Department/Program: Department of Psychology
Academic Year of Report: 2012-2013
Date Submitted: November 15
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A. Brief Introductory Statement:

The Psychology department is committed to excellence in undergraduate training in the science of psychology. We do so by offering students not only the highest caliber of classroom instruction but also extensive opportunities for professionally-authentic experiences in research (see list of 2011-2012 conference presentations by WSU Psychology students) and community engagement. We are dedicated to training students to be psychologically literate citizens who can engage in scientifically- and ethically-informed judgments, decision-making, and actions. As such, our curriculum emphasizes students acquiring knowledge about the discipline, applying that knowledge to real world situations, adopting scientific and ethical values, attitudes, and beliefs, and gaining interpersonal and communication skills.

Students report having very positive experiences in their classes, and psychology majors report being extremely satisfied with the quality and breadth of their instruction. WSU psychology student have had next step success in graduate school in the discipline (with recent acceptances to graduate programs at Harvard, Michigan, Texas A&M, University of Kentucky, University of Utah, and Utah State University, among many others), related disciplines (Social Work, Education, Marriage and Family Studies, and Criminal Justice) and other professional schools (Medicine, Law, Business, and Pharmacy). Psychology students are hired in a wide range of employment positions and do so at rate above the employment rate for the state.

Psychology faculty members are actively engaged in the discipline, the community, the university, and the department. Counted among them are a number award-winning teachers and researchers. They were early adopters and continue to be leaders of the university initiative for undergraduate research and community-based scholarship. They are also involved in a variety of interdisciplinary initiatives on campus, including Neuroscience, Linguistics, and Women’s Studies. The faculty members are excellent campus and community citizens serving in leadership positions both on campus and off. The recent reviews of the department by outside experts have been extremely positive\(^1\) and department members continue to aspire to become a model for the university and the discipline of innovative and effective undergraduate training in psychology.


B. Mission Statement

Through excellence in training in the science of psychology, the mission of the Department of Psychology at Weber State University is to facilitate students’ career aspirations and academic goals in the context of an undergraduate, Liberal Arts University, and a department which values teaching and research. (Adopted: Spring 2008)

Psychology first appeared in the curriculum of Weber Academy (which later became Weber State University) in 1892, with its role to enhance the skills of prospective schoolteachers. Psychology became an autonomous department in the 1950s and quickly grew in size and popularity, constituting 4% of the total SCHs for the entire institution. Today, the Psychology Department remains an important part of the academic life of Weber State University and the College of Social and Behavioral Sciences.

The mission of the Psychology Department is consistent with the department’s long tradition of valuing excellence in teaching. The mission statement was last reviewed and approved by the department in the spring of 2008. The statement centrally specifies undergraduates generally (not specifically majors) as those served by the Department and excellence in training students as the goal of the program. The word "training" was meant to convey an approach to our mission, which goes beyond mere classroom teaching to include student engagement in research, supervised Practicum, and related activities. In this sense, the department faculty members expect that students acquire not only discipline-specific content knowledge (i.e., definitions, theories, research findings), but also discipline-appropriate ways of thinking (i.e., the scientific attitudes and skills to analyze, interpret, and understand human behavior). Training in discipline-related content and ways of thinking are strongly believed to be effective in promoting students’ career aspirations and academic goals, whether or not they continue in the discipline.

Additionally, the department recognizes its role within the university in providing training in the Liberal Arts tradition. This adds another level of responsibility to prepare students to live in the 21st century as responsible, ethical, and engaged citizens who can synthesize and integrate information and make informed decisions. The final feature of the mission statement addresses the influences of the departmental focus on teaching and research. This context emphasizes a consensus among the faculty of the value of teaching and research in the training of students. All faculty members are committed to the importance of student experiences inside and outside the classroom, including research, for them to effectively internalize the values and skills of an education in the discipline in the liberal arts tradition, and to be well prepared for any career path, whether that is a job, professional school, or graduate school.

C. Student Learning Outcomes

The Psychology department created a set of departmental goals for student learning outcomes that were limited in number, integrated but somewhat orthogonal to each other, and broadly associated with a different mode of interaction between faculty and students. We arrived at 4 goals. The first goal is student acquisition of content knowledge of the discipline (Knowledge), which is largely realized through traditional, relatively impersonal, instructional modes of interaction. The second goal is for students learning the use of their disciplinary knowledge to understand themselves, others, and real-life situations (Application). Such a goal involves modes of faculty-student interactions that promote reflective thinking in students, with higher levels of student self-disclosure, engagement, and assessments focusing on concrete situations. The third goal of student adoption of scientific and ethical values (Values/Ethics) goes beyond mere instructional forms of interaction to faculty socializing students into the discipline by serving as models and mentors/tutors. The fourth goal of developing student skills for interpersonal interactions and communications (Interpersonal Relations and Communication) involves faculty serving as supervisors, facilitators, and directors of students who provide feedback, advice, comments, direction, and guidance.

For each learning goal specified by the department there are two specific student learning outcomes and the behavioral measures used to assess those goals. These SLOs are more specific and concrete than the learning goals which are aspirational, and the behavior measures by which the SLOs are measured are written to apply in different ways to each course in the curriculum.

