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

- *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

“Rodney Dangerfield of the sciences”
K. Stanovich (2009)
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

✓ 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

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**APA Guidelines 2.0 (2013)**

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

*2 birds 1 stone*
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.

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 Psychology and Jenny Williams, Brittany Young, Amanda Himebaugh

Brought to you by: The 50 Great Myths of Popular Psychology & PSY3022
POPULAR MYTH:
Dyslexia is only about reversing letters

“This is not awlyas how deyiscalx raed”

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.

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.
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**

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

**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 Schoenen, Nicole Pieters and Matthew Bordewick
*The 50 Great Myths of Popular Psychology*
Myth Debunking Posters

**Myth Busted!**

- **0.9%** Percentage of felony cases plead insanity
- **26%** Percent who are successfully found Not Guilty By Reason Of Insanity
- **85%** Percent who are sent to a mental hospital
- **32.5** Average number of months in confinement

Brought to you by: Heidi Putney, Alex Frankenfeld, Seth Hartman
*The 50 Great Myths of Popular Psychology*

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**Myth!**

Is happiness determined by our external circumstances?

- Money doesn’t buy happiness!

“There is nothing either good or bad, but thinking makes it so.”
- Hamlet

Amount of SLEEP you get is a better predictor of HAPPINESS than $$$MONEY$$$

According to Forbes the **Richest** people in America score the same as the **Amish** on happiness tests!

Brought to you by: The 50 Great Myths of Popular Psychology, Josh Ewing & Nick Nygren
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

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STP Best Practices Conference, October 2013
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

![Graph showing the effects of intervention on debunking myths. The graph compares the number of correct responses over time for intervention (Int) and control (Ctl) groups for both poster and non-poster items. The x-axis represents time of assessment (Pre and Post), and the y-axis represents the number of correct responses. The lines show an increase in correct responses for both intervention and control groups, with the intervention group consistently higher.]
Debunking Myths w/ the Class

% Correct Responses

- **Int Grp**: 52
- **Ctl Grp**: 41
- **Class**: 89

STP Best Practices Conference, October 2013
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.

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STP Best Practices Conference, October 2013
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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