

# BRINGING RESEARCH INTO THE CLASSROOM

Incorporate student data collection into a  
research methods course



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What is the typical student's attitude towards taking research methods?

My hope is always...



But it's typically more like...



# Common Fears/Questions...

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- Does it require a lot of reading?
- Does it require a lot of writing?
- Does it require an understanding of statistics?

And my response is always Yes, Yes and **OH YES**



# Research Methods = Fork in the Road



- Hate it or love it
- Research intensive vs. non-research intensive career
- **The key is to get students to actually DO research.**



# Steps in the Research Process

1. Choose a research question
2. Conduct a literature review
3. Develop a hypothesis
4. Design the study
5. Collect the data
6. Analyze and interpret the data
7. Write a research report

# Multiple Methods

## Correlational Methods

- Lit review
- Collect data
- **Run correlations**
- Write a 5-8 page manuscript in APA format

## Experimental Methods

- Lit review (same topic)
- Collect data
- **Run a 2x2 ANOVA**
- Write a 8-15 page manuscript in APA format



# Example Correlation Study

- **Key Article:** Ho, Sidanius, Cuddy, & Banaji (2013)
  
- **Instructions:** Collect data from 3 White students. Participants will respond to items about one of three target groups (Whites, Blacks or Black-White Biracials). We will analyze the data together in class. Then you must write an APA-style research paper to test the hypotheses listed below.
  
- **Hypotheses:**
  - ▣ White Target- No relationship between SDO and RGM
  - ▣ Black Targets- negative relationship between SDO and RGM
  - ▣ Black-White Target- negative relationship between SDO and RGM

# Correlational Study Questionnaire

- Racial Group Membership.
  - 1 = Completely Outgroup; 4 = Equally in/Equally out;  
7 = Completely Ingroup
  - To what degree do you consider (Target Group) people to be a part of your racial group?
  
- SDO. (1 = Strongly Disagree; 7 = Strongly Agree)
  - In setting priorities, we must consider all groups.
  - We should not push for group equality.
  - Group equality should be our ideal.
  - Superior groups should dominate inferior groups.

# Correlational Study Results

Correlations<sup>a</sup>

		SDO Measure	Group Membership
SDO Measure	Pearson Correlation	1	.006
	Sig. (2-tailed)		.975
	N	27	27
Group Membership	Pearson Correlation	.006	1
	Sig. (2-tailed)	.975	
	N	27	27

**White Target Group**

$r(25) = .01, p = .98, ns$

Correlations<sup>a</sup>

		SDO Measure	Group Membership
SDO Measure	Pearson Correlation	1	-.107
	Sig. (2-tailed)		.594
	N	27	27
Group Membership	Pearson Correlation	-.107	1
	Sig. (2-tailed)	.594	
	N	27	27

**Black Target Group**

$r(25) = -.11, p = .59, ns$

Correlations<sup>a</sup>

		SDO Measure	Group Membership
SDO Measure	Pearson Correlation	1	-.538**
	Sig. (2-tailed)		.005
	N	26	26
Group Membership	Pearson Correlation	-.538**	1
	Sig. (2-tailed)	.005	
	N	26	26

**Black-White Biracial Target Group**

$r(24) = -.54, p = .01$

# Example Experimental Study

- **Key Article:** Ho, Sidanius, Cuddy, & Banaji (2013)
  
- **Instructions:** Collect data from 4 White students. Participants will take a test and either receive positive or negative feedback (**feedback IV**). They will then report the degree to which they think either Blacks or Black-White biracials (**target group IV**) are racial ingroup members (**DV**). We will analyze the data together in class. Then you must write an APA-style research paper to test the hypotheses listed below.
  
- **Hypotheses:**
  - ▣ Main effect of target group
  - ▣ Main effect of feedback
  - ▣ Target group x feedback interaction

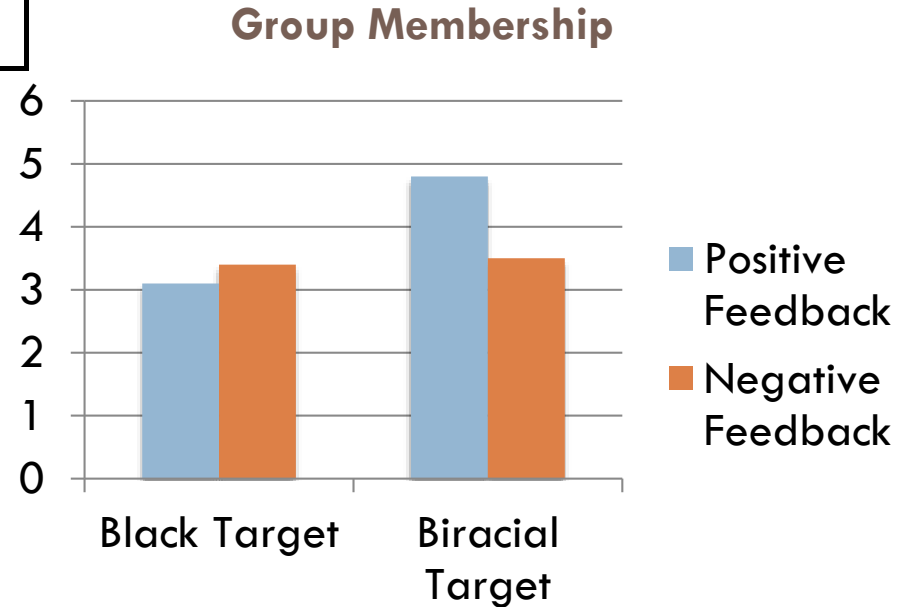
# Experimental Study Results

## Tests of Between-Subjects Effects

Dependent Variable: group membership

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24.551 <sup>a</sup>	3	8.184	4.377	.007
Intercept	921.151	1	921.151	492.636	.000
feedback	3.998	1	3.998	2.138	.149
target_group	12.202	1	12.202	6.525	.013
feedback*	10.571	1	10.571	5.653	.020
Error	117.800	63	1.870		
Total	1049.250	67			
Corrected Total	142.351	66			

a. R Squared = .172 (Adjusted R Squared = .133)





# Skills Developed



- Critical thinking skills
  - ▣ Critically evaluate empirical articles
  - ▣ Integrate previous research and theories
- Writing skills
  - ▣ How to follow APA format
  - ▣ How to develop a persuasive argument based on empirical findings and relevant theories
- Data analysis skills
  - ▣ Knowing how to run the appropriate analyses
  - ▣ Being able to interpret the results
  - ▣ Being able to write the results in APA format

# Scaffolding/Building Blocks



- Literature search homework assignment
- How to critically read a journal article exercise
- Descriptive and inferential statistics exercises
- Annotated bibliographies for each paper
- Outline of introduction for each paper
- APA writing sessions (emphasis on results)

# Goal

- Goal is to help students to:
  1. Be productive members of a research lab
  2. Have the necessary skills to conduct an independent research project
  3. Be able to be read empirical articles
  4. Know good from bad science
  5. Have a passion for exploration and discovery through research



# My Ultimate Goal





Question?

