

2012-2013 Annual Program Assessment Report

Please submit report to your department chair or program coordinator, the Associate Dean of your College and the assessment office by Monday, September 30, 2013. You may submit a separate report for each program which conducted assessment activities.

College: CSBS

Department: Psychology

Program: NA

Assessment liaison: Carrie Saetermoe

- 1. Overview of Annual Assessment Project(s).** Provide a brief overview of this year's assessment plan and process.

We focused this year on SLO 5. This SLO relates to competence statistical analysis, interpretation, and presentation of psychological data. We decided to continue our longitudinal analysis of our students' quantitative skills given our courses in statistics, methods, and our capstone course require students to use critical reasoning, quantitative reasoning, and synthesize a variety of information to generate a succinct hypothesis testing paradigm. Our previous assessment data suggested that quantitative reasoning is simultaneously one of the most significant concepts that psychology students can learn – it can send them into research careers and faculty positions – but our methods and statistics courses are also some of the most difficult courses based on grades and failure rates in these courses. Our ranking by the National Science Foundation as first among 529 comprehensive universities to place undergraduates into doctoral programs who complete the doctorate is tightly linked to our excellence in research methods and statistics; therefore, we decided as a faculty to examine more carefully how students move from one class to the next, what they retain, and what they have difficulty learning so that we can focus our efforts on the concepts that students struggle with most.

- 2. Assessment Buy-In.** Describe how your chair and faculty were involved in assessment related activities. Did department meetings include discussion of student learning assessment in a manner that included the department faculty as a whole?

I was the chair of the department. We met (all Psychology faculty members) at an assessment retreat in the 2011-2012 academic year to hammer out our plan and items. Last year, we had very high attrition, so this year is much better and supports our department's priority to ensure that the foundation of our major is in good shape before moving on to other aspects of the major. We now will have an assessment committee and we have, while I was chair, added a student position to ensure adequate distribution of surveys and data entry. While I am at the head of the assessment efforts, we have a committee to support, a student to do the footwork, and we consult with the faculty as a whole both when reporting and when we are formulating new assessment ideas. I will request of our new chair that we have one faculty meeting dedicated to assessment once again so that we can be sure our efforts move our programmatic needs forward.

- 3. Student Learning Outcome Assessment Project.** Answer items a-f for each SLO assessed this year. If you assessed an additional SLO, copy and paste items a-f below, BEFORE you answer them here, to provide additional reporting space.

3a. Which Student Learning Outcome was measured this year?

#5: Students will demonstrate sufficient use of statistical analysis, interpretation, and presentation of psychological data.

3b. Does this learning outcome align with one or more of the university's Big 5 Competencies? (Delete any which do not apply)

- Critical Thinking
- Written Communication
- Quantitative Literacy
- Information Literacy

3c. Does this learning outcome align with University's commitment to supporting diversity through the cultivation and exchange of a wide variety of ideas and points of view? In what ways did the assessed SLO incorporate diverse perspectives related to race, ethnic/cultural identity/cultural orientations, religion, sexual orientation, gender/gender identity, disability, socio-economic status, veteran status, national origin, age, language, and employment rank?

No, not really. Quantitative methods are part of a paradigm that reflects logical positivism, reflecting psychology's scientific background. While this paradigm claims to be objective, it is merely one of a variety of ways that we could measure student

learning. However, in studying students' knowledge of quantitative methods, we are asking students to have the fundamental tools required to understand and evaluate mainstream research literature and to design a strong research study.

3d. What direct and/or indirect instrument(s) were used to measure this SLO?

Please see attached surveys. We wanted to be able to conduct a longitudinal study, so we conducted pretests and posttests for each course, using the same methods test for Psy 321/L and our capstones.

3e. Describe the assessment design methodology: For example, was this SLO assessed longitudinally (same students at different points) or was a cross-sectional comparison used (Comparing freshmen with seniors)? If so, describe the assessment points used.

For now, we have a longitudinal component (within semester) but we do have student IDs for tracking students longitudinally across the three courses so that we can better understand transfer of knowledge from one class to the next. We plan to continue to assess two junior-level courses and one senior-level capstone for one more year.

