSF-project and add the link to your paper
- Make sure your script, if run on your data, produces the exact result outputs that you describe in your paper
- Your analytic code is helpful even if you cannot make your data publicly available

7. Do open research and talk about it ...

Open science can promote your research career and foster research collaborations



- Refer to your OSF-account on your homepage
- Emphasize your OS activities in your CV and job applications
- Refer to your materials, data, scripts in your further work and ask colleagues to do the same if they used your materials
- Encourage your supervisor, colleagues and your students to practice open science
- Make your commitment to open science public, e.g. <http://www.researchtransparency.org/>
- Use the chances of sharing data to establish research collaboration
- Establish your own local Open-Science-Initiative at your institution, see <https://osf.io/tbkzh/>

Supported by:



Resources: <http://www.bitss.org> | <https://osf.io/preprints/psyarxiv/>
<https://cos.io/> | <https://cos.io/our-services/open-science-badges-details/> |

6. Open Access

Make Pre/Postprints available



- What am I allowed to make publicly open? Check the journal guidelines at <http://www.sherpa.ac.uk/romeo/>
- Before the review process starts
 - Compile a preprint document (i.e., your manuscript before peer review)
 - For example, upload at <https://osf.io/preprints/psyarxiv>
 - Ask the community for feedback
 - The preprint can be linked to an OSF-project (for example for supplementary material)
- As soon as your paper is in press
 - Compile a postprint document (i.e., final version of your manuscript after review)
 - Update the preprint at PsyArXiv by replacing it with the postprint. Indicate the final reference and doi of the PDF version of your article provided by the journal
- Papers that are made available as a preprint are cited more frequently!

Additional information and helpful links:

https://osf.io/x3s5c/wiki/Open_Science_Infos/

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