Framework for Open and Reproducible Research Training
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Introducing a Framework for Open and Reproducible Research Training (FORRT)

with Flavio Azevedo
Introduction

The Problem

The teaching and mentoring open scholarship practices—but also, the transmission from scholars to scholars—has received considerably less attention.

As a result, it is still very common that graduates and undergraduates finish their studies without having heard about Open scholarship.

Also, there were few learning ‘out-of-the-box’ opportunities to scholars
Scientific Utopia

Open Scientific Communication

Crowdsourced Science

Re-structured Incentives

Integrating Open Scholarship into Higher-ED
What is FORRT?

- Established in mid 2018 by PhD students
- Composed mainly of early career scholars: \(+350\) scholars & educators
- Representing fields such as Psychology, Neuroscience, Communication science, Linguistics, Economics, Medicine, Mathematics, Computer science, Philosophy, Political science, etc.
- Volunteer-based organization.
- Over 100 visits a day across the world
What are FORRT goals?

1. Build together with educators a pathway towards the *incremental adoption of open scholarship practices into higher education*

2. Generate a conversation about the *ethics and social impact of a higher-education pedagogy* that emphasizes openness, epistemic uncertainty and research credibility

3. Promote a reflection about the *perceived importance of different academic activities* and advocate for greater recognition of educational resources
What has FORRT accomplished?
FORRT’s Glossary

• Devised to be an access point for those wishing to learn about OS
• Aims to provide concise definitions of the most important OS terms and clarify terminologies
• 110 contributors from the academic community have defined more than 250 open scholarship terms
• Each term is presented together with a brief definition and appropriate references. Whenever is the case, we also present potentially competing definitions for a term.

https://forrt.org/glossary/

Parsons et al. (2022). In press.
CARKing

Definition: Critiquing After the Results are Known (CARKing) refers to presenting a criticism of a design as one that you would have made in advance of the results being known. It usually forms a reaction or criticism to unwelcome or unfavourable results, results whether the critic is conscious of this fact or not.

Related terms: HARKing, Preregistration, Registered Report


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FORRT’s Impact on students

Scientific literacies
Student engagement
The overall student experience
Attitudes towards science

forrt.org/impact
osf.io/th254
FORRT’s Lesson Plans

• Devised to **support** educators who wish to integrate OS into their teaching

• **Draws on the expertise of the community of researchers and educators**

• **9 evidence-based, high-quality lesson plans** and almost **60 class activities** that can be incorporated into taught courses

• Each lesson plan was **categorized** based on theme, learning outcome, activity length and method of delivery

[https://forrt.org/lesson-plans/](https://forrt.org/lesson-plans/)

Pownall et al. (2021). Scholarship of Teaching and Learning in Psychology.
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Neurodiversity Project

• Neurodiversity is the non-pathological variation in the human brain regarding sociability, learning, attention, mood and other mental functions (Singer, 2017).

• Team Aims to raise awareness to diversity in academia, build community, empower under-represented scholars, and increase the visibility of the work produced by neurodivergent scholars and educators.
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FORRT’s Summaries

• **Reduce the burden** on educators wishing to get familiar and stay up-to-date with the OS literature
• **Over 200 summaries** of academic articles related to OS
• **Main take-aways and suggestions** of articles on similar topics
• **Peer-review process**

https://forrt.org/summaries/

Kalandadze et al. (2021). In preparation
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FORRT’s Reversals & Replications

• Replications of previous work are at the core of Open Scholarship
• It can be challenging to keep up to date with replication efforts
• Collate replication efforts and reversals across different fields
• 32 contributors from the academic community, ~150 entries across 20 different fields

https://forrt.org/reversals/
Social Psychology

No good evidence for many forms of priming, automatic behavior change from ‘related’ (often only metaphorically related) stimuli. Semantic priming is still solid, but the effect lasts only seconds.

- **Elderly priming.** Hearing about old age makes people walk slower. The p-curve alone argues against the first 20 years of studies.

  - Status: reversed
  - Original paper: ‘Automaticity of social behavior’, Bargh (1996); 2 experiments with n=30. [citations = 5038(GS, October 2021)]
  - Original effect size: $d = 0.82$ to $d = 1.08$
  - Replication effect size: Doyen: $d = -0.07$. Pashler: $d = -0.22$

- **Distance priming.** Participants primed with distance compared to closeness produced greater enjoyment of media depicting embarrassment (Study 1), less emotional distress from violent media (Study 2), lower estimates of the number of calories in unhealthy food (Study 3), and weaker reports of emotional attachments to family members and hometowns (Study 4).

- **Flag priming.** Participants primed by a flag are more likely to be more in conservative positions than those in the control condition.
Curated resources

There are more than 700 resources submitted so far in our database. We are currently curating a new and improved version that is compliant with OER Commons for greater findability, accessibility, interoperability, and reusability (FAIR) of these resources.

If you notice there is an educational resource, research article or pedagogical tool missing in our database, please consider adding it here on FORRT’s resource submission form or via the direct link.

Enter keywords below to find relevant resources for you or use the filters below:

No items found.

**HAIL THE IMPOSSIBLE: P-VALUES, EVIDENCE, AND LIKELIHOOD.**
Significance testing based on p-values is standard in psychological research and teaching. Typically, research articles and textbooks...

**1,500 SCIENTISTS LIFT THE LID ON REPRODUCIBILITY**
Survey sheds light on the ‘crisis’ rocking research.

**A 21 WORD SOLUTION.**
One year after publishing “False-Positive Psychology,” we propose a simple implementation of disclosure that requires...

https://forrt.org/resources/
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From ideas to reality

- Idea
- Identifying Team Manager
- Inviting collaborators
- Meetings / Team-Work
- Sharing on website
- Writing an academic paper
Thank you!

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https://forrt.org/publications/