3f. Assessment Results & Analysis of this SLO: Provide a summary of how the results were analyzed and highlight findings from the collected evidence.

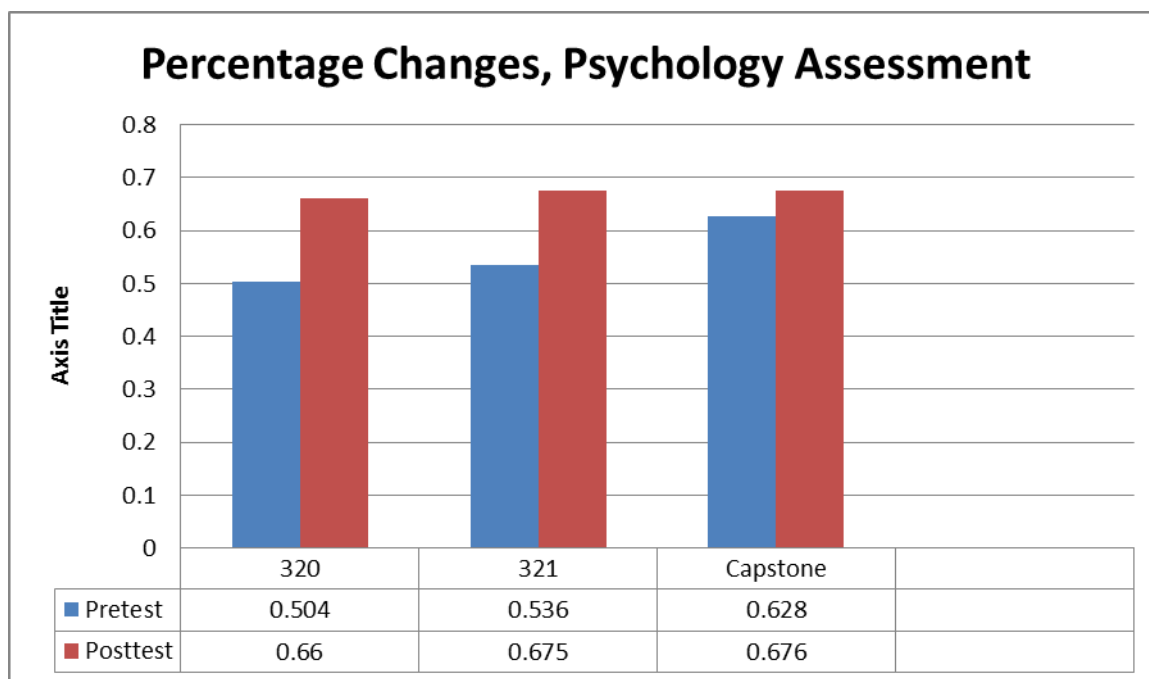
In the Fall and Spring semesters of the 2012-2013 academic year, we administered a statistics test to all of our Psychology 320/L classes (n = 357 Fall, n = 285 Spring), our methods classes, Psychology 321/L (n = 222 Fall, 118 Spring) and our capstone classes (n = 214 Fall, 191 Spring). Attrition rates were high for the statistics and the methods courses. We will continue to work to improve retention in our longitudinal study. In the meantime, all data and recommendations will be forwarded to instructors of each course. We can advise instructors about the types of mistakes students make through item analysis (correct/incorrect answers) and continue to refine the types of issues that must be addressed so that students are prepared for the next course in our major sequence.

For Psychology 320/L, the overall change from pretest to post went, out of 13 total items, from 6.55 items correct (sd = 1.99) to 8.58 items correct (sd = 2.10); $t(241) = 13.29$, $p < .001$), suggesting that significant change took place in students' knowledge during the period of the class. Significant changes in the percentage of students who were correct took place for 12/13 of the items, with one item not changing significantly, in part because 82% of the students were correct at the pretest. Posttest scores indicate that, for one item, 48% were correct (a difficult concept, confidence intervals), for 4 items, 50-59%

were correct (two-way ANOVA, identifying the correct statistical test, normal distribution, and correlation), for 3 items, 60-69% were correct (percentiles, type of variable, and interpreting mean and SD), for 3 items, 70-79% were correct (median/mean, random sampling, identifying IV/DV), for 1 item, 87% were correct (Type I error) and for 1 item, 90% were correct (hypothesis testing).

