

Two Birds with One Myth Debunking Campaign: Engaging Students to Target Psychological Misconceptions

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Interest in Myths



In the beginning...

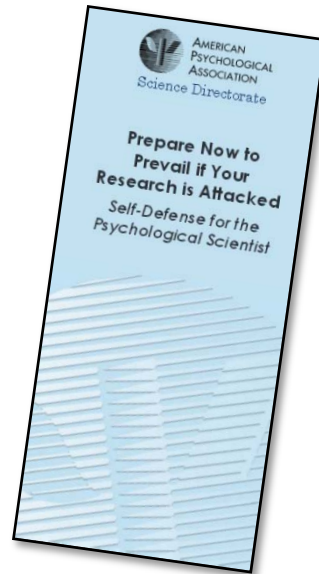


Psychological Science & Misconceptions



*“Rodney Dangerfield
of the sciences”*

K. Stanovich (2009)



- *Public Skepticism of Psychology: Why Many People Perceive the Study of Human Behavior as Unscientific* (AP, 2011)
 - Psychology does not use scientific methods
 - Psychology is not useful to society
 - **Psychology is merely common sense**

Psychological Science & Misconceptions

- Misconceptions about psychological phenomena are widespread and, in part, stem from incorrect information encountered in daily life as well as poor development/application of critical thinking skills

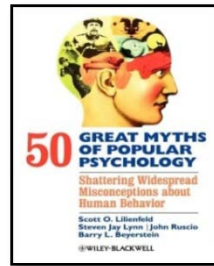
Examples

Rates (UMD)

- | | |
|---|-----|
| ✓ People only use 10% of their total brain power | 42% |
| ✓ People with Schizophrenia have multiple personalities | 55% |
| ✓ The polygraph test can accurately detect dishonesty | 40% |
| ✓ A large proportion of criminals successfully use the insanity defense | 46% |

Psychological Science & Misconceptions

- Gaining recent attention with publication of *50 Great Myths of Popular Psychology*



- Students who endorse discipline-inconsistent knowledge/beliefs find learning of new concepts impaired



2 birds 1 stone

APA Guidelines 2.0 (2013)

- ✓ Knowledge Base
- ✓ Scientific Inquiry & Critical Thinking
- ✓ Ethical & Social Responsibility in a Diverse World
- ✓ Communication
- ✓ Professional Development

Psychology Course

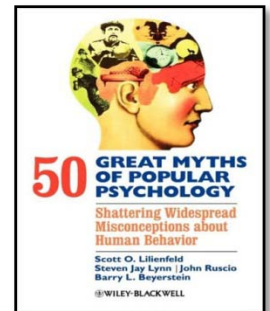
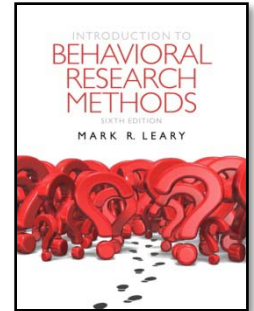
Course Overview

Two-course sequence on research methods:

1. *Experimental Design*
2. *Applied Methods & Measurement*


Myth Debunking Project Overview:

- Student teams presented to classmates PSA-style posters for myth debunking campaign designed to target Intro Psych
- Students determined: **4** different posters displayed weekly, within classroom, over a **5**-week span = **20** posters



Myth Debunking Posters

Do You Only Use 10% of Your Brain?



No area of the brain can be destroyed without causing serious deficits.

Unused areas of the brain either wither away or degenerate.

Brain tissue consists of 2-3% of our body weight but consumes over 10% of our body's oxygen. Evolution would never have permitted this.

Scientists have never found an area in which a person experiences no perception, emotion, or movement.


Brought to you by: The 50 Great Myths of Psychology and Jenny Williams, Brittney Young, Amanda Himebaugh

Is hypnosis really an altered state of consciousness?

Are we really more open to suggestion?

Are we more likely to say or do things we wouldn't normally do?

If so...



Then why aren't we out getting hypnotized every Friday night???

