Motivating and Teaching the Psychological Science

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psychology is a science
...and I’m here to show you why and how
Hard Core experimental psychology @
Engagement with K-12 educators and schools
Psychology is a science!
what is psychology?

it’s a science...
...in post-secondary education, in the American Psychological Association (including its accreditation wing), in textbooks, in the National Science Foundation, in the dictionary, in the College Board AP exam...

it’s kinda not exactly quite a science...
...in high school.
Completing a high school psychology class was not related to performance in a college introductory psychology course. (Griggs & Jackson, 1988)

There was no significant difference in the final [Introductory Psychology] grades between students with high school psychology experience and those with no previous experience. (Hedges & Thomas, 1980)

The student who has had high school psychology does not enter the introductory course knowing any more about the field than his counterpart without such a background. (Federici & Schuerger, 1976)

Students reported little positive effect of their high school psychology experience, and it may even have driven some away from the field. (Coles, 1960)

historical disconnect between high school & college psychology
a serious proposal:
If you’re doing (teaching/studying) psychology, you are a scientist, and you’re doing science

• It doesn’t matter what department you’re in, or what your degree says
• Science is a process
  – Not a credential
  – Not a body of knowledge
psychology is a science... and I’m here to show you why and how
Scientific clinical psychology is the only legitimate and acceptable form of clinical psychology. This first principle seems clear and straightforward to me - at least as an ideal to be pursued without compromise. After all, what is the alternative? Unscientific clinical psychology? Would anyone openly argue that unscientific clinical psychology is a desirable goal that should be considered seriously as an alternative to scientific clinical psychology?
### in Indiana...

<table>
<thead>
<tr>
<th>Suicide</th>
<th>Addiction</th>
<th>Mental Health</th>
</tr>
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<tbody>
<tr>
<td>Highest rate in the country of teens who’ve considered suicide and the 2\textsuperscript{nd}-highest rate of those who’ve attempted it</td>
<td>8\textsuperscript{th} highest per capita health care costs from opioid abuse</td>
<td>10% less than national average report positive outcomes from mental health treatment</td>
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<tr>
<td></td>
<td>521.2% increase in reported patients admitted to rehab clinics for heroin use from 2002 to 2012</td>
<td>Penetration rates of mental health programming for adults is 20-50% lower than national average</td>
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<tr>
<td></td>
<td>21% of Hoosier adults are current smokers (11\textsuperscript{th} in the country)</td>
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We desperately need public trust in psychology.

- Hoosiers should want therapy when they need therapy.
- When someone sees a therapist, they should be able to trust...
  - They won’t get worse
  - There’s evidence to support what they’re doing
but...

Today, patients cannot tell if the clinical psychologist they see will be guided by science, or instead by personal experience and nonscientific training. - Richard McFall

• A minority of psychotherapists practice evidence-based therapy
• Even among therapists who claim they’re evidence-based, only half are
psychotherapy is not art, not intuition

psychology is science
a false dichotomy

clinical psychology

research psychology
psychology is a science
...and I’m here to show you why and how
What is urgently needed is an educational program in which students become interested in actively knowing, rather than passively believing. Volpe, 1984
psychological science

a three-part formula for active teaching and learning

1. Participate (as a subject) in research
2. Read about and analyze research
3. Conduct research
1. Participate

• More satisfying than learning on your own
• Higher levels of understanding of research, and interest in research
• Shown to improve students’ understanding of psychology concepts more than lecture
• No research where you are? **Come visit!**

(Or point 3, conduct research, upcoming)


2. Read & Analyze

textbooks can be great, but they...
• present findings as facts
• aren’t actually *that* easy

whereas research articles...
• highlight *process* (remember: *science is a process*)
• (when chosen carefully) are more interesting, enjoyable, and memorable
• augment critical thinking skills


A researcher tested a new drug designed to decrease depression. She gave it to 100 clinically depressed patients and discovered that their average level of depression, as measured by a standardized depression inventory, declined after 4 months of taking the drug. She concluded that the drug reduces depression.

3. **Conduct Research**

**why research?**

- that’s what it means to **do** psychology
- research builds generalizable academic skills and **highly** marketable professional skills
- it’s an ideal way to learn content

“**When a kid comes home from school and mom asks what he did that day, he can respond, "We had a psych lab and a physics lab."**” - Charlie Blair-Broeker

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for the researcher...

- Communication skills (85)
- Critical thinking skills (78)
- Collaboration skills (74)
- Adaptability skills (53)
- Organization skills (24)
- Technical skills (18)
- Ethical skills (9)

Meta-analysis of 31 sources
Listing 341 skills
sought by employers in new college hires

Appleby, D. C. (2009, August). The skills we believe psychology majors possess and the skills employers value in potential employees. In R. E. Landrum (Chair), Essential work skills for psychology majors: Do our students actually acquire them? Symposium conducted at annual meeting of the American Psychological Association convention, Toronto, Canada.
but beyond...

Building public trust in psychology’s rigor, value, validity, findings, concerns...
psychology is a science…
...and hopefully I’ve shown you why and how