



Department of Psychology 2007-2008 Evaluation Report

The report was produced by the Department of Psychology Assessment Committee (Heidi Wayment, Chair; Laurie Dickson, Steve Funk, Michelle Miller, and Robert Till). Contents of report shared with faculty on October 31, 2008 and discussed on November 19, 2008. This report will be posted on Departmental website and portions published in Fall 2008 departmental newsletter.

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Knowledge of Psychology Across Student Level

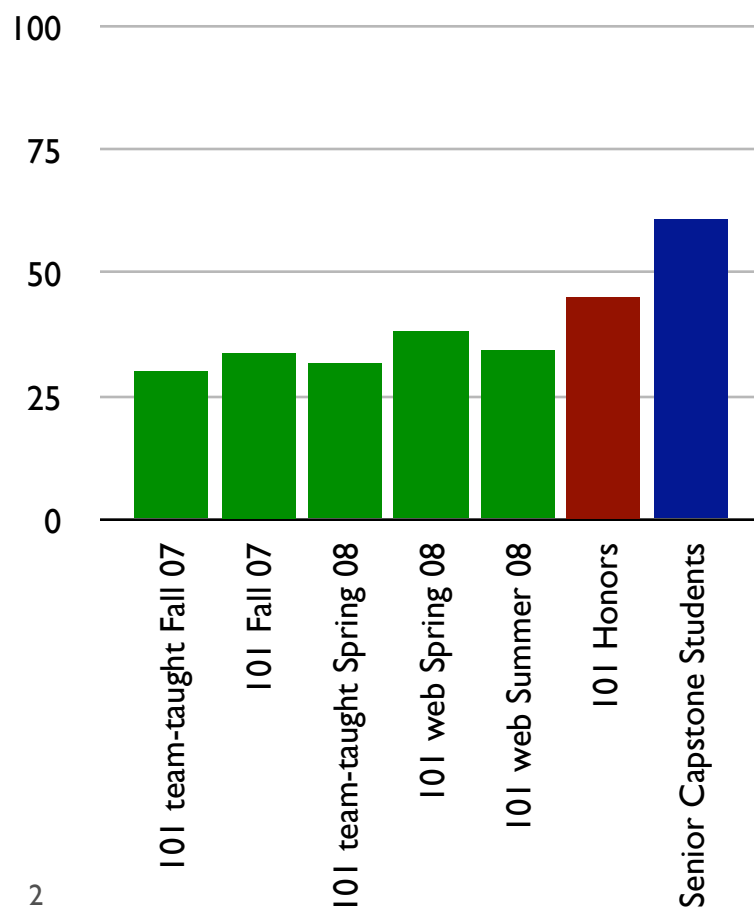


According to the Department of Psychology’s Mission Statement, by the completion of the baccalaureate program, *psychology majors should demonstrate fundamental knowledge of the mental structures and processes that underlie individual human experience and behavior.* In order to assess whether students are making significant gains in fundamental knowledge in psychology, we administered a 25-item knowledge test (Thompson & Zampoanga, 2003) to students at the beginning of the semester during their first NAU psychology course (PSY 101) and in required capstone courses. PSY 101 students completed the test during a mass pre-testing made available to them on-line. Students enrolled in capstone courses took the test as part of their on-line “exit” survey. Cross-sectional analyses revealed that, compared to a sample of PSY 101 students, in their first or second semester at NAU, graduating senior psychology majors greater knowledge about the fundamental concepts in psychology. Senior psychology students scored nearly twice as high as the entry-level students. Notably, students enrolled in PSY 101 Honors scored higher than other first-year students, but not as high as graduating seniors. Data from 1,046 first year students were compared to a sample of 131 graduating seniors (total N = 1177). Taken together, the knowledge survey appears to be documenting increases in fundamental knowledge of psychological concepts as a function of time studied. However, these results should be viewed cautiously given the cross-sectional nature of the data and the fact that PSY 101 students answered identical questions at both time points.

Recommendations

Include knowledge test early in Fall and Spring semesters of PSY 101 students and again during the capstone courses, as is stated in our departmental Learning Outcome Assessment Plan (approved 2006). Consider alternate forms of the test to avoid duplication of questions.

Section	Mean	N
PSY 101 (team-taught): Fall 2007 pre-test	30.2 (11.35)	377
PSY 101 (Fall 2007 pre-test)	33.85 (12.47)	395
PSY 101 (team-taught): Spring 2008	32.1 (12.40)	210
PSY 101 Spring (web)	38.28 (12.10)	49
PSY 101: Summer 2008	34.5 (13.62)	32
PSY 101H: Fall 2007 pre-test	45.4 (11.22)	23
Captstone Seniors Fall 2007 & Spring 2008	61.12 (17.7)	131