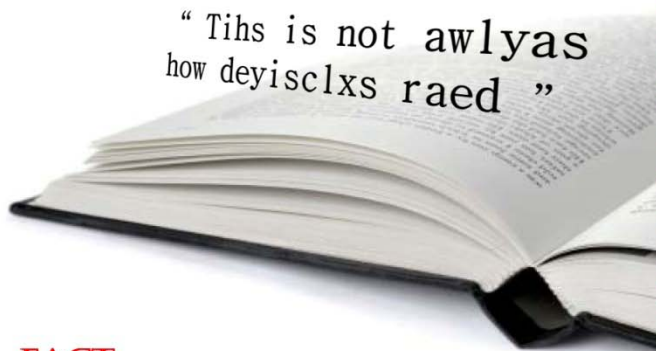
Because there is no evidence that hypnosis is more than just a state of relaxation.

Brought to you by: The 50 Great Myths of Popular Psychology & PSY3022

Myth Debunking Posters

POPULAR MYTH:

Dyslexia is only about reversing letters



FACT:

Dyslexia is a reading disorder that causes difficulty in **spelling, forming sentences, and reading**. Mixing up of letters does not happen to all people with dyslexia.



Brought to you by:
The 50 Great Myths of Popular Psychology & PSY3022

Myth: The Polygraph ("Lie Detector") Test Is an Accurate Means of Detecting Dishonesty



This Measures
Respiration

This Measures
Blood Pressure

This Measures Skin
Conductivity

None of these Measure Lies


- Despite popular belief, the polygraph can be easily fooled by a calm psychopath, or falsely catch a nervous innocent.
- The polygraph is actually good at measuring excitement, but not at detecting lies.




Brought to you by:
The 50 Great Myths of Popular Psychology & the PSY3022 Lie Detectives

Myth Debunking Posters

Schizophrenia does NOT mean Multiple Personalities




- The proper name for Multiple Personalities is Dissociative Identity Disorder.
- Schizophrenia is marked by delusions or hallucinations.
- 77% of Freshman psychology students falsely believe this myth. **DON'T LET IT BE YOU**



Brought to you by: The 50 Great Myths of Popular Psychology & Josh Egging and Nick Nygaard

Popular Myth: Researchers have demonstrated that dreams possess symbolic meaning

According to Freudian thought, dreams are transformed into symbols that disguise hidden wishes

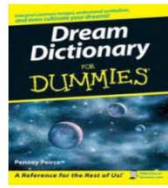


Interpretations often vary between sources.


Different interpretations of dreams involving FISH

Interpretation #1 You will find a charming, good looking mate	Interpretation #2 Attempt to feel more powerful by dominating less powerful	Interpretation #3 Indicates conception
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Can you really rely on this??

