



Busting Myths to Increase Critical Thinking and Interest in Psychology

Jennifer S. Blessing

Department of Psychology, University of Tampa, Tampa, FL 33606



Abstract

Increasing students' ability to think critically about science is of utmost importance. The current study is an extension of Blessing and Blessing (2010) with two sections of General Psychology designated for first year students intending to major in psychology. One section was assigned to complete the PsychBusters class presentations along with a PsychBusters poster presentation at the end of the semester. The other section did not use the PsychBusters assignment but assigned a different poster presentation. For both sections, interest in psychology and critical thinking were measured. A few significant differences were noted; all students maintained high interest but critical thinking skills still need improvement.

Introduction

When teaching psychology classes, one of the most important features is underscoring the idea that psychology is a scientific field, governed by empirical evidence and study. A key component is effectively conveying to students that critical thinking about human behavior is preferred to simply relying on intuition. General Psychology courses present a great challenge to convey content knowledge along with critical thinking skills about the topics.

Blessing and Blessing (2010) effectively demonstrated a means to improve critical thinking with a General Psychology class assignment, "PsychBusters." This assignment required students to select a commonly heard statement about human behavior and research its origins and veracity. The results indicated that students' class presentations of their findings improved critical thinking in all members of the class when compared to a class which did not include the assignment.

This study extended the PsychBusters' assignment to assess unique sections of first year students who intend to major in psychology. If critical thinking skills can be introduced and shaped early in the college experience, the possibility is that students will have a deeper understanding of the science of psychology.

Method

Participants

Sixty-seven undergraduates (18 males, 47 females, and two chose to not indicate gender) at the University of Tampa participated in the study. All were enrolled in one of two introductory psychology sections, one of which was taught by the author. These sections were initially populated with first year students who indicated psychology as a major. After drop and add, the experimental class included 29 first year students, 3 sophomores, and 2 juniors. The control class included 26 first year students, 5 sophomores, and 2 juniors. The average age was 18.6 years ($SD = 2.3$).

Procedure

Each section required the same identical textbook (Feist & Rosenberg, 4th ed.) and focused on the same chapters. During the first week of classes, each section was given a pretest including an Interest in Psychology Survey and a Critical Thinking task. Posttest versions were given during the last week of classes.

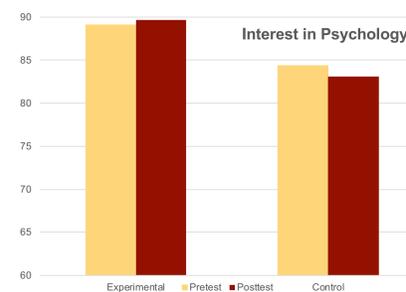
The experimental section participated in PsychBusters assignments. Students signed up in groups for each chapter. Each group selected a "myth" about human behavior from the chapter and researched its veracity. They presented in class about the myth and what they discovered. Presentations were scheduled throughout the semester. At the end of the semester, each group created a poster that included the information from their presentation and added a proposal for an empirical study to test the myth.

The control class did not complete the PsychBusters presentations. However, they worked in pairs to conduct small convenience sample surveys and created posters about their results. Posters from both classes were presented at a department sponsored poster session which included posters from two other psychology classes.

Results

Interest in Psychology

Our 14 item Interest in Psychology Survey was based on items from Harackiewicz et al. (2008) and Hulleman et al. (2010). Students in both sections reported high levels of interest in psychology at both pretest and posttest.

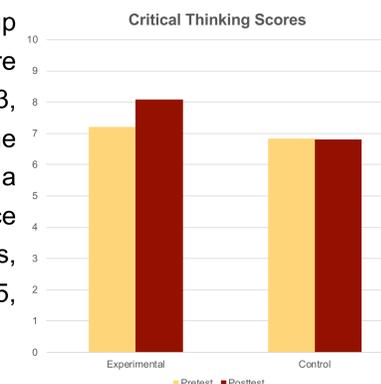


Individual items regarding interest in majoring in psychology and thinking of psychology as a science had no change across students in both sections. On average, students in both sections maintained a high interest in psychology across the semester as well as maintained strong thinking that psychology is a science and strong interest in majoring in it.

Critical Thinking

Students were given a hypothesis (such as "Blondes have more fun") and were asked to judge how accurate the statement was, how they might experimentally test this statement, and what they would expect to find. Items on the Critical Thinking were coded from 0 (nonsensical) to 4 (excellent) and summed for a total out of 16.

A t-test of the pretest was done to ensure no group differences to start; there were none $t(64)=.53, p=.598$. A t-test on the posttest scores reveals a significant difference across groups, $t(50)=2.303, p=.025, r^2=.10$.



Discussion

Blessing and Blessing (2010) demonstrated that engaging students to critically assess commonly held beliefs about human behavior can improve critical thinking students in General Psychology. The current study found significantly higher critical thinking in the PsychBusters section at posttest.

Most of the students had indicated a desire to major in psychology; this bears out in the Interest in Psychology scores being close to ceiling. A sample of 119 non-psychology majors in other sections of Intro Psychology also completed the survey and averaged 72.2 ($SD=8.3$). Clearly those in the two psychology major sections reported overwhelming interest as compared to typical sections, $t(170) = -8.83, p<.001, r^2=.31$.

While no significant pretest to posttest improvement in critical thinking was revealed, the PsychBusters section scored significantly higher at the posttest. One note: the average pretest and posttest scores on the task were higher than those reported in Blessing and Blessing (2010). Perhaps both groups started with a more critical eye towards research.

The findings suggest PsychBusters can increase critical thinking but not increase interest in the field. Moreover, this sample indicates that early selection of psychology as a major may be strongly linked to critical thinking and interest.

Example Myths

- Intelligence:* Listening to Mozart makes you smarter.
- Motivation:* People are naturally motivated by money.
- Development:* Vaccines cause autism.
- Social:* Birds of a feather flock together.

References

Blessing, S. B. & Blessing, J. S. (2010). PsychBusters: A means of fostering critical thinking in the introductory course. *Teaching of Psychology, 37*(3), 178-182.

Harackiewicz, J. M., Durik, A. M., Barron, K. E., Linnenbrink-Garcia, L., & Tauer, J. M. (2008). Initial Interest Scale [Database record]. Retrieved from PsycTESTS. doi: <http://dx.doi.org/10.1037/t32926-000>

Hulleman, C. S., Godes, O., Hendricks, B. L., & Harackiewicz, J. M. (2010). Psychology Interest Scale [Database record]. Retrieved from PsycTESTS. doi: <http://dx.doi.org/10.1037/t03751-000>

Author: Jennifer Blessing
Email: jblessing@ut.edu

Note: This study involved the comparison of two sections of PSY101 (General Psychology) which were populated with mostly first-year students who indicated an interest in majoring in psychology. (However, after drop/add period there were some students who did not match those two criteria.) In addition to these two sections, 125 students in other sections of PSY101 were invited via SONA to complete the interest in psychology survey and the critical thinking task. Analyses of these participants' scores have not yet been completed but will be done this spring.