

# BOTTOM UP DIFFUSION OF OPEN SCIENCE PRACTICES THROUGH TRAINING OF EARLY CAREER RESEARCHERS

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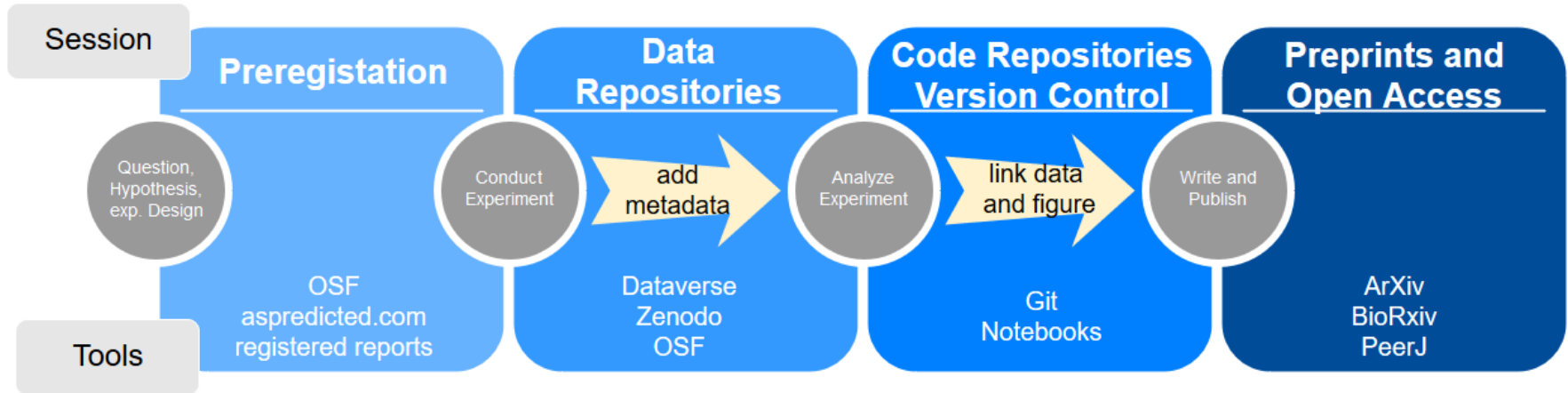
# Challenges for Open Science

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A key cost of open science is time – time to format, annotate and publish data and associated metadata; **time to learn new tools that allow for automated analysis and reproduction**; and time to produce scripts with a sufficient level of robustness and documentation to be broadly useful to others

Howe, A., Howe, M., Kaleita, A. L., & Raman, D. R. (2017).  
Imagining tomorrow's university in an era of open science.  
*F1000Research*, 6. <https://doi.org/10.12688/f1000research.11232.2>

# Building blocks of an open science course



# Practice! Student projects in the course

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Use existing data and publish data set

Conduct an extended  
Replication ([osf.io/jaxdp](https://osf.io/jaxdp))

Document analysis  
of an existing  
data set

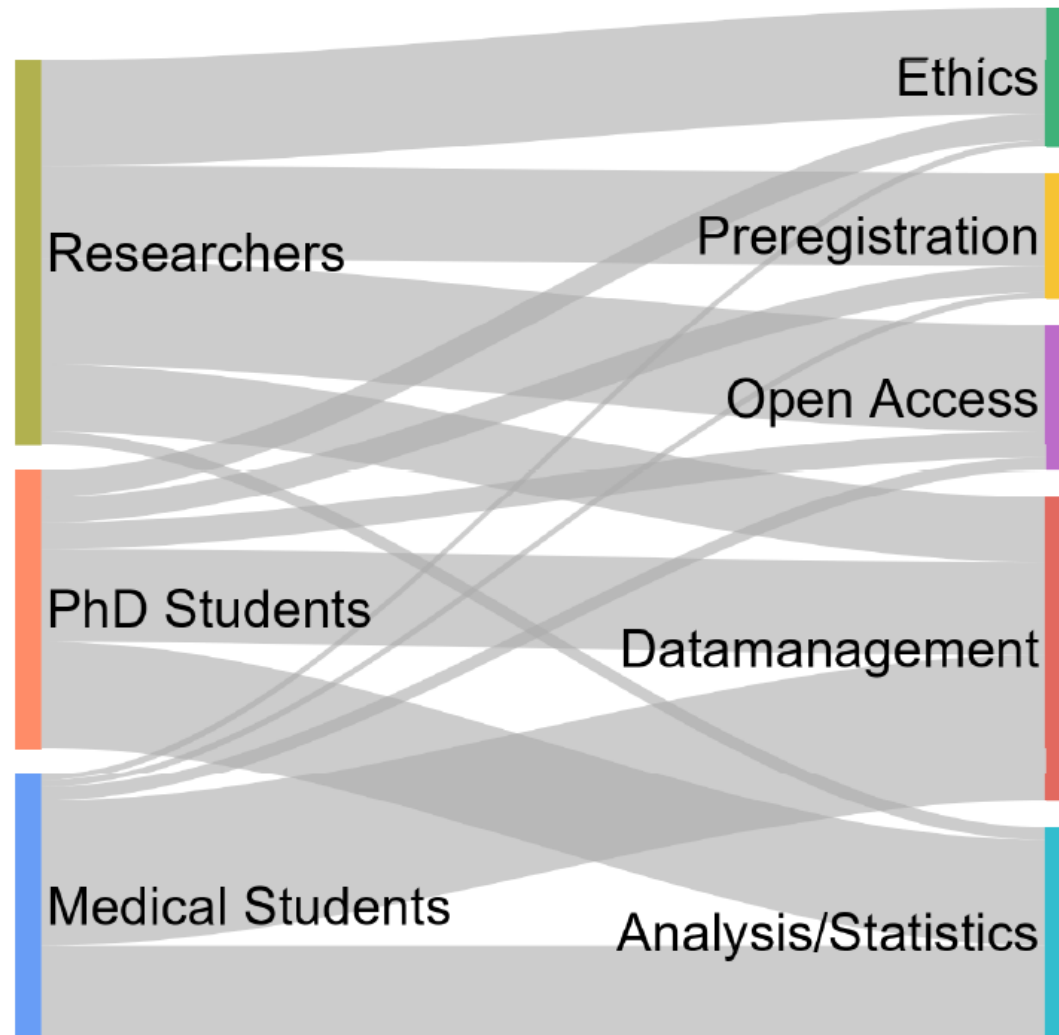




# QUEST - BIH CENTER FOR TRANSFORMING BIOMEDICAL RESEARCH

QUALITY | ETHICS | OPEN SCIENCE | TRANSLATION

# Education for the masses...





# THANK YOU!

Preprint: [osf.io/FBVEP](https://osf.io/FBVEP)  
Course material: [osf.io/X6892/](https://osf.io/X6892/)

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