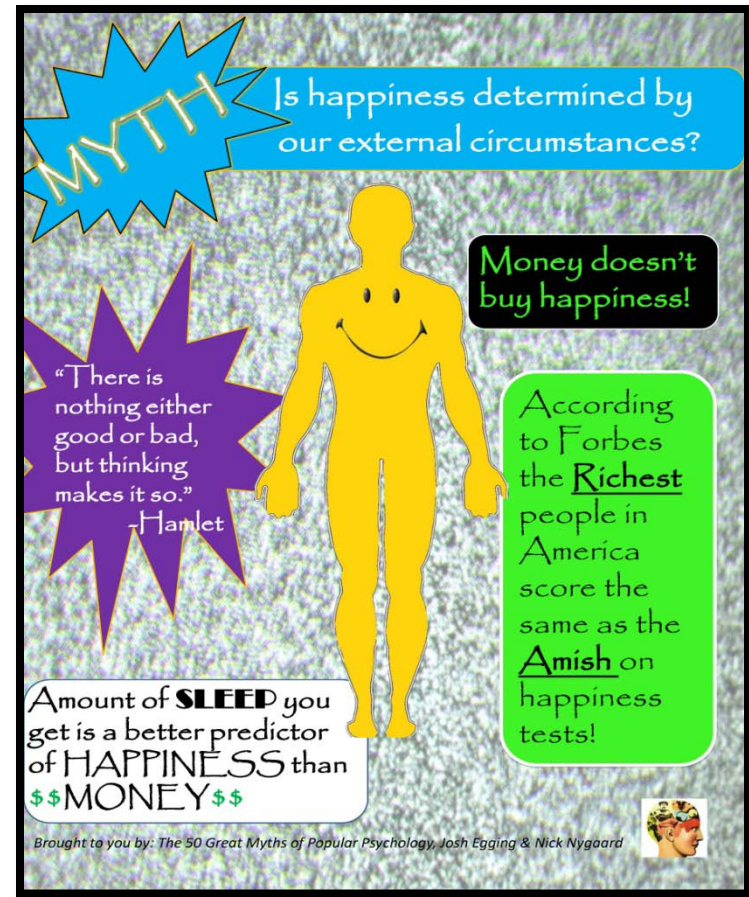
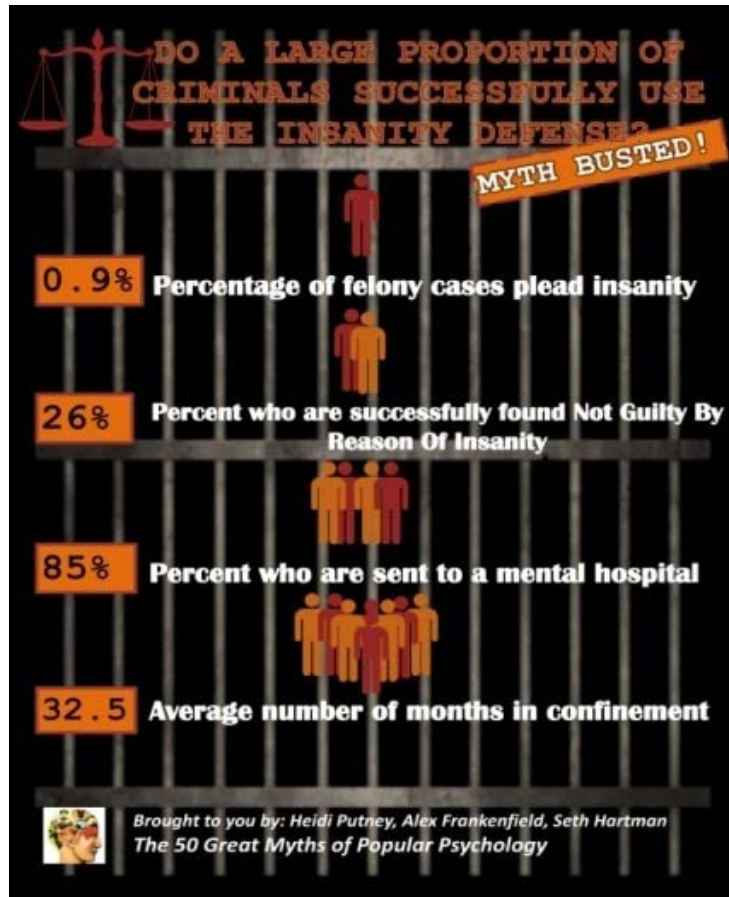


Fact:
Close interpretations reveal that dreams don't appear to be disguised by symbolic meanings