For Psychology 321/L, the overall change from pretest to post went, out of 16 total items, from 8.57 items correct ($sd = 2.54$) to 10.80 items correct ($sd = 2.59$); $t(93) = 8.24$, $p < .001$), suggesting that significant change took place in students' knowledge during the period of the class. Significant changes in the percentage of students who were correct took place for 8/16 items. This is a much poorer record for observable learning than for Psychology 320/L, although our sample size was smaller for this class as well due to high rates of attrition. Significant gains were made on items related to confounds, APA style, IV/DVs (3 items), the type of variable, research design and correlation. There was a significant decrease in knowledge related to hypothesis testing which was a disturbing finding that will require clarification among our instructors. The remainder of the items, 7/16, did not change significantly, and many stayed exactly the same. Future efforts in assessment may zero in on why the learning in our research methods course is not as strong as it could be.

Our idea behind using the same items for methods and our capstone course was to ascertain if applying the concepts learned in Psychology 321/L would transfer and be embellished upon in our capstone. Overall, there was significant improvement ($t(119) = 2.40$, $p < .018$), but there was significant improvement only for one item (type of method), non-significant improvement in 14 items, and a significant decline in the item related to reliability (which was already poorly understood). One factor that likely played into this finding was a ceiling effect – some of the items were already high to begin with – for example, the Type I error item started out at .81 and moved to .86, the research paper item went from .91 to .97, so there wasn't much room for improvement. We were able to ascertain that the learning from Psychology 321/L was transferred, with minimal degradation, from one semester to another in a cross-sectional fashion; that is, the post-test scores for the methods test were similar, but slightly lower, for the capstone pretest.



3g. Use of Assessment Results of this SLO: Describe how assessment results were used to improve student learning. Were assessment results from previous years or from this year used to make program changes in this reporting year? (Possible changes include: changes to course content/topics covered, changes to course sequence, additions/deletions of courses in program, changes in pedagogy, changes to student advisement, changes to student support services, revisions to program SLOs, new or revised assessment instruments, other academic programmatic changes, and changes to the assessment plan.)

Detailed analysis of each item, with incorrect answers highlighted, will be prepared for each course. These analyses will be provided with suggestions for where instruction might be improved for each instructor and for each course. We will continue to assess quantitative skills while simultaneously conduct a small, qualitative study of 5 students who did well and 5 students who did poorly in each course (total = 30 interviews). In this way, we can get a sense, from a qualitative perspective, why some material was difficult to understand.

4. **Assessment of Previous Changes:** Present documentation that demonstrates how the previous changes in the program resulted in improved student learning.

We are currently conducting an item analysis and will prepare a report to all professors of each of the courses assessed. In the meantime, we have, based on prior assessments, identified areas of primary import for each of the classes. These materials will be distributed each semester along with a reminder of the items and areas that require special reinforcement.

5. **Changes to SLOs?** Please attach an updated course alignment matrix if any changes were made. (Refer to the Curriculum Alignment Matrix Template, http://www.csun.edu/assessment/forms_guides.html.)

None

6. **Assessment Plan:** Evaluate the effectiveness of your 5 year assessment plan. How well did it inform and guide your assessment work this academic year? What process is used to develop/update the 5 year assessment plan? Please attach an updated 5 year assessment plan for 2013-2018. (Refer to Five Year Planning Template, plan B or C, http://www.csun.edu/assessment/forms_guides.html.)

We will be reconsidering our SLOs as a part of our program review in the 2013-2014 academic year. We will have a small retreat to determine if we would like to change course or continue our assessment of our quantitative strengths and weaknesses.

7. **Has someone in your program completed, submitted or published a manuscript which uses or describes assessment activities in your program?** Please provide citation or discuss.

Kazemi, E., Rice, B., Rylander, A., & Morgan, S. (2011). The benefits of teaching self-management skills to students of psychology. *Journal of Instructional Psychology*, 38(4), 235-241.

8. **Other information, assessment or reflective activities or processes not captured above.**

N/A