1. Knowledge: Students will understand psychology as a scientific discipline. Essential to this, students will understand a core set of statistical and methodological knowledge regarding how psychologists critically evaluate, creatively test, and scientifically defend psychological claims. They will also understand a core set of content knowledge addressing the biological, cognitive/behavioral, social/personality, and developmental aspects of behavior and their integration.

   1.1. Characterize the nature of the science of psychology and grasp the foundations of the science for consuming and producing psychological claims.

   Students will be able to generally characterize psychology as a science, distinguishing its assumptions and methods with those of other disciplines, and specifically describe the strengths and limits of different research methods and the validity of conclusions derived from the research when consuming or producing psychological claims.

   1.2. Demonstrate knowledge, understanding, and synthesis of the breadth and depth of psychological science.

   Students will be able to demonstrate theory and research representing different content areas (biological, developmental, abnormal, experimental, and individual differences) and approaches (e.g., behavioral, biological, cognitive, evolutionary,
humanistic, psychodynamic, and socio-cultural) of the discipline and appreciate the interactions at the different levels of analysis synthesizing them into comprehensive and multifaceted bio-psycho-social explanations human nature.

2. Application: Students will be able to critically apply psychological principles and research to explain social issues, inform public policy, solve problems, understand themselves, and achieve career goals.

2.1. Students will be able to transfer their knowledge of psychological science to understanding and improving society.

Students will be able to describe the ways that psychological science has applications to social issues, processes, and domains (mental health, law, military, business, and education) and demonstrate ways that disciplinary knowledge can be used to inform social policy, solve social problems, and improve human functioning.

2.2. Students will be able to transfer their knowledge of psychological science to understanding and improving themselves and planning their future.

Students will be able to use knowledge of psychology science to promote their personal development and career planning by gaining insight into their behavior, mental processes, interests, and talents to develop self-management, self-improvement, and self-assessment strategies necessary to reach their personal and professional goals.

3. Values/Ethics: Students will share key values adopted by psychologists, which include (but are not limited to) skepticism and intellectual curiosity, tolerance of ambiguity, respect for human diversity, appreciation of their civic, social, and global responsibilities, and humility regarding the limits of their psychological knowledge and skills. Students will also grasp the spirit of the APA Code of Ethics, follow its guidelines, and recognize the necessity of ethical behavior in all aspects of the science and practice of psychology.

3.1. Students will understand and adopt key attitudes beliefs, values, and responsibilities consistent with being a student of psychological science

Students will make strides in adopting key assumptions (e.g., monism), beliefs (e.g., determinism), attitudes (skepticism and intellectual curiosity, tolerance of ambiguity) values (humility regarding their knowledge and skills), and responsibilities (e.g., interpersonal, civic, social, and global responsibilities) of being a student of psychological science.

3.2. Students will understand and uphold the ethical standards which guide their interpersonal, professional and scientific behavior

Students will learn and behave in a manner consistent with the APA ethical code regarding their research, professional, and interpersonal activities.
4. **Interpersonal Relations and Communication**: Students will exhibit skills to professionally communicate their understanding of terms, concepts, research, and theories of the discipline to others via written and oral formats. Students will also have interpersonal and collaborative skills necessary to effectively work in groups with others who hold diverse opinions, beliefs, and attitudes.

4.1. Students will acquire skills to communicate professionally to others in various formats following disciplinary practices and conventions (e.g., APA style)

*Students’ written, oral, and visual communication in formal and informal contexts will demonstrate an adequate level technical competence (grammar, structure, and style) and use of professional conventions (e.g., APA style and other professional conventions) to express, defend, or critique psychological claims ideas in a disciplinary appropriate manner.*

4.2. Students will demonstrate competence to work effectively in groups (projects, research, etc.)

*Student will learn to effectively work with others in group settings, which includes demonstrating skills to listen, communicate, and collaborate in unbiased, non-prejudicial ways.*

**D. Curriculum Grid**

The curriculum grid is an accounting of how program goals and the corresponding SLO are instantiated in the curriculum. Groups of faculty members who teach each general education, core general, core content, and high impact (research and service learning) courses compared and contrasted their classes in light of the program goals, the number of assessments dedicated to each program goal, and the weighting or importance of assessments in the calculation of final grade in the course. They then rated each course on a 1 (low) to 4 (high) scale, which indexes the emphasis given to each program goal in the class. For more details of the justifications of the ratings given for any class, go to the department assessment web site ([http://www.weber.edu/psychology/DepartmentalAssessment.html](http://www.weber.edu/psychology/DepartmentalAssessment.html)) and click on the EOL curriculum map for the corresponding course number.

The curriculum grid is organized by course type (Gen Ed courses, Core Content courses, Core General courses, and High Impact courses). **Gen Ed** courses are designed to enhance students’ understanding not only of psychology, but the social sciences in general. **Core Content** courses include the courses serving as the breadth requirement in the curriculum, so that psychology students are exposed to a range of ways psychologists conceived of and study human nature – as a biological system, a developing system, as a system which breaks down, as a system with elements such as learning and information processing that are considered universal, and a system with elements that are different for different people depending on their social context or personalities. **Core General** courses are those which highlight the statistical, computational, and methodological tools used by psychologists in
how they study human nature and include Statistics, Stats Lab, and Research Methods in Psychology. These courses are designed to promote in students the skills to think like psychologists. Finally, **High Impact** courses are those which allow students to apply the breadth of their knowledge, and skills to think like a psychologist to academic or community research projects, including directed readings, projects and research, practicum, and capstone research project.

