



Research Methods in Psychology

Lab 9. Submission of the Entire Proposal and 'Beyond Research Methods and Statistics'

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Quantitative Methods, Measurement, and Statistics

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Today is our final lab!

How are you?

Ready for
PSY015!

No more
PSY015...

imgflip.com





What are we going to do?

Submission of the entire proposal (Assignment 9)

A big picture

Assignment 9 rubrics and tips

Beyond methods and statistics: Metascience



A big picture

Conducting psychological research

Asking psychological research questions (Assignment 1)

Reviewing and summarizing relevant articles (Assignments 2, 3, and 4)

Writing the introduction section (Assignment 6)

Writing the methods section (Assignments 5 and 7)



A big picture

What is the next step?

Combine all together based on comments/feedback

- Response letters
- Revise the title page, intro, method, references, and appendix



A big picture

Revision is painful!

The Stages of Revision



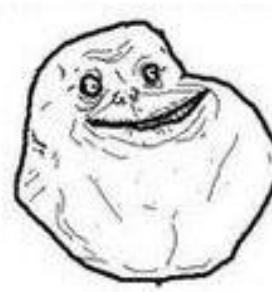
denial



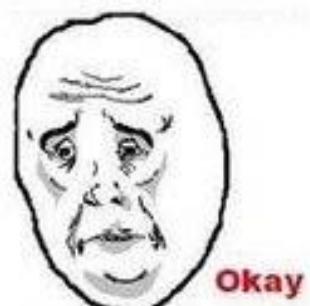
anger



bargaining



depression



acceptance



Submission of the entire proposal

Assignment 9 rubrics

How to submit the entire proposal

- Response letter (5pt)
State how you addressed the comments/feedback about all five sections
- Entire proposal (5pt)
Include revised title, intro, methods, references, and appendix

Format and deadline

- Follow the APA style and due at 9 am on November 29 (No late work will be accepted)



Submission of the entire proposal

Response letter (5pt)

Purpose is to mimic the journal submission process

Summarize my comments/feedback for five components

Explain how you addressed my comments/feedback

Show an example...



Submission of the entire proposal

Entire proposal (5pt)

Combine all five components in the order of...

- Title, intro, methods, references, and appendix

Again, be sure to follow the APA 7th formatting

Show an example...



Metascience

Beyond psychological methods and statistics

We have learned methods (PSY015) and statistics (PSY010)

So any psychological research would be perfect and rigorous, do you agree?



The replication crisis in psychology

Only 36% of the significant findings were replicable

RESEARCH ARTICLE SUMMARY

PSYCHOLOGY

Estimating the reproducibility of psychological science

Open Science Collaboration*

SCIENCE sciencemag.org

28 AUGUST 2015 • VOL 349 ISSUE 6251



Metascience

Researcher degrees of freedom

Inherent flexibility in conducting research and analyzing its results

Degrees of Freedom in Planning, Running, Analyzing, and Reporting Psychological Studies: A Checklist to Avoid p -Hacking

Jelte M. Wicherts*, Coosje L. S. Veldkamp, Hilde E. M. Augusteijn, Marjan Bakker, Robbie C. M. van Aert and Marcel A. L. M. van Assen

Methodology and Statistics, Tilburg University, Tilburg, Netherlands





Metascience

Questionable research practices to obtain significant p-values

The Earth Is Round ($p < .05$)

Jacob Cohen

After 4 decades of severe criticism, the ritual of null hypothesis significance testing—mechanical dichotomous decisions around a sacred .05 criterion—still persists. This

sure how to test H_0 , chi-square with Yates's (1951) correction or the Fisher exact test, and wonders whether he has enough power. Would you believe it? And would you



Metascience

A movement to redefine or ban the p-value

nature human behaviour

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[nature](#) > [nature human behaviour](#) > [comment](#) > article

Comment | Published: 01 September 2017

Redefine statistical significance

[Daniel J. Benjamin](#)✉, [James O. Berger](#), ... [Valen E. Johnson](#)✉

+ Show authors

[Nature Human Behaviour](#) 2, 6–10 (2018) | [Cite this article](#)

139k Accesses | 964 Citations | 854 Altmetric | [Metrics](#)

We propose to change the default *P*-value threshold for statistical significance from 0.05 to 0.005 for claims of new discoveries.



Metascience

Stop using p-values!

Prof. Dr. Rens van de Schoot (<https://www.youtube.com/watch?v=owb5A8IVS0o>)



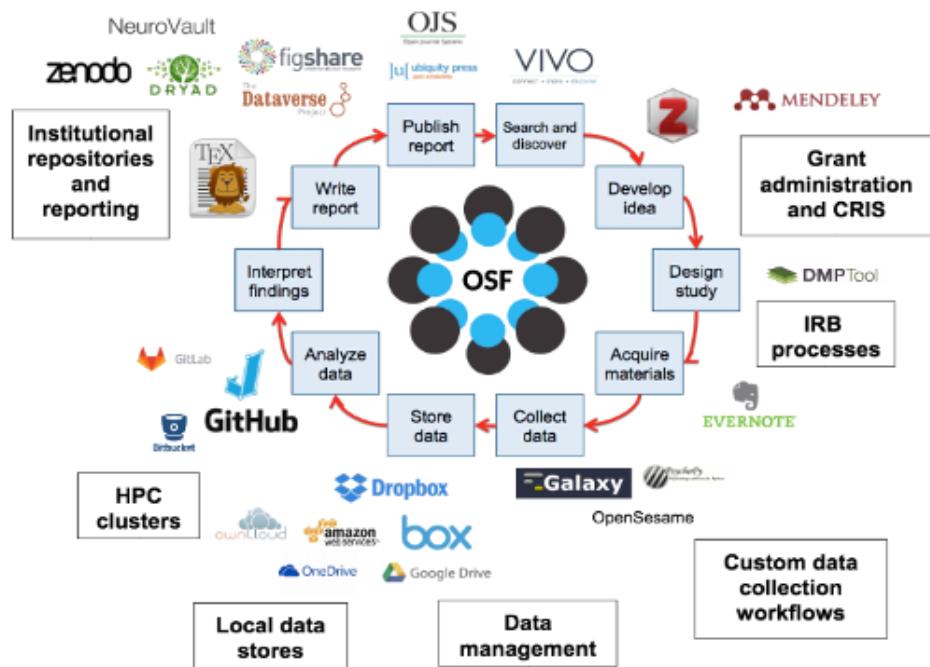
will you join me?





Metascience

Open science movement





Concluding remark

What I want to convey to you...

Be critical in doing everything in your life

Be transparent in doing science

Enjoy your undergraduate life (jealous of you!)



Before you go home...

Any **FINAL** questions or comments?





Thank you for the great semester! Cheers!

Happy Thanksgiving!