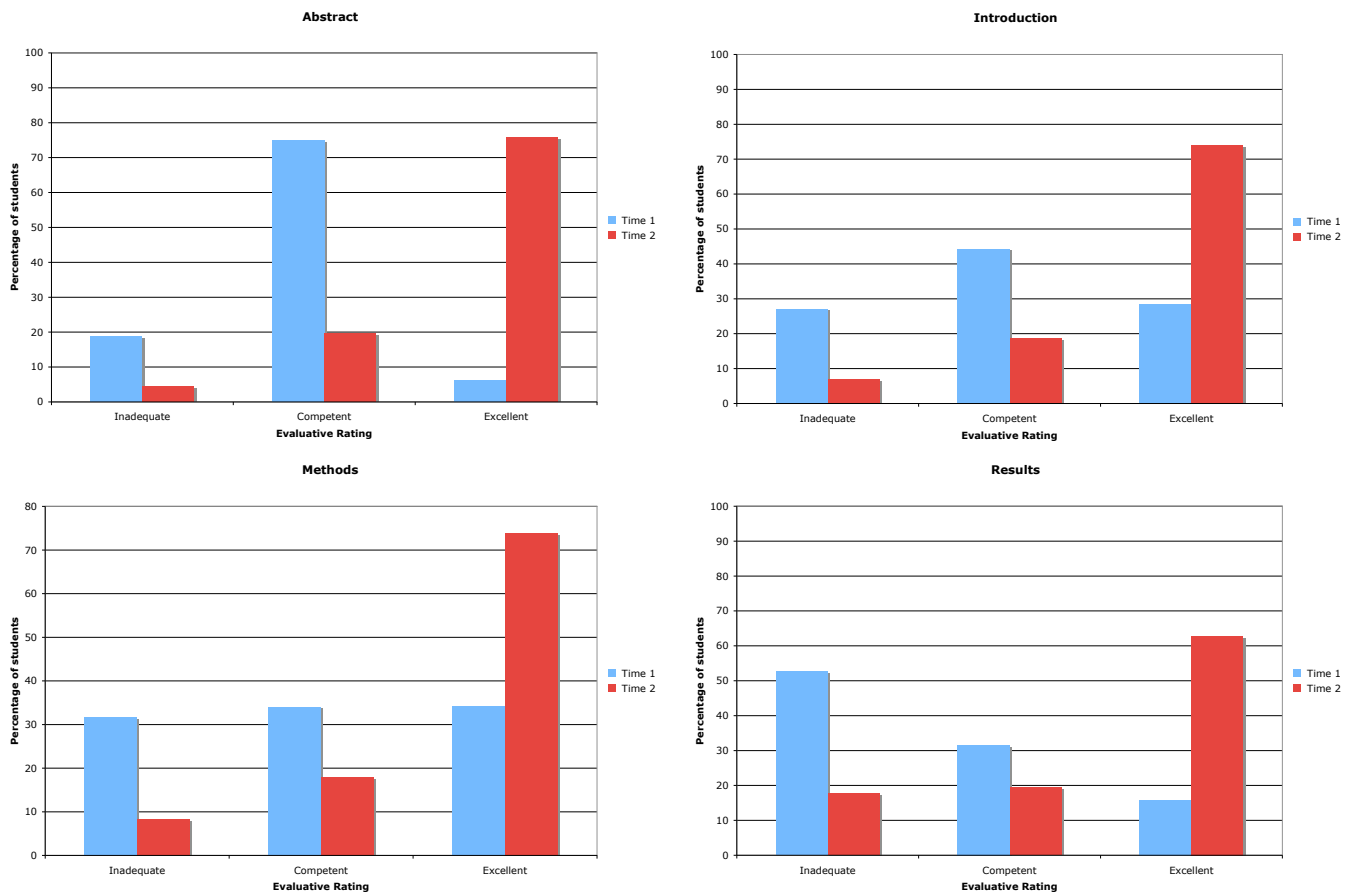
Written Expression Among PSY 302w Students

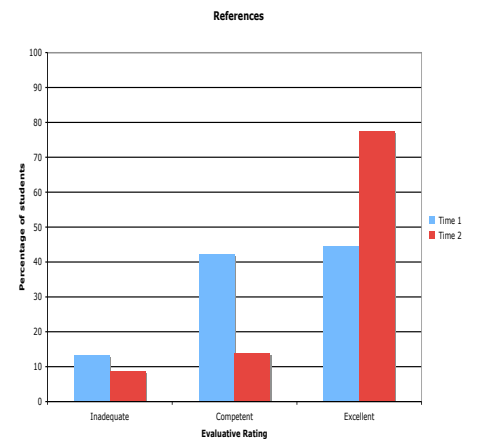
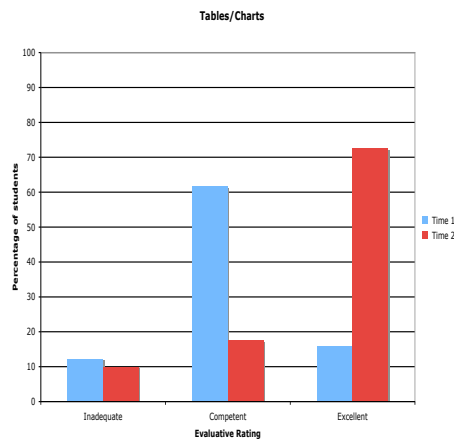
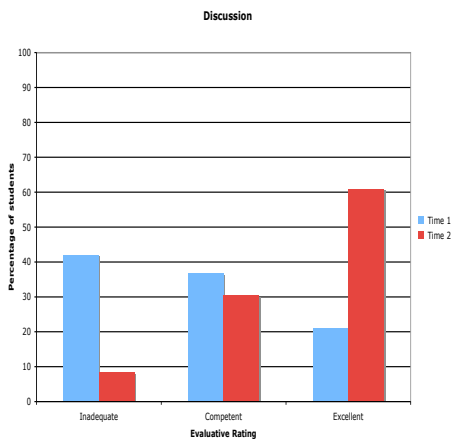