D1. General Education Classes

<table>
<thead>
<tr>
<th>Course</th>
<th>Program Goals</th>
<th>Knowledge</th>
<th>Application</th>
<th>Ethics/Values</th>
<th>Relations and Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psy 1010</td>
<td>Introductory Psychology</td>
<td>4</td>
<td>3</td>
<td>2.5</td>
<td>2</td>
</tr>
<tr>
<td>Psy 2000</td>
<td>Interpersonal Relationships</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>

Note: Introductory Psychology is also a Core General course and is a prerequisite for most other courses in the curriculum.

Both Introductory Psychology (PSY 1010) and Interpersonal Relationships (PSY 2000) are General Education classes that must fulfill additional university-based general education goals which are assessed according to different student outcomes than those identified by the program. Introductory Psychology and Interpersonal Relations are weighted most strongly on the **Knowledge** goal as most of the assessments and most highly weighted assessments address the content knowledge. **Interpersonal Relations and Communication** is also related strongly for PSY 2000, but less so for PSY 1010 because of the focus of the course. **Application** was highly rated in both courses, reflecting an emphasis to help students appreciate the real world implications of the material discussed in the classes. **Ethics/Values** remain important, but because of the enrollments and resources this goal is most challenging to achieve in these classes.

D2. Core Content Classes

<table>
<thead>
<tr>
<th>Course</th>
<th>Program Goals</th>
<th>Knowledge</th>
<th>Application</th>
<th>Ethics/Values</th>
<th>Interpersonal Relations and Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area A</td>
<td>Psy 2730</td>
<td>Biological Psychology</td>
<td>4</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>Neur 2050</td>
<td>Introduction to Neuroscience</td>
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</tbody>
</table>

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3 See [http://www.weber.edu/psychology/DepartmentalAssessment.html](http://www.weber.edu/psychology/DepartmentalAssessment.html), click on General Education Reauthorization Documents.
<table>
<thead>
<tr>
<th>Area</th>
<th>Course</th>
<th>Title</th>
<th>Knowledge</th>
<th>Application</th>
<th>Ethics/Values</th>
<th>Relations and Communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Psy 3000</td>
<td>Child Psychology</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td></td>
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<tr>
<td></td>
<td>Psy 3140</td>
<td>Adolescent Psychology</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>C</td>
<td>Psy 3010</td>
<td>Abnormal Psychology</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>D</td>
<td>Psy 3250</td>
<td>Conditioning &amp; Learning</td>
<td>4</td>
<td>4</td>
<td>3.5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psy 3500</td>
<td>Cognitive Psychology</td>
<td>4</td>
<td>3.5</td>
<td>2.5</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>Psy 3430</td>
<td>Theories of Personality</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Psy 3460</td>
<td>Social Psychology</td>
<td>4</td>
<td>4</td>
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</tbody>
</table>

**Note:** Psychology majors are required to take one course in each area.

**Knowledge** is the most strongly weighted goal for core content courses, which are designed to ensure that students receive a common understanding of the breadth of the discipline. The next highest rated goal, **Application**, emphasizes the significance of the material for understanding a variety of real world phenomena. The final 2 goals, **Ethics/Values** and **Interpersonal Relations and Communication**, are each rated less highly because of the challenges in resources, time, and class size to emphasize these goals as well.

### D3. Core General Classes

<table>
<thead>
<tr>
<th>Course</th>
<th>Program Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number</td>
<td>Knowledge</td>
</tr>
<tr>
<td>Psy 3600</td>
<td>4</td>
</tr>
<tr>
<td>Psy 3605</td>
<td>2</td>
</tr>
<tr>
<td>Psy 3610</td>
<td>4</td>
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</tbody>
</table>

**NOTE:** Statistics is a prerequisite for Research Methods and Statistics Lab is a co-requisite for Research Methods.

For the Psychological Statistics and Research Methods class, **Knowledge** is weighted most strongly, reflecting the importance of the information students are learning in the class. Research Methods also strongly emphasizes **Interpersonal Relations and Communication**, largely because students work in groups, make oral presentations, and complete a research project, which is written using APA style. Psychological Statistics and Statistics Lab most strongly weight **Application** as students in both classes learn how to apply statistical principles to actual data. **Ethics/Values** are highly weighted in all of these core general courses, as they are critical in understanding and adopting the beliefs, values,
and attitudes of psychological scientists. More than any other core course in the curriculum, students in these classes are apprentices who are learning the discipline in small and intimate classes. To ensure class environments that promote opportunities for the forms of interaction necessary to inculcate students with scientific beliefs, attitudes, and values, enrollments in Psychological Statistics and Statistics Lab are limited to 20 and 25 respectively, and to 15 in Research Methods.

