

Adoption of Open Science Practices in Psychology and Education Research

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Open science practices like data and code availability are (what exactly). To what extent do researcher actually implement OSF-practices in their publications? Do institutions explicitly value these principles in their hiring process and research conduct?

We examine open science practices within the top 10 journals by h_5 -index in Special Education, Education and Psychology. Specifically, we analyse the frequency of *open science statements* and *data and code*-availability in [N] published open access articles alongside the prevalence of open science *expectations* and *requirements* in job advertisements for professorships at German universities. We found that bla ...

1 Introduction

2 Analysis

rieser: Should we provide a sample of keywords here?

2.1 Job postings for professorships

We analysed job postings for professorships from the *Academic Job Posting Service of the German Association of University Professors and Lecturers* [1] published between January 2024 and [tbd.] 2025. Out of a total of $N_A = 295$ postings, 18 of them explicitly mentioned keywords related to open science. While all 18 described open science as desirable, only [k=6] required a formal statement. Exactly 1 was a specifically created "W2 Open Science" professorship. We identified these postings by matching keywords, their mangled variants, and partial sentences and extracting their containing sentences; the final classification however was based on manual review of the corresponding paragraphs.

rieser: double check this

rieser: Should we analyse Subject and department? Does it matter if 4 of these were from the same university? Does English <-> German matter?

rieser: I need to add to the code here to make sure that all keywords are hit and all of them provide a paragraph. Else the desirable <-> requirement stat might be wrong.

2.2 Publications

We analysed [N=?] open access publications from Journals [J1,J2,...] filtered by the OpenAlex index [2]. In this process, we checked for the presence of either/or an open science statement, a data availability statement, an open access dataset or open access code. Based on this, we found that [k₁ out of N] included a dataset, [k₂ out of N] included their code, [k₃ out of N] included an open science statement of data availability statement. [k₄ out of N] contained all 3.

rieser: Should we devise a score here? So dataset + statement + code gives highest score.

We analysed the top 20 Journals in education and special education. For a full list see List of Journals. We filtered these journals using the OpenAlex index [2].

3 Implementation

We extracted all *works* from the OpenAlex [2] corpus that were tagged as belonging to the fields Psychology or Education. From these records, we retained the ones that included at least one linked open access PDF. To manage this dataset, we implemented a database consisting of two tables: an **index** table containing the metadata for each entry, and a **pdfs** table storing information about the retrieved documents.

rieser: explain what this means or phrase differently

rieser: This is not done yet

Because of hardware limitations and the large volume of file, we implemented a batched processing pipeline. This pipeline retrieves and processes PDFs in batches of size $k = 200$. After processing, the results are joined onto the bibliographic data from the index table for further analysis. Before moving onto the next batch, the pdfs are deleted and marked as downloaded and/or processed in the **pdfs**-table.

rieser: How many GBs?

4 Related Work

We could mention dataset here, even if we adapt it. Otherwise, fexrep [5].

5 Conclusion

Appendix

List of Journals

Table 1. List of journals analysed, with ISSNs and OpenAlex IDs, ranked by cite(googlescholaretc)

#	Name	Issn	IssnO	OpenAlexId
1	International Journal of Inclusive Education	1360-3116	1464-5173	
2	European Journal of Special Needs Education	0885-6257	1469-591X	s136622136

Table 2. List of Psychology Journals analysed, with ISSNs and OpenAlex IDs, ranked by cite(googlescholaretc)

Rank	Name	Issn	IssnO	OpenAlexId	NumOpenAccess	PctOfTotal
1	Frontiers in Psychology	1664-1078		s9692511	48290	99.6
2	Perspectives on Psychological Science	1745-6916	1745-6924	s27228949	509	34.0
3	Trends in Cognitive Sciences	1364-6613	1879-307X	s192051125	1097	25.8
4	Current Psychology	1046-1310	1936-4733	s203585231		
5	Current Opinion in Psychology					
6	Personality and Individual Differences					
7	Clinical Psychology Review					
8	Journal of Applied Psychology					
9	Journal of Personality and Social Psychology					
10	Educational Psychology Review					

Data Availability Statement

Our code, data and evaluations are available on GitHub [4] [3] or on osf or on zenodo??.

References

[1] [n. d.]. Academic Job Posting Service. <https://www.hochschulverband.de/en/services/academic-job-posting-service>

[2] Jason Priem, Heather Piwowar, and Richard Orr. 2022. OpenAlex: A fully-open index of scholarly works, authors, venues, institutions, and concepts. doi:10.48550/arXiv.2205.01833 arXiv:2205.01833 [cs].

[3] Jeremias Rieser. 2025. Ausschreibungen Open Science. gitlab.

[4] Jeremias Rieser. 2025. Open Science Mentions. <https://github.com/jkr11/open-science-mentions>.

[5] Jian Wu, Rajal Nivargi, Sree Sai Teja Lanka, Arjun Manoj Menon, Sai Ajay Modukuri, Nishanth Nakshatri, Xin Wei, Zhuoer Wang, James Caverlee, Sarah M. Rajtmajer, and C. Lee Giles. 2021. Predicting the Reproducibility of Social and Behavioral Science Papers Using Supervised Learning Models. doi:10.48550/arXiv.2104.04580 arXiv:2104.04580 [cs].