The Department of Psychology's Undergraduate Learning Outcome Assessment Plan calls for an assessment of effective writing in psychology. Therefore, all 302w students' major paper assignments (an APA formatted research report) are assessed at two time points during the semester. The purpose of this assessment is to gauge 1) quality of paper content, 2) organization of paper content, and 3) quality of writing mechanics. The "writing intensive" designation dictates that students have the opportunity to rewrite all or part of their report over the course of the semester.

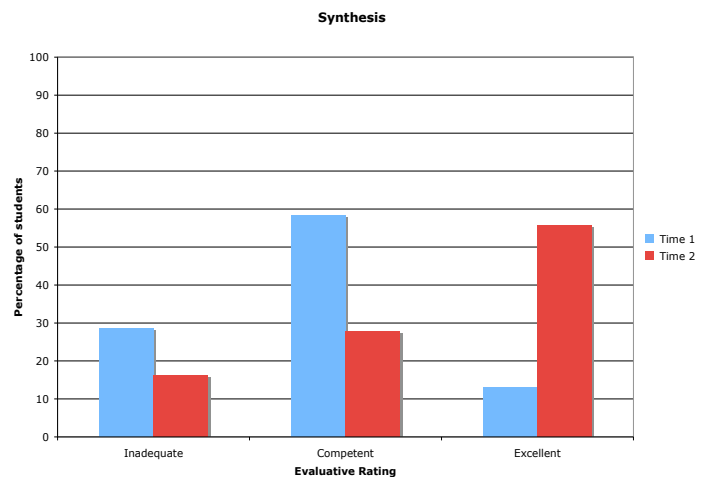
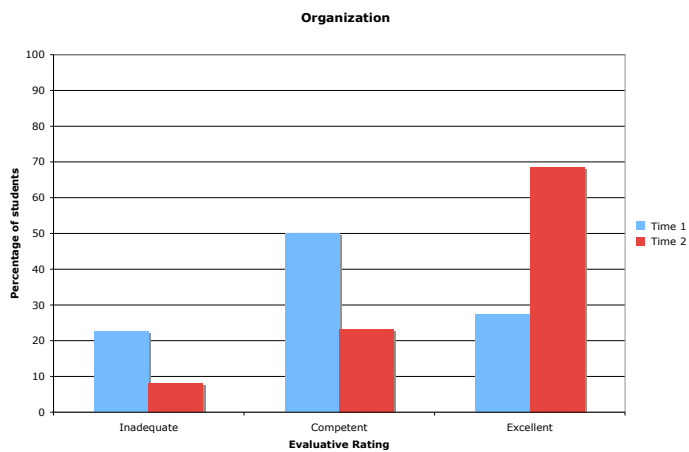
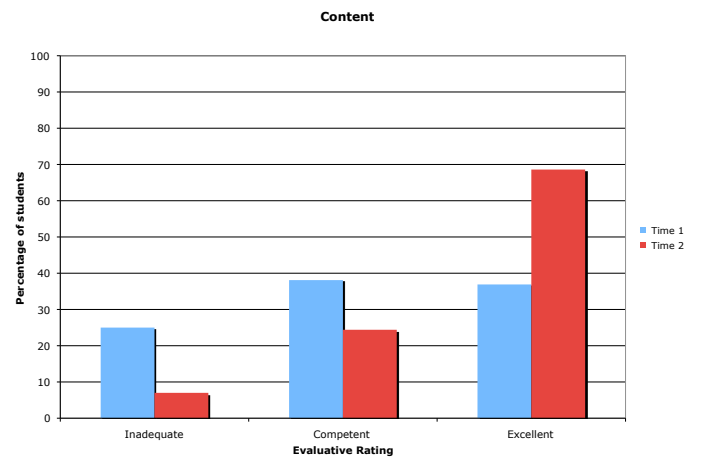
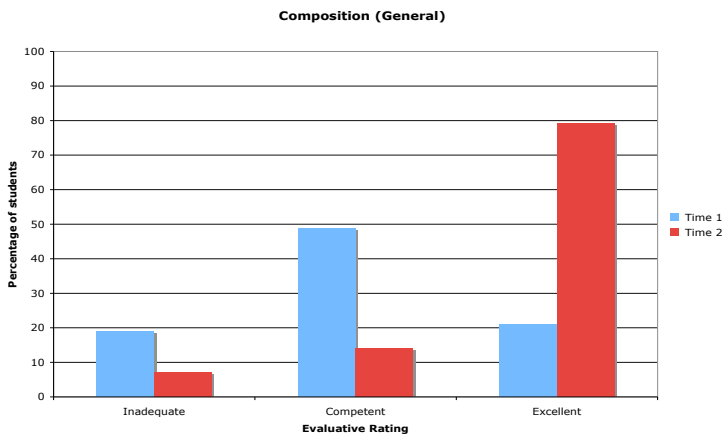
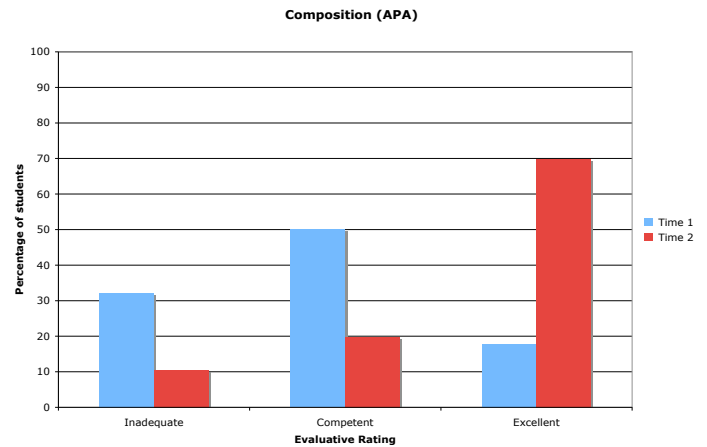
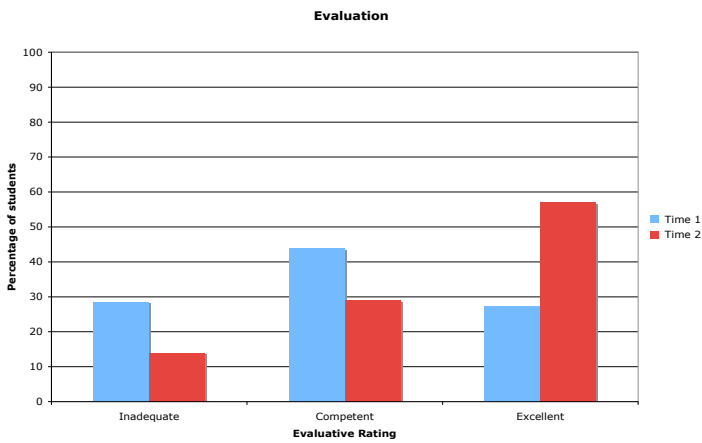
Data reported here represent 64 students from three sections of PSY 302W in the Spring 2008 semester) and 23 students from one section of PSY 302W in Summer 2008. Each sub-category was assessed at two time points using a 5-point scale (1 = poor, 2 = weak, 3 = moderate, 4 = good, 5 = excellent). We collapsed the 5 categories into 3 pedagogically-relevant categories for ease of presentation (Inadequate, Competent, and Excellent). Chi-square tests revealed significant improvement over time for all categories. Not all instructors rated all paper sections at both assessment times, for example not all students completed all of the paper sections for the first draft.