D4. High Impact Courses

<table>
<thead>
<tr>
<th>Course</th>
<th>Program Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number Title</td>
<td>Knowledge Application Ethics/Values Relations and Communication</td>
</tr>
<tr>
<td>Psy 4380 Practicum</td>
<td>2 4 4 2</td>
</tr>
<tr>
<td>Psy 4800 Projects and Research</td>
<td>4 3.5 3 3.5</td>
</tr>
<tr>
<td>Psy 4830 Directed Readings</td>
<td>4 3.5 3 3.5</td>
</tr>
<tr>
<td>Psy 4910 Senior Capstone</td>
<td>4 3.5 4 3.5</td>
</tr>
</tbody>
</table>

Note: These courses are not required for Majors, although many junior and senior students enroll in them (see Table 1). These courses may also become the core of a senior capstone requirement.

The research-oriented high impact courses (PSY 4800, 4830, and 4910) most strongly weight Knowledge, which in these courses corresponds to knowledge of the research domain under study. Both Applications and Interpersonal Relations and Communication are also strongly weighted. The latter goal reflects the demand that students interact with their supervisor and employ professional ways of formally and informally communicating their work with their supervisor and others. The former goal emphasizes students’ use of their background knowledge in the discipline to critically evaluate existing and/or creatively produce new knowledge of the research domain. Finally and also relatively highly weighted in the research course, is the Ethics/Values goal which reflects students not only knowing, but also acting consistent with the beliefs, attitudes, and values of psychological science, including the importance of following APA ethical rules in treating participants.

Practicum highlights the importance of Application and Ethics/Values goals as students use their general background, and specific knowledge of the issues addressed in Practicum, to understand and act in the field as a quasi-professional who recognizes their roles and professional responsibilities. The other goals are deemphasized in order to focus on Application and Ethics/Values.
E. Class Assessment Plan

The assessment program of the Psychology department has two components. The first is an ongoing research program into the general abilities of psychology students and how they learn the discipline\(^4\). These *student assessments* are largely indirect, meaning they are based on non-classroom measures of and changes in students’ disciplinary attitudes, beliefs, values, knowledge, skills, etc. This work is ongoing each year. The second component assures the alignment of courses in the psychology curriculum to the general program goals of the department which flow from our mission statement. This involves taking the general program goals and the specific student learning outcomes those goals identify overall and applying them to each individual class. The plan for this second *class assessment* component of our assessment program is outlined below.

The class assessment plan is for a four year rotation for courses reviews. The four year rotation is designed to minimize the burden on faculty for the number of courses they are reviewing in a given year and to ensure that all faculty members are involved in the review each year. Each year of the four year rotation, a set of courses will be reviewed which are taught by almost all full time regular faculty members. The plan will involve the two-step processes beginning in the fall and ending in the spring. During the Fall semester, faculty will engage in the systematic review of their classes, including a) revisiting student learning outcomes (SLOs) defined for their course and assessing whether that class’ assessments and grading rubrics are optimally aligned to those outcomes, b) tracking students’ performance on selective assessments which aligned best to the outcomes, and c) retaining (where necessary) examples of student performance on targeted assessments which span the grade range.

The process of revisiting SLOs and assessing the optimality of their alignment to class assessments will occur early in the fall semester for a course that is being reviewed. This serves as a final check of a process, completed in 2011-2012 (see Regents Review 2011), in which learning outcomes were applied to individual classes. The tweaking of a course’s SLOs and assessments may result in a revision of the course evaluation in the curriculum grid above. Faculty may make some editorial changes in the SLOs for the

classes they are reviewing so that they can be better align to assessments and may alter their assessments to better align them to the SLOs for the class. We consider this tweaking a key part of the continual assessment philosophy.

The process of tracking students’ performance on selective assessments which aligned best to the outcomes was instituted by the department to address concerns that coding assessments is a laborious and unreliable effort. The more assessments coded, the more room there is for unreliable assessments and the entrance of error into the assessment process. To minimize the workload and maximize the reliability, faculty members were asked to code only a subset of items which they believe are the best exemplars of a given SLO learning outcome. An ideal set of assessments to code would be a) at least 10 multiple choice items per specific student learning outcome from Chi Tester or Canvas tests which students were given over the course of a semester, b) multiple graded written assignments across the various different written exam questions (essay or short answer), online discussions, homework, or papers which students completed over the course of a semester, and c) other graded assessments (e.g., in-class group work, discussions, etc.) which tap additional SLOs not otherwise covered.

Finally, for each class reviewed, faculty will retain examples of student performance on assessments (likely of the b category above). Ideally, the assessments selected will be illustrative and representative of the grade range of the class. Student identification information will be redacted and the assessment will serve as artifacts available to those evaluating the department assessment.