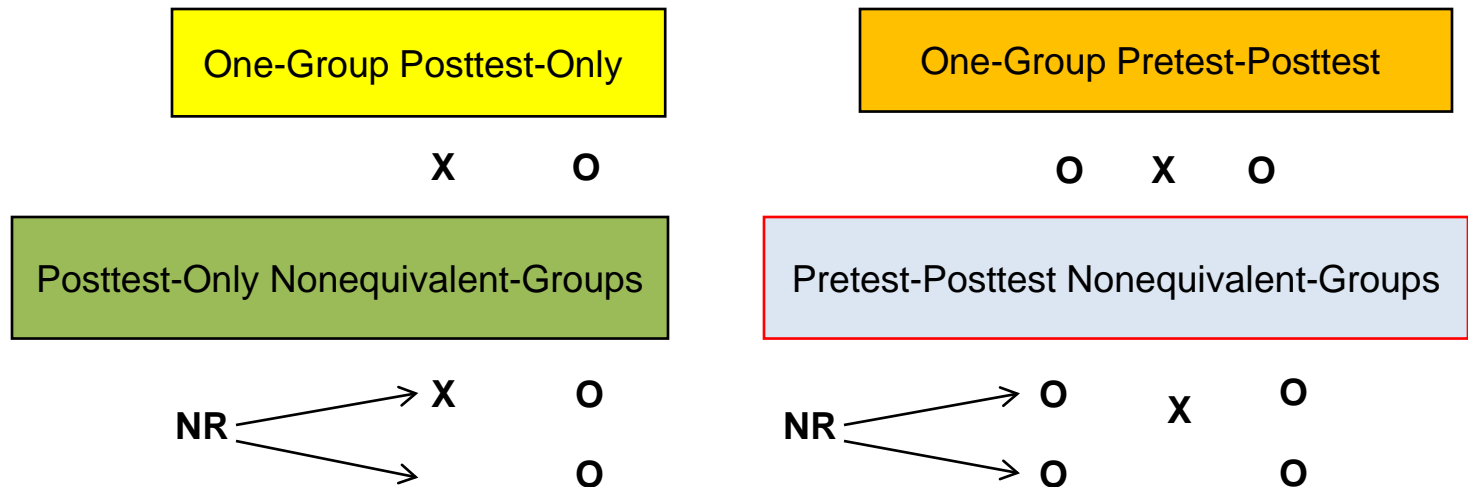
Brought to you by:
The Dream Team: Jaime Scholzen, Nicole Pieters and Matthew Bordewick
The 50 Great Myths of Popular Psychology

Myth Debunking Posters



Learner-Centered Principles

- LCP were used throughout to facilitate engagement & strategic thinking
 - Multiple feedback sessions occurred among students throughout the project