Papers were rated on seven different components of an APA-style research report (Abstract, Introduction, Method, Results, Discussion, References, Tables/Figures).





In addition, papers were rated with general categories (Evaluation, Composition-APA, Composition-General, Content, Organization, and Synthesis).



As evidenced in the charts, when considering the percentage of students that were competent or higher in each of the three domains under evaluation, it is clear that our student learning outcomes were met by the end of the course. Taken together, these results indicate that 71% of the students performed at the "competent" or higher level at initial assessment, with about 90% achieving competence or higher by the end of the semester. Looking at the data in the reverse, 27% of the students' writing was rated as inadequate at the beginning of the semester, compared to 9% at the end of the semester.

Recommendations

The assessment instrument aids instructors in identifying student competencies among the various skills required for effective writing. Instructors will be given a packet of assessment materials prior to the beginning of each semester. The form helps clarify where students need more help: Method, Results, Discussion sections and with general composition and content. In the future, in order to better control for demand characteristics, we may want to consider analyzing a subset of the student papers (both first drafts and final drafts) by a "blind" evaluator.

Critical Thinking Skills Among PSY 101 and Senior Capstone Students

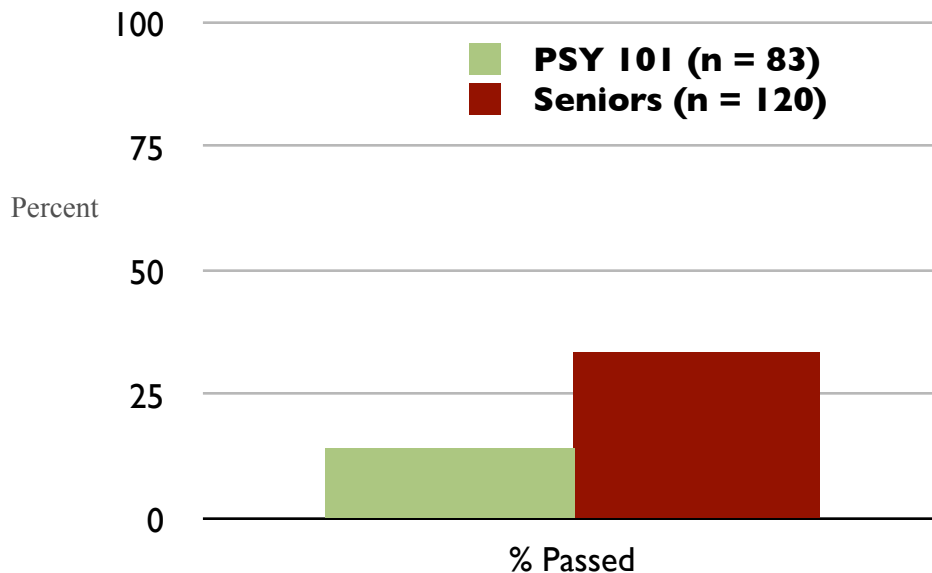


According to the Department of Psychology's Mission Statement, by the completion of the baccalaureate program psychology *majors should demonstrate fundamental knowledge of critical thinking and analytical skills necessary to evaluate scientific and popular claims concerning behavior*. In order to assess critical thinking skills, we administered the College of Mount St. Joseph's Critical Thinking Exam (Lawson, 1999). During the 2006-2007 evaluation period, we simplified this test by reducing it to 4 items (representing easy to difficult questions). This four-item test was administered to graduating psychology