E1. Schedule of Class Assessments

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<tr>
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<tbody>
<tr>
<td>PSY 3600 Psychological Statistics</td>
<td>X</td>
<td></td>
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<tr>
<td>PSY 3605 Statistics Laboratory</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>PSY 3610 Research Methods</td>
<td>X</td>
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</table>

<p>| Biology | PSY 2730 Biopsychology | X | | | |
| NEU 2200 Intro Neuroscience | | | | | |
| Developmental | PSY 3000 Child Psychology | X | | | |
| | PSY 3140 Adolescence Psychology | X | | | |
| Abnormal | PSY 3010 Abnormal Psychology | X | | | |
| Experimental | PSY 3500 Human Cognition | X | | | |
| | PSY 3250 Conditioning and Learning | X | | | |
| Personality / Social | PSY 3430 Theories of Personality | X | | | |
| | PSY 3460 Social Psychology | | | | |</p>
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 2000</td>
<td>Interpersonal Relations</td>
<td></td>
</tr>
<tr>
<td>PSY 2370</td>
<td>Psychology of Women and Gender</td>
<td></td>
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<tr>
<td>PSY 3020</td>
<td>Child &amp; Adolescent Psychopath.</td>
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<tr>
<td>PSY 3100</td>
<td>Psychology of Diversity</td>
<td></td>
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<tr>
<td>PSY 3200</td>
<td>Psych of Sport (HPHP x-listed)</td>
<td></td>
</tr>
<tr>
<td>PSY 3270</td>
<td>Motivation and Emotion</td>
<td>INF</td>
</tr>
<tr>
<td>PSY 3300</td>
<td>Applied Behavior Intervention</td>
<td>INF</td>
</tr>
<tr>
<td>PSY 3550</td>
<td>Psychology of Consciousness</td>
<td>NLO</td>
</tr>
<tr>
<td>PSY 3560</td>
<td>Group Dynamics</td>
<td>NLO</td>
</tr>
<tr>
<td>PSY 3710</td>
<td>Physiological Psychology</td>
<td>INF</td>
</tr>
<tr>
<td>PSY 3730</td>
<td>Perception</td>
<td>INF</td>
</tr>
<tr>
<td>PSY 3740</td>
<td>Drugs and Behavior</td>
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<tr>
<td>PSY 4000</td>
<td>Advanced General</td>
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<td>PSY 4050</td>
<td>Evolutionary Psychology</td>
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<tr>
<td>PSY 4090</td>
<td>History and Systems of Psychology</td>
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<tr>
<td>PSY 4310</td>
<td>Intro to Counseling Theories</td>
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<tr>
<td>PSY 4340</td>
<td>Skills &amp; Techniques of Counseling</td>
<td>NLO</td>
</tr>
<tr>
<td>PSY 4510</td>
<td>Industrial &amp; Organiz. Behavior</td>
<td>INF</td>
</tr>
<tr>
<td>PSY 4760</td>
<td>Tests &amp; Measurements</td>
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</tr>
<tr>
<td>PSY 4900</td>
<td>Selected Topics in Psychology</td>
<td></td>
</tr>
<tr>
<td>PSY 4990</td>
<td>Seminar</td>
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**Elective Courses**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSY 1050</td>
<td>Careers in Psychology</td>
<td>NLO</td>
</tr>
<tr>
<td>PSY 1540</td>
<td>Psychology of Adjustment</td>
<td></td>
</tr>
<tr>
<td>PSY 2010</td>
<td>Psych as a Science/Profession</td>
<td></td>
</tr>
<tr>
<td>PSY 2800</td>
<td>Projects and Research</td>
<td></td>
</tr>
<tr>
<td>PSY 2830</td>
<td>Directed Readings</td>
<td></td>
</tr>
<tr>
<td>PSY 2890</td>
<td>Cooperative Work Experience</td>
<td></td>
</tr>
<tr>
<td>PSY 4380</td>
<td>Practicum</td>
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</tr>
<tr>
<td>PSY 4390</td>
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<tr>
<td>PSY 4800</td>
<td>Projects and Research</td>
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</tr>
<tr>
<td>PSY 4830</td>
<td>Directed Readings</td>
<td></td>
</tr>
<tr>
<td>PSY 4890</td>
<td>Cooperative Work Experience</td>
<td></td>
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<tr>
<td>PSY 4910</td>
<td>Senior Capstone Research</td>
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</tr>
<tr>
<td>PSY 4920</td>
<td>Conferences and Workshops</td>
<td>NLO</td>
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</tbody>
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**Experiential and Individualized Instruction Courses**

*NOTE: NLO designates a class that we have no plans at the present time to teach so are considered to be classes that are no longer offered. Inf designates classes that are infrequently given and may not be given in the year that we are assessing that class. Arrangements will be made to assess Inf classes when they are being taught.*
F. Report of Assessment Results for 2011-2012

This section includes all the assessments performed last year as part of the Regents Review process and additional assessments completed after the Review process. The data address only indirect measures of SLO as the direct assessments of individual classes begin in 2013-2014. The indirect measures collected, including questionnaire performance, address each of the four general goals for the program overall, Gen Ed courses, and High Impact courses. In addition, other indirect assessments examined in Psych 1010 students according to Social Science General Education criteria.

F1. Evidence of Learning: Program Outcomes

F1.a Graduating Senior Survey

One general program-level assessment performed in 2011-2012 was an analysis of a survey which assessed various beliefs and attitudes of graduating seniors about the department and their experiences (See Appendices 1 and 2). The questionnaire has been used over the past 12 years, but for the analysis performed last year graduating seniors were grouped into two cohorts: Those who graduated prior to 2007 (N = 135, M = 2004, and designated as the 2004 cohort), and those who graduated after 2007 (N = 128, M = 2009, and designated as the 2009 cohort). The 2009 cohorts were recipients of many of the recent department course and curriculum changes.