 - Collaborative exchange btwn teacher & students
For example, students collectively determined design



Assessing Beliefs in Misconception

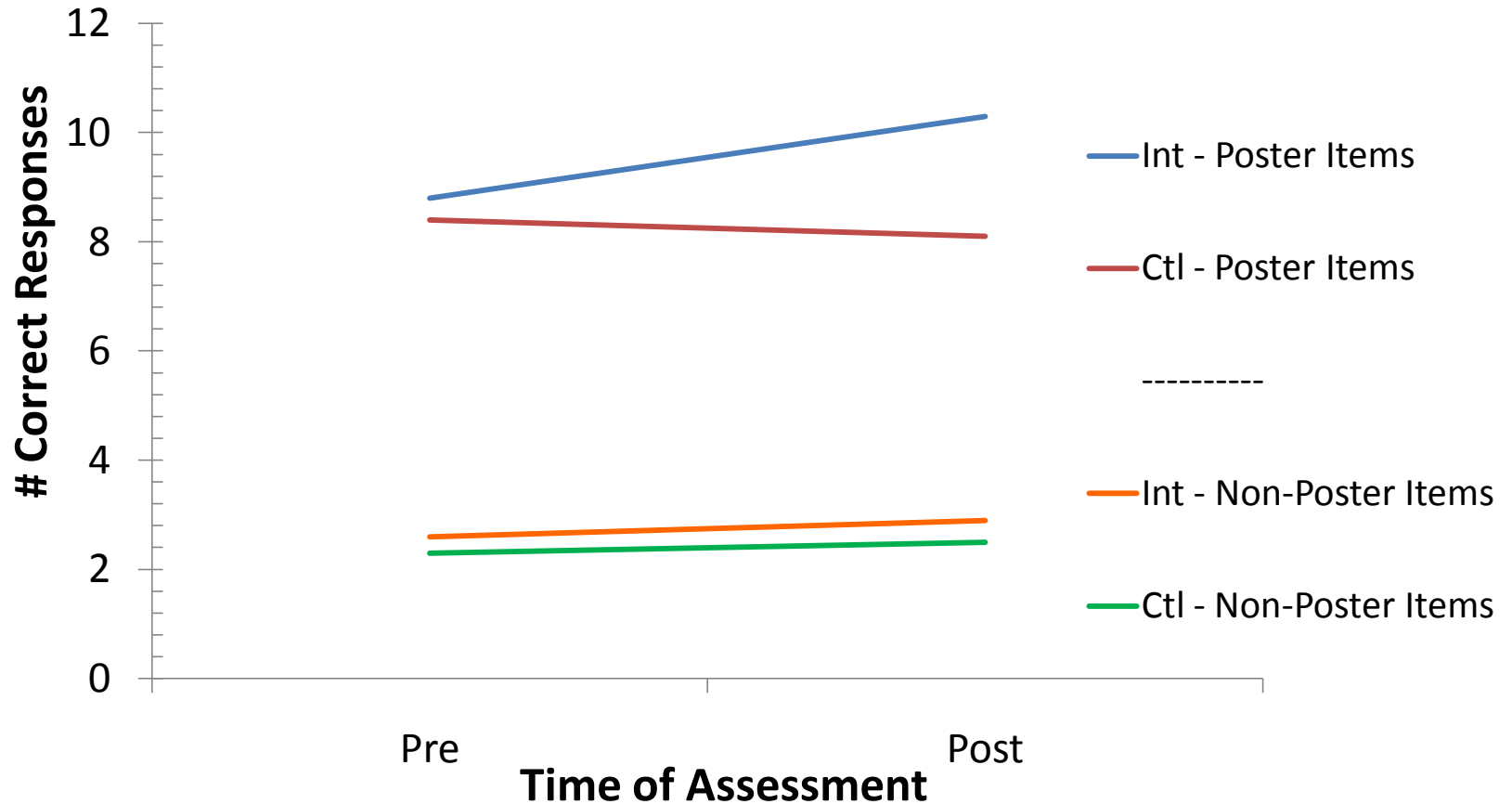
“Knowledge of Psychology Test”: Students initially developed MC items for own posters, but later adapted to T/F format