majors during their last year at NAU in their psychology capstone course. For purposes of comparison, the test was also given to first year students enrolled in sections of PSY 101. The answers were evaluated using the grading criteria provided by the test's author. Open-ended answers to each of the four critical thinking questions were scored as either "correct" (1 point), "partially correct" (.5 points), or "wrong" (0 points).

Students' performance on these critical thinking questions were assessed in PSY 101 students (a random sample of $n = 50$ from the large number of students from PSY 101 courses during the 2007-2008 academic year, or 3% of all students enrolled and 33 students enrolled in a PSY 101 Summer 2008 course) and senior psychology majors enrolled in a capstone course during the 2007-2008 academic year ($n = 120$). Critical thinking scores were coded and calculated on a total of 203 students.

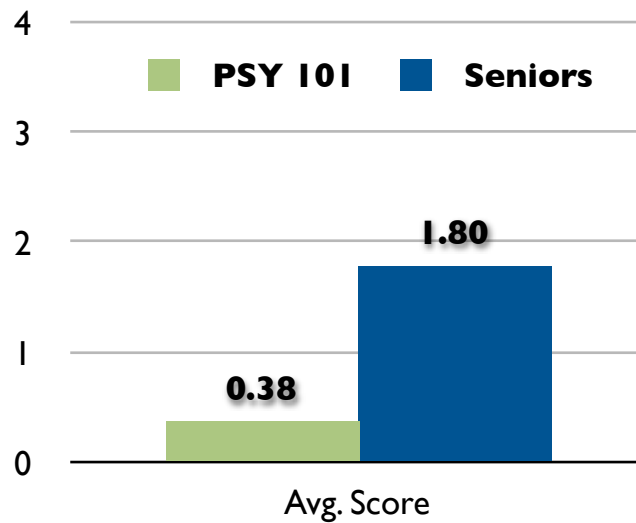
Easy vs. Difficult Questions As expected, senior psychology majors performed better on the easiest critical thinking question (65% received full credit; 73% in 2006-2007) and worst on the most difficult question (11% received full credit; 11% in 2006-2007). Performance on the two moderately difficult questions fell in-between (28% received full credit on both; 51% and 25% in 2006-2007). This pattern of responses to the four critical thinking questions was similar to those found in the 2006-2007 academic year.

Senior vs. First-Year Students 11% of senior students and 64% of PSY 101 students earned no points on the test. These results are very consistent with last year's results. Two-and-a-half percent of senior students earned perfect scores this year, compared to 5% last year. If we consider a "passing score" of at least 2 points

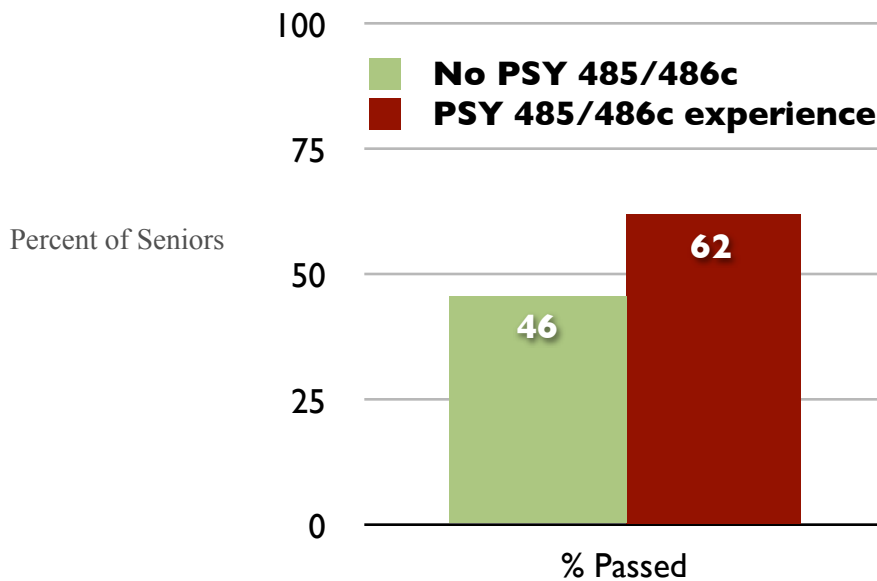


(out of a total of 4), then 14.4 % of first-year students passed the critical thinking exam compared to 34% of senior psychology students. Last year 16% of first year students earned two points or higher and 29% of seniors

passed the test. As presented in the figure, the average score of senior psychology majors was higher (1.80) than that for first-year students (PSY 101 = .38).