Judgments of Satisfaction, Rigor and Educational Quality: Students rated the overall academic standards of the department on scale from poor (1) to excellent (5). Overall ratings of academic standards (M = 4.35) were high and there were no difference between the cohorts. The students additionally rated their satisfaction with their psychological and general education classes on a scale from definitely unsatisfied (1) to definitely satisfied (5). Students rated themselves as more satisfied with Psychology (M = 4.47) than General Education (M = 3.74) classes, and more satisfied in the 2009 cohort (M = 4.19) than the 2004 (M = 4.02) one. There was also an interaction effect, reflecting the increase in satisfaction only with psychology classes between the cohorts (see Figure 1).

Figure 1: Graduating Seniors Ratings of Gen Ed and Psychology Classes by Cohort

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A 12-year-old graduating senior questionnaire had a series of questions relevant to most, but not all, learning outcomes of the program goals. New questions were added in 2010. However, the older assessment contains many relevant questions to assess students’ perceptions of the nature and quality of their academic experience.
Graduating seniors’ positive average ratings for satisfaction with and standards of their psychology courses paralleled their positive ratings for being prepared for graduate school \((M = 4.48)\) and willingness to repeat the major, if choosing a major again \((M = 4.24)\). Moreover, all these ratings are inter-correlated even after removing variance associated with Gender, Overall GPA, and Psychology GPA (see Table 1), suggesting that these questions tap a common underlying variable, which we call **Educational Quality**.

### Table 1: Partial Correlation Coefficients for Graduating Seniors’ Assessments of Educational Quality, Controlling for Gender and University and Departmental GPA.

<table>
<thead>
<tr>
<th></th>
<th>Satisfaction with Psychology Major</th>
<th>Choose Psychology Major Again</th>
<th>Preparation for Graduate School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Choose Psychology</td>
<td>.33**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preparation for Grad School</td>
<td>.38**</td>
<td>.24*</td>
<td></td>
</tr>
<tr>
<td>Academic Standards</td>
<td>.58**</td>
<td>36**</td>
<td>.35**</td>
</tr>
</tbody>
</table>

Note: \(DF = 170\), \(* = p < .01\), \(** = p < .001\)

The Educational Quality variable was created by the extraction of the only factor that emerged in a factor analysis of the four ratings. The variable accounted for 53\% of the variance, and each student was assigned a score based on the item loadings on the factor, with an overall mean of the Educational Quality of \(M = 0.00\), \(sd = 1.00\). A positive score on the variable represents students’ perception that their psychology education was above average in quality. That is, they perceive their education as having high standards which effectively prepares them for graduate school, and about which they are so satisfied that they would repeat it if making a choice of a major again. A negative score reflects a below average perception of their psychology education. The data show a trend towards higher Educational Quality scores among the 2009 \((M = .11)\) than the 2004 cohort \((M = -.11)\), \(t(247) = 1.68, p = .09\).

Together these findings suggest that over the past 12 years, graduating seniors think that they are receiving rigorous training in their psychology major, which has high standards and prepare them well for graduate school. They have no regret about their investment in the psychology major, as they would choose the same major if they had to do it all over again. Throughout the rest of this analysis, the composite Educational Quality variable will be correlated with students’ perceptions of their acquisition of other targeted skills and abilities. These correlations assess whether students’ perceptions of their acquisition of other skills and abilities contributes to their perception of the overall satisfaction with their education.

The finding that students’ satisfaction with psychology courses was related to them judging the courses as having high standards was the basis for the curriculum revisions we
undertook in 2008 and continue to consider. The data were interpreted as students being more satisfied with their educational experience when challenged by more rigorous coursework. So we proceeded to ratchet-up the rigor of the courses, first by removing easier classes from the curriculum, and later by increasing the requirements (e.g., Statistics Lab). Further increases in the rigor of the curriculum are pending as the department works out the details of a new capstone requirement.

**Judgments of Research Skills and Critical Activities:** The Graduating Senior Survey also assessed students’ skills in research, a critical aspect of the Knowledge (1.2) and Application (2.1), and Values/Ethics (3.1) SLOs. Most graduating majors (74%) from 2010 and 2011 rated their research abilities (to design studies, collect, data, and analyze results) as having improved “a lot” due to experiences in the psychology department, with all students suggesting that those skills has at least shown “some” improvement. The average rating of improvements of research skills due to experiences in the department was high (M = 4.73) on a 1 (not at all) to 5 (a lot) scale.

Moreover, the expectation that improved research skills would help them improve their skills in critical reading, writing, and thinking was confirmed. Graduating seniors rated themselves has having improved their Critical Thinking, defined as the ability to think through problems and develop one’s own ideas and perspectives on psychological issues (M = 4.59), Reading Comprehension, defined as grasping the material one reads (M = 4.44), and Written Communication, defined as expressing yourself on paper (M = 4.44). There were positive and mostly significant relations between self-reports of the improvements of methodological reasoning and improvements in writing (r = .56, p < .01), reading (r = .38, p = .05), and thinking (r = .35, p = .08) in the discipline. The data are interpreted as strong, but incomplete, evidence of students’ learning about the scientific foundation of the discipline and forms of critical activities it supports in students as writers, readers, and thinkers.