- ✓ **20** items corresponded w/posters & **5** items non-poster misconceptions = 25 total items
- ✓ Some items reverse scored; higher score = better

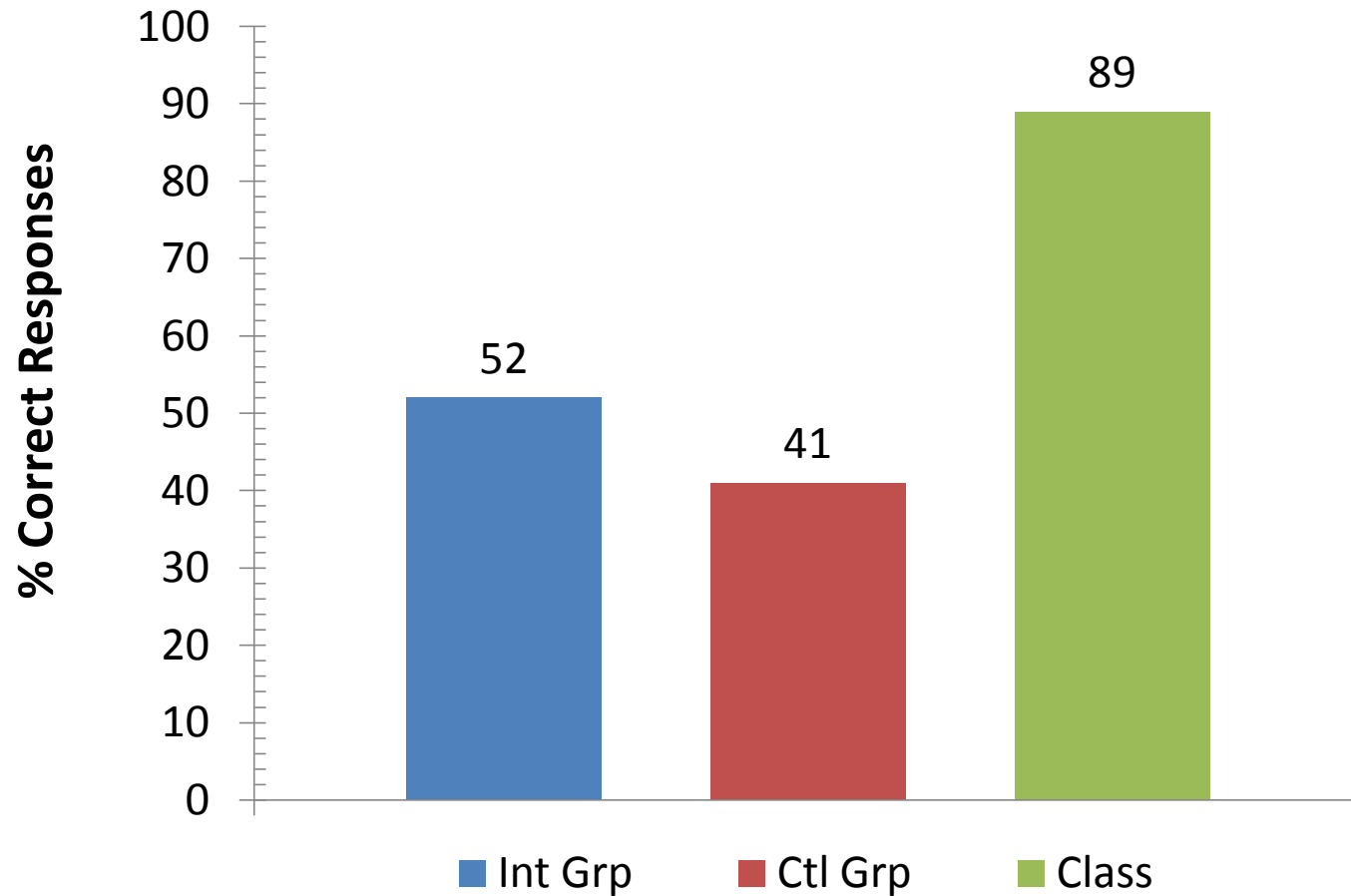
The insanity defense is rarely used in trials, and when it is used defendants are successful in a minority of cases. (T)