Impact of Undergraduate Research A higher percentage of students who participated in PSY 485/486c scored 2 or higher (passing grade) on the critical thinking exam (62%) compared to those who had not participated in this experience (46%; Chi Square with 1 degree of freedom = 2.712, $p < .07$). This result likely reflects a selection bias of students choosing to engage in undergraduate research experience.



Recommendations

Continue to include critical thinking test early in Fall and Spring semesters of PSY 101 students and in all capstone courses. Discuss possibility of assessing critical thinking among 230 and 302w students, or among students just beginning undergraduate research experience to determine the effect of such experience on critical thinking.

Undergraduate Psychology Majors: Exit Questionnaire



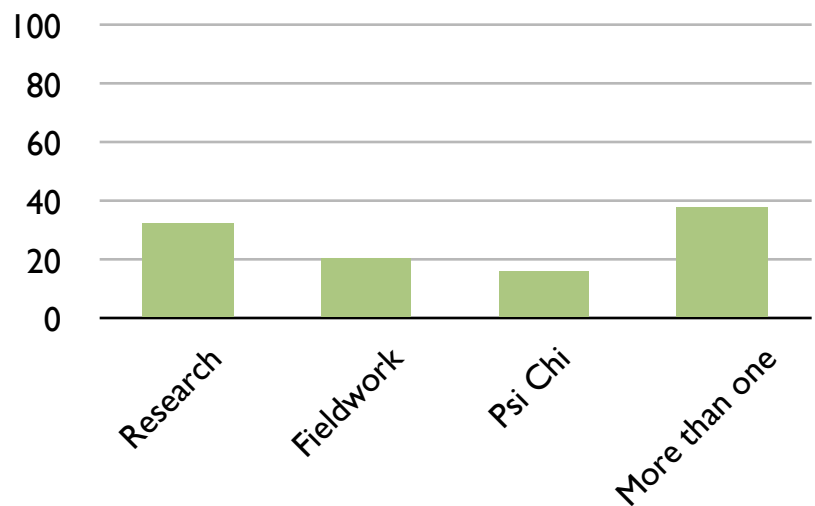
Each year during our psychology capstone course, graduating seniors are asked to complete a questionnaire assessing their thoughts and feelings about their experiences as an NAU psychology major. Below is a summary of the data collected during the Fall 2007 and Spring 2008 semesters from 141 seniors.

Gender Eighty-seven female (62%) and 27 male (19%) students completed the questionnaire and indicated gender. Another 27 students (19%) did not indicate gender.

Ethnicity Approximately 62% of the sample was Caucasian (n = 87), another 6% was Hispanic (n = 8), and another 5% was Native American (n = 7). Another 23% of the students (n = 33) did not indicate ethnicity.

Why Choose Psychology? Students could list more than one reason. Nearly half of the students (46%) listed personal growth as a reason and nearly half (47%) listed professional or graduate school preparation. Twenty-eight students (20%) listed the reason that psychology was inherently interesting. Thirty-one students (22%) listed vocational training and fifteen students (11%) listed liberal studies education as a reason for choosing psychology.

Extracurricular Activities Opportunities for important learning opportunities outside the classroom are strengths of the NAU Department of Psychology. Results revealed that one-third of all majors (n = 47) participated in at least one semester of guided research with a faculty member (PSY 485 or PSY486c). Twenty-one percent (n = 29) of the students said they participated in fieldwork or internship experiences. Sixteen percent (n = 22) said they participated in Psi Chi or the Psychology Club. All together, **38%** of exiting senior psychology students (n = 54) participated in one or more of these three activities.



A few comments from seniors:

“Undergraduate Research has been the most important and influential thing that I have participated in at NAU. It has helped me understand research in a new light and help me to understand my own interests.”

“The undergrad research experience was an excellent experience in applying the material I had learned in my courses.”

“I have found my research experience very helpful in learning more about how to conduct research in psychology, as well as learning how to interact with my peers in creating valid research.”

“I strongly believe in the benefit of the fieldwork opportunity that I have. Fieldwork should be a major component of all those psychology majors who want to continue in the field or a related area. It is helpful in seeing how the field operates and it can be a powerful influence on where you want to take your career.”

Most Helpful Individuals in Psychology Department As in the past, every faculty member was listed at least once in this part of the survey, including part-time faculty. Overall, there was tremendous praise for the NAU psychology faculty. For example,

“I believe NAU has and has had some of the greatest professors in the Psychology department. I did not come into college as a psychology major but I left one because the teachers cared, reached out, and made a difference. The professors I have had I can say impacted me in several ways. In the courses I had with them I noticed tests were well written and not meant to be frustrating but tapped into the brain and really reached students. Objectives addressed were objectives tested over. I am a dual major dual minor and psychology has had some of the greatest teaching methods of all the departments. Please keep up the good work!”