**Judgments of Application:** Application of psychological knowledge is a key element of SLO 2.1. One new question asked of revised (2010-2011) graduating seniors in the survey (see Appendix 2) in the graduating senior questionnaire concerned whether they believed that their experiences in the Psychology Department promoted an ability to apply psychological knowledge, defined as the ability to find real world relevance of theory and research. Students’ average ratings were high (M = 4.56) on a scale from not at all (1) to a lot (5). Moreover, their application ratings were positively correlated with the composite Educational Quality variable, r = .60, N = 17, p < .01, independently of Gender, University GPA, and Psychology GPA. These findings were interpreted as evidence that students value learning how to apply psychological theory and research to real world social issues. Further evidence of student outcomes for this goal in future assessments will address how students have used psychological theory to understand and improve society in their classes or other departmental activities. Faculty members will also be encouraged to seek Community Service Learning course designations for the classes that promote student work in the community.

**Judgments of Personal (Self and Career) Knowledge:** SLO 2.2 focuses on students learning the ways in which psychological knowledge can be used to promote their personal development and career planning. One question asked of recent (2010-2011) graduating
seniors concerned whether they believed that the Psychology Department helped promote their career preparation (defined as preparation for graduate school or a job). Again, the same 5-point scale was used ranging from not at all (1) to a lot (5). The Career Planning question was answered positively but less so than other questions ($M = 3.96$), although responses to the question were positively correlated with the Educational Quality variable ($r = .69$, $N = 17$, $p < .01$), independently of Gender, University GPA, and Psychology GPA. These findings were interpreted as evidence that students value career planning aspects of their experience as psychology majors. This comes as no surprise, as 59% of graduating seniors over the past 12 years identified career planning as one goal of them majoring in psychology.

Judgments of Ethical Reasoning: The recently revised graduating senior questionnaire had one question added to it addressing the extent to which students’ experiences in the Psychology Department promoted their ethical reasoning skills, defined as an ability to behave appropriately in professional and personal circumstances. Such a skill is central to SLO 3.2. Students rated the question positively ($M = 4.34$) on the 1 (not at all) to 5 (a lot) scale, and those ratings were positively correlated with the composite Educational Quality variable ($r = .71$, $N = 17$, $p < .01$). These data are interpreted as evidence of the impact of the training of ethical reasoning. However, there has remained a concern that the ethics training is dispersed across classes in the curriculum and not centrally focused. Ethical training is now a central part of PSY 2010, Psychology as a Science and Profession, but it remains an elective course in the curriculum.

Judgments of Oral and Written Communication Skills: Graduating seniors over the past 12 years rated the extent to which their experiences in the Psychology Department promoted their oral and written communication, central to SLO 4.1. Students rated them positively ($M_{Oral} = 4.10$, $M_{Written} = 4.38$) on the 1 (not at all) to 5 (a lot) scale. The two ratings were positively correlated to each other ($r = .26$, $N = 166$, $p < .01$), and each is positively correlated to the composite Educational Quality variable ($Oral r = .19$, $N = 166$, $p < .05$; Written $r = .17$, $N = 166$, $p < .05$), independently of Gender, University GPA, and Psychology GPA. We interpret these data as evidence of student learning, which will be documented more systematically in class-related assessments of APA-style presentations and papers in Research Methods and related classes.

Judgments of Interpersonal Relations: Graduating seniors over the past 12 years rated the extent to which their experiences in the Psychology Department promoted their interpersonal relationships skills. Student ratings were positive ($M = 4.29$) on a 1 (not at all) to 5 (a lot) scale, and they were positively correlated to the composite Educational Quality variable ($r = .28$, $N = 168$, $p < .05$), independently of Gender, University GPA, and Psychology GPA. The data are interpreted as partial evidence of students improving their skills to work with others. The students’ own perceptions need to be confirmed by additional evidence of successful learning from the students’ learning outcome data in classes that promote interpersonal relations.

F1.b Methodological Knowledge

Although graduating seniors rated themselves as having acquired methodological knowledge in their exposure and engagement in the discipline, there is no independent corroboration that they in fact acquired such knowledge. Such corroboration is necessary
for the indirect measure be seen as supporting SLO 1.1, 2.1, and 3.1 More direct evidence of psychology students’ methodological knowledge comes from their performance on a 2012 test of methodological knowledge. A total of 334 students completed a 10-item Psychology Methodological Knowledge survey (see Appendix C). It was used in the 2006 assessment of Introductory Psychology students, whose average score was 49% which, while low, was significantly above chance, t(356) = 33.30, p < .001. Notably, the Introductory Psychology students performed better than a group of 149 History 1700 (US History) students (M = 38.26%), t(674) = 9.32, p < .001. Even among the History students, those who had never had a psychology course (N = 79) scored lower (M = 34.80%) than those who had (N = 70, M = 46.89%), p < .001.

In the present assessment, data was collected toward the end of the Spring 2012 semester among students in all psychology classes. A total of 334 students were participants in the study, with 143 Freshman (10% were actual or potential majors), 64 Sophomores (23% were actual or potential majors), 67 Juniors (37% were actual or potential majors) and 60 Seniors (34% were actual or potential majors). Performance on the survey showed the effect of Year, F(3, 287) = 4.42, p < .01, and Major Status, F(3, 287) = 10.40, p < .001, with no interaction effect (see Figure 2). Seniors (M = 54%) scored higher than Freshmen (M = 38%) and Sophomores (M = 44%), but no different than Juniors (M = 48%). The data provide critical evidence that psychology students not only believe that they improved their methodological thinking about psychology (related to SLO 1.1. 2.1, and 3.1), but actually demonstrate greater methodological knowledge with exposure and engagement in the discipline.

