

Developing Critical Thinking Skills In Psychology

Pamela L. Bacon

Associate Professor & Psychology Department Chair

Introduction

Psychology majors and alums are presented with daily opportunities to utilize the critical thinking skills they developed at CSB/SJU. Whether they are reading a newspaper article, serving their community on a School Board or a non-Profit, making decisions about their health care, caring for others, or identifying how to best use their resources, people constantly encounter summaries of research studies and conclusions about research studies. Developing students' ability to critically evaluate research and the conclusions drawn from the research is one of the main CSB/SJU Psychology Department learning goals.

Starting in 2011, I began changing the way I taught my courses so that the main goal of every course regardless of the target audience or level of the course was to develop students' critical thinking skills. I shifted the focus of my courses from only covering content to also developing critical thinking skills using examples from everyday life (e.g., radio news reports, magazine articles, and newspaper articles) and also from the psychological literature. Students practiced these skills in a variety of assignments and in class activities that were appropriate for the students' current training in psychology.

Most research methods courses lend themselves naturally to developing critical thinking skills, so I already had a number of critical thinking activities to use in this course. Content courses like introductory psychology and social psychology typically emphasize mastering terminology and theories, so I spent considerable time developing critical thinking activities and assignments that would fit within the content areas but still ensure that students developed their critical thinking skills.

Goal: To determine if focusing on critical thinking in psychology leads to changes in students' critical thinking skills across the semester.

Method

Participants

Pam Bacon's spring 2012 introductory psychology ($N = 30$), research methods ($N = 16$), and social psychology ($N = 30$) courses completed the in-class assessment on the first and last day of class.

Materials

Critical thinking was assessed using Lawson's (1999) Critical Thinking in Psychology test. This 8-item test was developed to measure students' ability to read about a fictional study and then critique the researcher's conclusion. Students must describe what the problem is with the researcher's conclusion and then explain why it is a problem. The researchers used Penningroth et al.'s (2007) scoring system, which assigns one point for identifying the problem and one point for the explanation. Because one of the items combined the identification and explanation, it was only worth one point; the others were worth two points, for a total of 15 points possible.

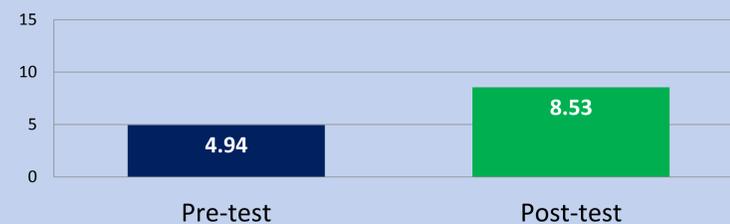
Procedure

Each response was typed and given a code. The two researchers who coded the responses were blind to whether it was a pre-test or post-test responses and blind to whether it was from an introductory, research methods, or social psychology student.

Results

Research Methods Pre-Test and Post-Test Averages

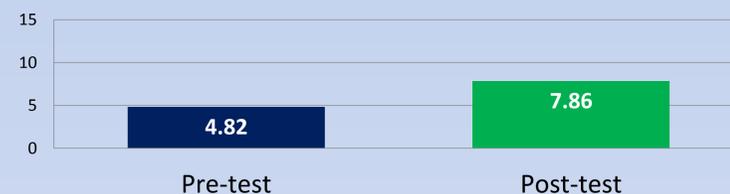
Research methods is a required 200 level course taken by sophomore and junior psychology majors.



*Paired t-test results: $t(16) = -5.45, p < .001, d = 1.3, r^2 = .65$.

Social Psychology Pre-Test and Post-Test Averages

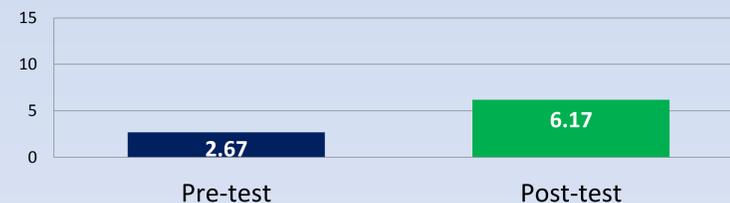
Social psychology is a 300 level course typically taken by junior and seniors who are psychology majors or minors. In addition to teaching course content in social psychology, I also emphasize critical thinking and quantitative reasoning skills in this course.



*Paired t-test results: $t(27) = -6.38, p < .001, d = 1.2, r^2 = .60$.

Introductory Psychology Pre-Test and Post-Test Averages

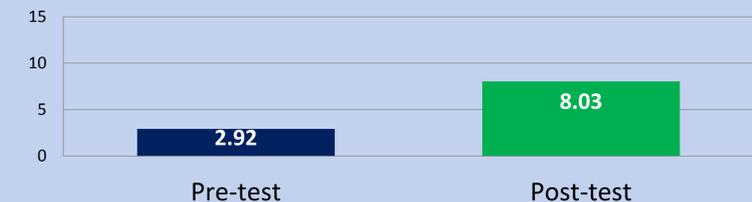
Introductory psychology fulfills the social science requirement in the Common Curriculum. This may be many students' only exposure to using the scientific method to answer social science questions.



*Paired t-test results: $t(29) = -7.00, p < .001, d = 1.3, r^2 = .63$.

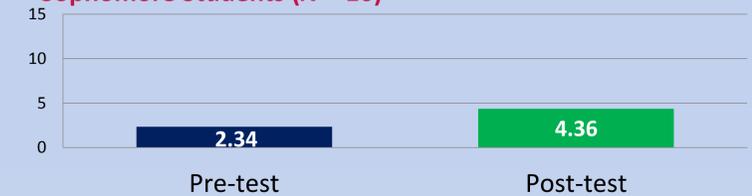
Comparison of First Year Students' vs. Sophomore Students' Gains in Introductory Psychology

First Year Students ($N = 12$)



*Paired t-test results: $t(16) = -7.11, p < .001, d = 2.0, r^2 = .82$.

Sophomore Students ($N = 16$)



*Paired t-test results: $t(16) = -5.45, p < .001, d = .89, r^2 = .46$.

Conclusion

Students demonstrated substantial growth in critical thinking scores in research methods, social psychology, and introductory psychology across the semester. The gains were particularly large for first year students in introductory psychology.

First years showed much higher gains on the post-test than the sophomores in introductory psychology. This finding highlights the importance of developing the skills when students are developmentally ready to learn them.

One troubling finding was that the senior psychology majors did not have higher critical thinking pre-test scores than the sophomore research methods students, suggesting that the gains made in research methods are not built upon in upper division content courses. Based on these assessment results, the Psychology Department has made changes to introductory psychology labs and is reviewing and incorporating best practices in teaching critical thinking into all courses.

References

- Lawson, T. J. (1999). Assessing psychological critical thinking as a learning outcome for psychology majors. *Teaching of Psychology, 26*, 207-209.
- Penningroth, S. L., Despain, L., & Gray, M. J. (2007). A course designed to improve psychological critical thinking. *Teaching of Psychology, 34*, 153-157.