What Could Psychology Do Better? Just as in last year’s survey, we found a great variety of responses. Again, the two major categories of concern pertained to advising and curriculum. Approximately **13%** of the students indicated a need for “better advising.” We believe there were fewer complaints than in previous years in part because of postings on our departmental website and on the psychology office bulletin board. The curriculum issue, mentioned by about **12%** of the students, seems to center on individual preferences for more courses of particular types – more applied courses and more specialized in a particular area. The remaining suggestions were varied and included suggestions about helping transfer students make the transition to NAU, improvements in technology, and a general desire for more information.

Plans after Graduation Students were asked about their plans after graduation. Approximately 24% of the sample left the item blank, perhaps uncertain of their plans at this time. More than half of the group indicated some intention to attend graduate school. Specifically, 21% indicated that they planned to attend graduate school in psychology. Another 5% indicated plans for graduate school in another field and 4% indicated plans to attend law school or medical school. In addition, another 25% had plans to work for a while and then attend graduate school. **Thus, a total of 56% of graduating majors were interested in pursuing graduate education.** Another 18% indicated that they would seek work, with no plans for further education. As one student commented,

“My time as an undergraduate research assistant has afforded me concrete experiences the reach beyond the classroom. I have a better understanding of how experiments really work and the amount of preparation that goes into a project. My internship has given me new direction in my education. I got to see what psychology looks like applied in a real world setting. My internship solidified my desire to go on in my education to graduate school.”

Student Ratings Graduating students were asked to rate aspects of their education on a 5-point scale (1 = very poor; 5 = very good). In order to compare how this year’s assessment compared with previous assessments, ratings from 2006, 2007 and 2008 are described below (chart on next page).

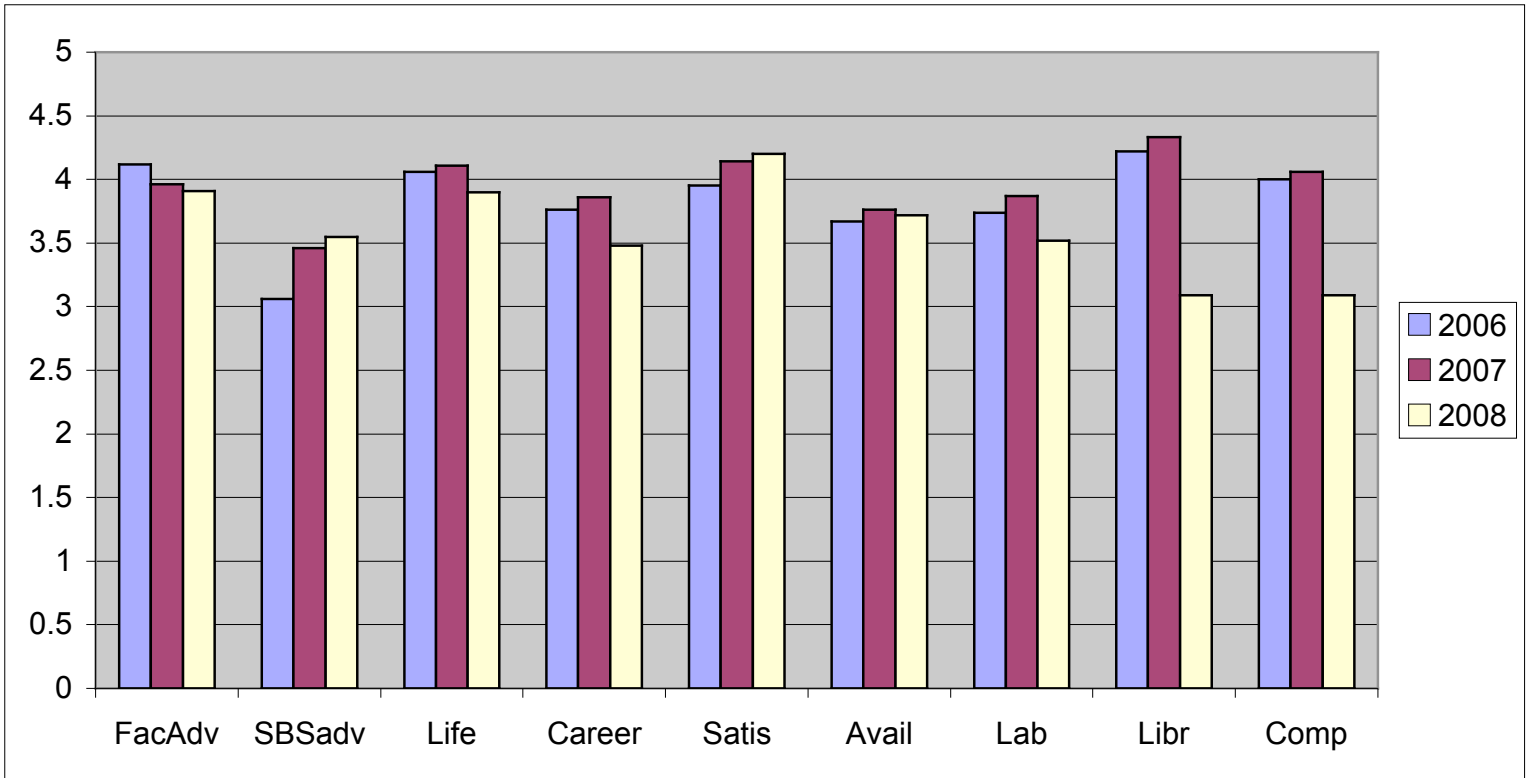
Students continue to be happier with psychology faculty advising (FacAdv) than with SBS advising (SBSadv), but this difference has shrunk over the past three years.

