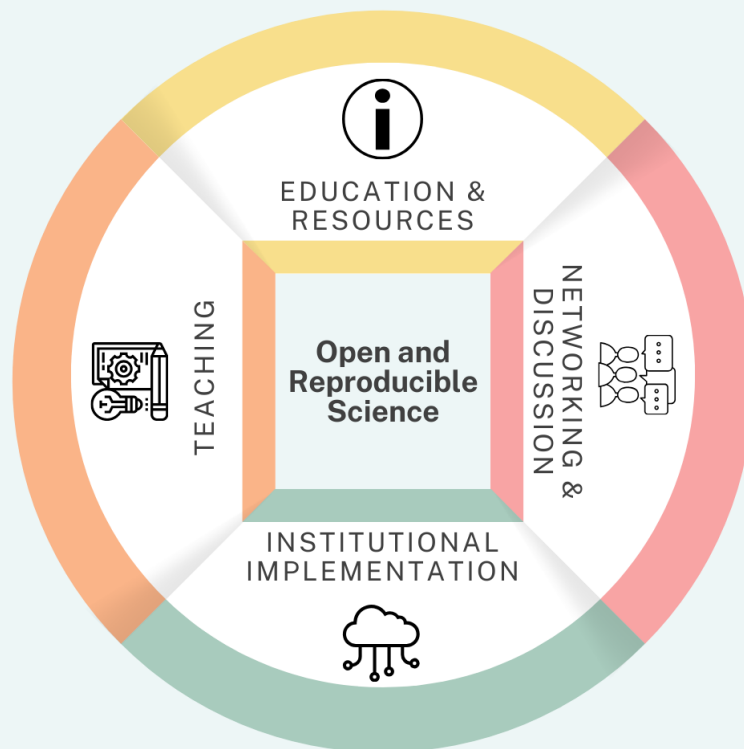# Concept paper of the Open Science Initiative of the Institute of Psychology

of the University of Wuppertal

[as of November 2024]

Summary

The Open Science Initiative at the University of Wuppertal addresses the challenges of reproducibility and transparency in research by embedding Open Science principles in teaching, research and institutional practices. Our goals include fostering a culture of openness and collaboration, equipping students and researchers with essential skills, and strengthening the quality of scientific work.

Through tailored workshops, resources, and the integration of Open Science practices into courses and theses, we aim to prepare researchers who value transparency, reproducibility, and accessibility. **We invite all members of our academic community to join this initiative and contribute to the advancement of Open Science.**

https://www.psychologie.uni-wuppertal.de/de/forschung/open-science-initiative/

The Background

The challenges posed by the poor reproducibility of research results in science have led to a global rethink. The debate on whether there is a crisis and how deep it is has been replaced by a forward-looking discussion on how to improve the quality of scientific research. In this context, various initiatives and measures to promote transparency and reproducibility have emerged under the collective term 'open science'.

In response to current discussions about quality assurance, reproducibility and credibility of scientific research, Open Science initiatives have been formed at several institutes in Germany and have joined together to form the Network of Open Science Initiatives in Germany (NOSI). The initiatives aim to support the institutes in open science issues, to strengthen the quality of research and teaching, and to discuss possible implications for requirements and reward systems at levels of the individual researcher, the department, and beyond.

Our Open Science Initiative builds on these developments and aims to embed the principles of Open Science in our research community. By implementing this initiative, we aim to foster a culture of open exchange and collaboration that accelerates scientific progress, strengthens public trust in science, and lays the foundation for the future development of the research community.

Aims and objectives

01 – Education & Resources

One of our main goals is to promote open science by offering specialized training programs and workshops for students, early career researchers, and senior faculty. In addition to these in-house initiatives, we frequently invite guest speakers from other universities to our Institute Colloquium to explore all aspects of open science, including critical perspectives. We also provide valuable resources through our dedicated Moodle course for Open Science enthusiasts and keep our community informed through our regular Open Science newsletter.

02 – Networking & Discussion

The Open Science Initiative is designed to facilitate ongoing dialogue and collaboration among researchers, fostering a dynamic and supportive community. We aim to foster ongoing interaction and knowledge exchange by organizing regular meetings and additional events such as journal clubs. These gatherings will serve as low-threshold opportunities for researchers at all levels to connect, share their experiences, and discuss the challenges and barriers they face in practising open science. By creating a dedicated space for networking and discussion, we will enable researchers to form working groups to address specific issues related to open science, thereby fostering collective problem-solving and innovation. The initiative also seeks to network with local, national and international initiatives related to open science.

03 – Institutional Implementation

The Open Science Initiative aims to promote and inform the discussion of the implications at the institutional level of how to support the highest quality and transparency in research. In communication with and between the different bodies of the School of Social and Human Sciences and the University of Wuppertal (e.g. Promotion Committee, Ethics Board, Appointment Committees), the initiative aims to reflect on and optimize the rules, procedures and incentives as they contribute to transparency, reproducibility and scientific progress. The initiative also aims to identify relevant resources at the university for transparent research purposes (e.g. data management) and to communicate needs to central university institutions.The Open Science Initiative also engages in the discussion of institutional and academic implications within and beyond the university, such as the publication system, including the handling of publication fees, editorial roles and peer review, and the promotion system, reflecting on indicators of research quality.

04 – Teaching

Our Open Science Initiative aims to integrate the principles and practices of open science into teaching from the very beginning, fostering a new generation of researchers who embrace transparency, collaboration, and reproducibility as core values. By embedding key concepts such as pre-registration, open data, and open educational resources (OER) into courses such as the Research-Oriented Internship (FoPra) and Theory and Practice of Scientific Work (TPwA), we uphold BUW's high standards of teaching. This approach ensures that students are equipped with the skills and mindset necessary to engage in rigorous, open research practices. In addition, we seek to extend these practices to theses and independent projects, creating a forward-looking and inclusive educational experience.