During a full moon, people commit more crimes and behave more abnormally. (F)

Effects of Intervention on Debunking Myths

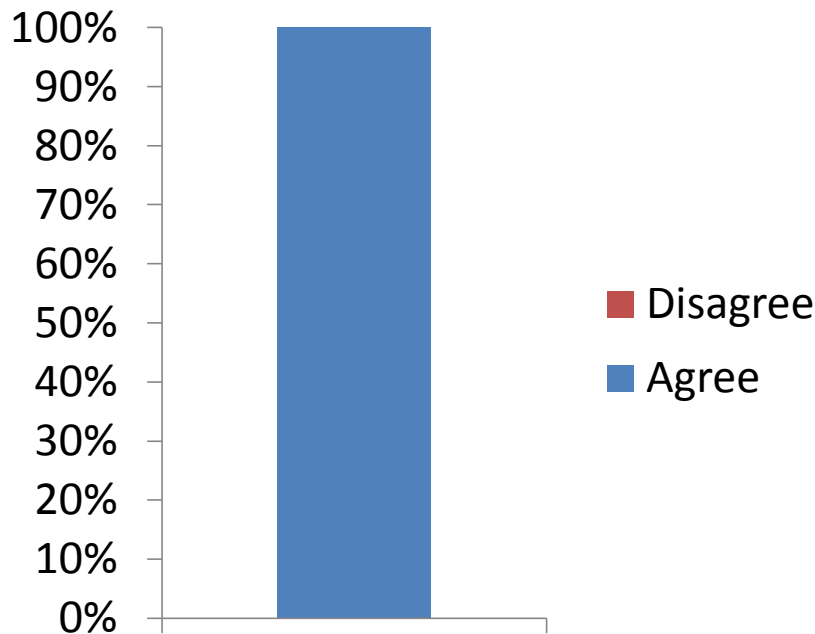


Debunking Myths w/ the Class

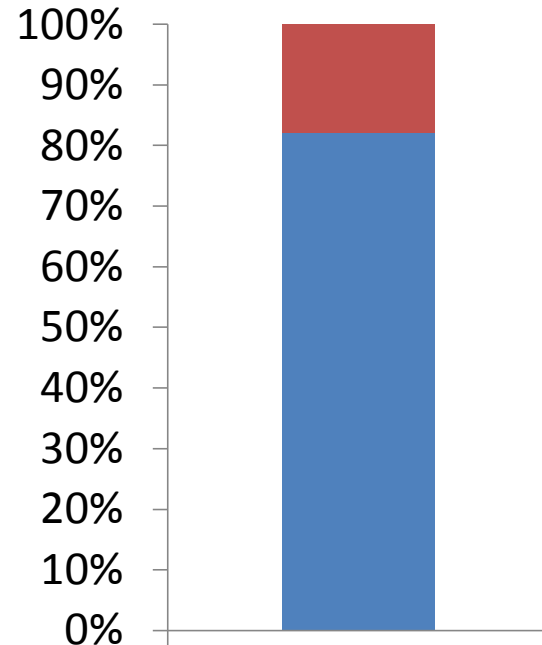


Student Reflection on Project and Learning

Learning about the commonly believed *Myths of Psychology* was enjoyable.

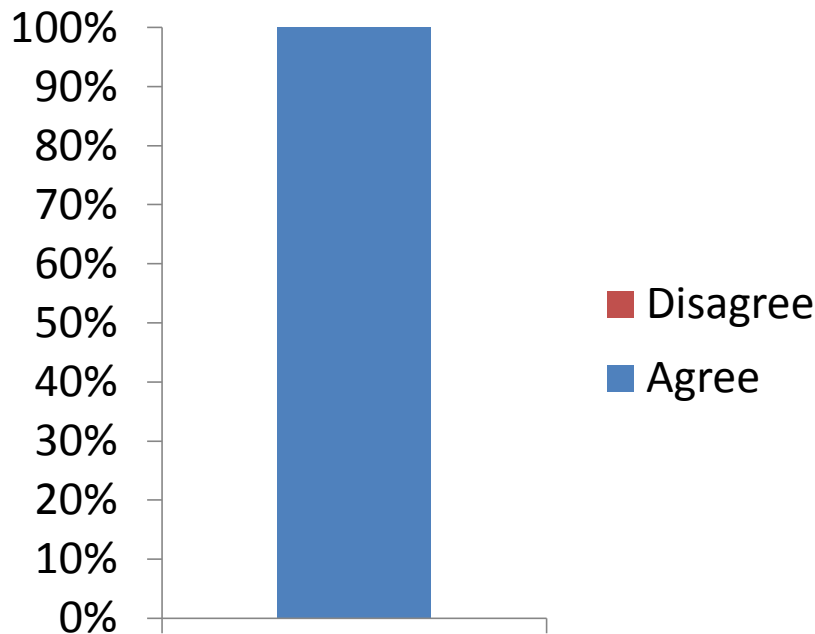


Designing the *Myths of Psychology* intervention helped me understand and think about how I might be able to conduct applied research.

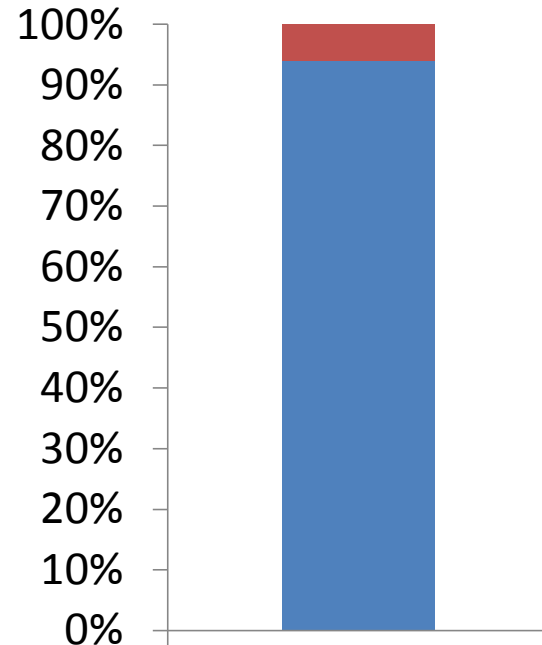


Student Reflection on Project and Learning

The *Myths of Psychology* posters and intervention fostered skills for evaluating new ideas with an open but critical mind.