Preparation for personal life (Life) and for careers (Career) was rated slightly lower than in the previous two years, however, the ratings are still very positive. And, overall satisfaction (Satis) of our psychology majors has continued to increase across the three-year period.

Availability of psychology classes (Avail) was rated very much the same across the three-year period.

The quality of lab classes (Lab) showed a slight drop in ratings as compared to the previous two years, but continues to be very positive.

Inexplicably, there was a large drop in ratings of library resources (Libr). This shift was not expected and we will need to investigate. There was also a drop in ratings of computer facilities (Comp), not altogether surprising in view of the aging equipment available to our students.



Correlates of Student Ratings of Program with Overall Satisfaction

Overall satisfaction with the psychology program was significantly correlated with all but one of the eight rated dimensions. Correlation with library resources was nonsignificant. Correlations with overall satisfaction were highest for course availability and faculty advising, $r = .56$ and $.53$ respectively ($p < .0001$). Correlations were also strong between satisfaction and SBS advising ($.50$), between satisfaction and quality of lab courses ($.48$), between satisfaction and computer resources ($.44$), and between satisfaction and career preparation ($.48$), all significant at the $p < .0001$ level. The correlation of satisfaction with preparation for one's personal life ($.34$), found to be very strong in previous years, appeared much weaker in this year's ratings though still significant ($p < .0001$).

Summary of Findings

1. Compared to first-year students in PSY 101, senior psychology majors showed higher scores in psychological knowledge and critical thinking skills.
2. APA writing skills improved as a result of taking PSY 302w.
3. Senior psychology majors who participated in undergraduate research scored better on critical thinking skills compared to those who did not engage in undergraduate research (PSY 485/486c).
4. Satisfaction with the major was high, especially with respect to the quality of faculty, small class sizes, and personal attention received.
5. Nearly 40% of graduating seniors participated in at least one major extracurricular activity (research, field-work, or Psi Chi/Psychology club).

General Recommendations

Based on the Assessment Results from the 2007-2008 academic year, the department has formulated the following goals for the 2008-2009 academic year.

1. The Department will work to implement major changes to its curriculum that address the need for more breath and more depth in coursework for majors.
2. Streamline the assessment of written expression in PSY 302W classes.
3. Modify the senior (capstone) exit survey by eliminating redundant open-ended questions.
4. Continue to use cross-sectional analyses of first year and senior students for the 2008-2009 academic year. The following year (2009-2010) we should be able to conduct longitudinal analyses of students who first took the Psychology Knowledge assessment and critical thinking assessment as first year students in Fall 2006.

Specific Goals for 2008-2009

CHAIR LEVEL

Work with chair of undergraduate curriculum committee and individual faculty to implement sweeping curriculum changes adopted by faculty at the end of 2007-2008 academic year. Continue to lead discussion about ways in which we might be able to diversify course offerings (i.e., improving depth in some areas, or have emphases within the major).

Work with PSY 101 Coordinator to assess knowledge and critical thinking in PSY 101 sections using SONA or SurveyMonkey. Work to select data from a random number of students for final analysis.

Coordinate with 302w instructors to use revised assessment tool for writing evaluation and work to employ consistent procedures across sections.

Work with instructors of senior capstone courses to have their students take knowledge test, critical thinking test, and exit survey on-line.

Publish assessment results in Departmental Newsletter and notify all majors when posted to the departmental website.

DEPARTMENT STAFF LEVEL

Based on student feedback, we will maintain and update website on information important to students (e.g., what's new, 485 application process, capstone changes, 4-year plan, applying to graduate school). Provide more information about fieldwork and Psi Chi and Psychology Club. Include information on 2009 NAU Undergraduate Research Symposium, and links to regional conferences.

Maintain bulletin boards on 4-year plan, 485 opportunities, Psi Chi and other honor societies. Create board about GRE and graduate school, Transfer Students, Capstone Offerings.

Generate support and enthusiasm for planned NAU undergraduate research conference (4/09).

Publish newsletter and bookmark and other materials to share knowledge to students.

FACULTY LEVEL

Be proactive and tell students about website and what is available (hand out bookmarks in class).

Continue to let students know that information is available to them. Think of ways to help students think about what they want to do with psychology much earlier in their career. Continue to host a two-evening event about the graduate school application process (Dr. Andy Walters has agreed to continue to host this important event in 2008-2009).

Generate support and enthusiasm for NAU undergraduate research conference in April 2009.

Faculty teaching PSY 101, 302w, and all capstone courses work with chair to administer or guide students to evaluation/assessment materials.