Open Science: Changing the Impact of Scholarship

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In Open Science
Praxis Shapes Theory

Photo by Alejandro Escamilla on Unsplash
“One Term, Five Schools of Thought"

1. Infrastructure
2. Public
3. Measurement
4. Democratic
5. Pragmatic

Fecher, B, & Friesike, S. (2014).“ Open Science: One Term, Five Schools of Thought.“
DOI:10.1007/978-3-319-00026-8_2
Infrastructure

- Digital Repositories
- Open Source Coding Languages
- Open Workflow Tools
Infrastructure Examples

GitLab
jupyter
R Studio

Open Science Framework

zenodo
The Dataverse Project

Infrastructure Examples
Publically Accessible

- Interactive Data Visualizations
- Crowdsourcing projects
- Crowdfunding projects - With Updates

Access to Knowledge Creation and Access to Process or Production of Research
Measurement

Alternative system for measuring impact - beyond bibliometrics

- Altmetrics: Downloads, Views, Shares, etc.
- Credit for Peer Review
- Collaboration
- Openness of Materials or Publications
Democratic Access to Knowledge

Knowledge should be freely available to everyone

- Preprints
- Open Data
- Open Code
- Open Source Licenses
- Open Educational Resources
Democratic Examples
Pragmatic

Increase Efficiency in Knowledge Creation

- Collaborative Research
- Open Supplementary Materials
- Co-Creation of Knowledge
- Shared Specifications for Interoperability and Re-Use
Colors of Open Access

Gold OA
- OA through a publisher
- May require article processing charges
- OA may be embargoed

Green OA
- Self-archiving in an open access digital repository
- Deposit can be preprint or peer-reviewed postprint
- Review the journal’s copyright policies
- Embargo may be required

Diamond OA
- OA through a publisher - most likely a society journal
- No fees for researchers
- Not currently a popular model
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Check if Green OA is an option for a given researcher: https://dissem.in/
Motivations for Open
Why Change What’s Been Working for So Long?
Compliance

2003: NIH requires researchers to have data sharing plan
2011: NSF requires a data management plan for all grant applications
2013: OSTP memo mandates grant-funding federal agencies* have public access policy for articles and data

*If they spend $100m or more annually funding research
Reproducibility Crisis

Open Science as part of the solution
“These findings are evidence that open research practices bring significant benefits to researchers relative to more traditional closed practices”

https://doi.org/10.7554/eLife.16800.001

Increase Impact
Partnership

Join researchers to navigate the changing open scholarship landscape
Thank you!

Any Questions?

Contact me: mpotterbusch@gwu.edu or @LibrarPotter
CREDITS


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