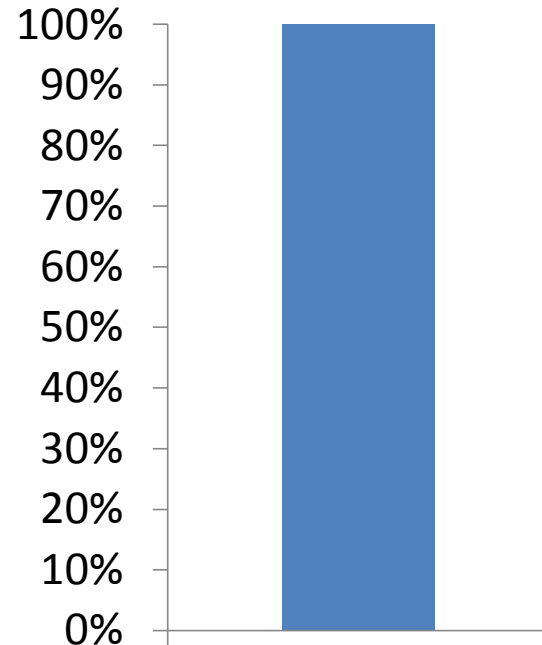
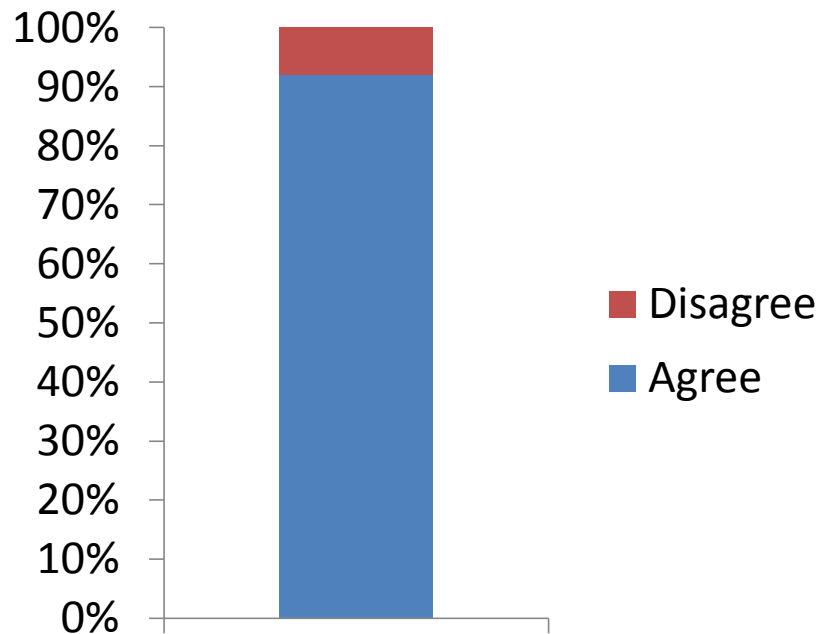
The *Myths of Psychology* posters and intervention has contributed to my being more skeptical about psychological claims that I hear.



Student Reflection on Project and Learning

I think the *Myths of Psychology* posters and intervention project can positively impact students in PSY1001.

I recommend using this assignment in future classes.



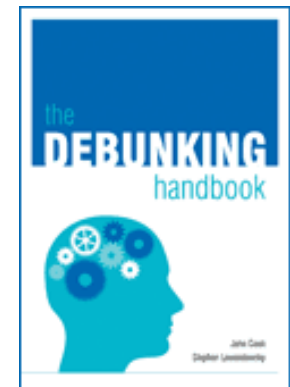
Lessons Learned

- Students' experience with the myth debunking campaign was viewed as valuable to their learning
- Although it may not be necessary or practical to be learner-centered on every component of a course, it certainly is feasible & rewarding (for students & instructor alike) to use this approach with multiphase & challenging projects designed to foster critical thinking & problem solving
- Benefits of this approach may well extend beyond the designated classroom

Where Might We Go From Here?

- Greater emphasis on assessment of misconceptions
 - e.g., response format, wording

Most people only use 10% of their brain power = 42% vs. 71% (ST/PT/DT)
- Longer-term follow-up
- Adaptations to increase effect size & demonstrate iterative process of science to students
- Intro Psy students as myth busters



Questions?



If you would like a list of resources, sample materials, etc .

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