**Figure 2: Psychology Methodological Knowledge test performance by Year in School and Major Status.**
F1.c PAS and Adopting the Values Associated with Scientific Psychology

Two learning outcomes are associated with the program goal of Values/Ethics. Student outcome 3.1 focuses on psychology majors adopting ways of thinking and acting associated with being a student of psychological science. This focus on actually changing student assumptions, beliefs, attitudes, and values to be consistent with scientific psychology highlights the processes of socialization of students into the culture of the discipline. In this account, faculty serve as socializing agents who model, tutor, and mentor students to think and behave in disciplinary-appropriate ways.

Evidence of faculty serving as role models comes from research on WSU psychology students’ adoption of the beliefs, attitudes, and values of scientific psychology. One study demonstrated that psychology students in Introductory Psychology classes recognize that their instructors (regular fulltime faculty members) adopt the beliefs, values, and attitudes of scientific psychology as measured by the Psychology as Science (PAS) questionnaire more strongly than they do. In a follow-up study, students in Introductory Psychology and research-oriented classes were asked to complete the PAS from their own and their Professor’s perspective at the beginning and end of the semester. Students in both types of classes had higher PAS scores in the Professor than the Self condition, and there was modest change during the semester in Self PAS scores (see Figure 5). The change in Self PAS scores was positively related to higher Professor PAS scores at the end of the semester, when controlling for initial Professor PAS scores and other variables. The findings suggest the importance of faculty members serving as models about how they think about the discipline. The implications of the findings have been discussed among faculty members about the importance of them serving as role models for students’ adopting the beliefs, attitudes, and values of the discipline inside and outside the classroom.

Figure 3: PAS scores by Perspective and Time for Students in Introductory Psychology (Study 1) and research-oriented classes (Study 2).

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F1.d ETS Psychology Test Performance.

Over the 2011-2012 academic year, graduating seniors were invited to test their knowledge of Psychology generally and their knowledge of specific domains of psychology in a standardized, 140 item ETS Psychology exam. The exam assesses graduating seniors' learning of such domains and approaches in psychology as Memory/Cognition, Perception/Sensation/Physiology, Developmental, Clinical/Abnormal, Social, and Measurement/Methodology. The ETS test provides the first program-level evidence for SLO 1.2 which addresses students understanding and synthesis of the domains of, and approaches to, scientific psychology.

Students were offered an opportunity to take the ETS test in exchange for a chance of winning a Kindle Fire at the end of the Fall 2011 semester and again at the end of the Spring 2012 semester. Twelve students took the test, which remains too small a number for ETS to compare the performance of WSU students to others. That number is 20 and we are continuing the collection of data this academic year. Overall students averaged 179 (sd = 10) on the ETS Psychology test which has a maximum score of 200. The percentage correct on each of the 6 subscales is presented below. Although we do not yet know the standardized score of WSU psychology students' performance, we are generally pleased with the result. SLO 1.1 emphasizes the range of knowledge that students are expected to know and a consistency of performance was demonstrated on the ETS test. The lowered score for Memory/Cognition does not come as a surprise as that aspect of the curriculum is recognized as needing work. A new required lower division course is being developed to promote students' understanding of memory and learning which will be a prerequisite for more advanced courses in Cognition and Conditioning and Learning.

Figure 4: Graduating Seniors performance on the ETS Psychology Test Subscales

For more information see http://www.ets.org/mft/about/content/psychology.
F1d. Measures of Psychological Literacy

Although the program-level SLOs are specific and distinct, there is an important sense that they all are related to a common goal. Numerous scholars have argued that psychological literacy should be an outcome goal of undergraduate education in psychology because it is an important characteristic of citizens in a democratic society. The notion of psychological literacy has been defined as the integrated set of psychology knowledge, values, and skills which psychologically literate citizens adaptively use to solve real world problems in their lives and communities.

There are no direct tests of psychological literacy, and the evidence that does exist provides only limited support for the claim that students acquire an integrated set of psychological knowledge, values, and skills that develops with exposure to and engagement in the discipline. The 2011-2012 assessment was designed to more systematically assess the nature and acquisition of psychological literacy. An academically diverse group of 492 students were sampled either during the first two weeks or last three weeks of classes in the Spring 2012 semester. They completed the PAS (Amsel et al, 2009, 2011) Psychology Knowledge (Thompson & Zamboanga, 2004) and Psychology Misconceptions (Thompson & Zamboanga, 2004) questionnaires in random order, along with demographics and class expectation questions. Participants completed the PAS task in the Self and Professor Conditions at the same time (see Appendix D).

There were 492 undergraduate psychology students (60% female, M Age = 24 years, sd = 7.1 years). A total of 40% of the participants were Freshman, 18% were Sophomores, 20% were Juniors, and 21% were Seniors, with 40% of participants actual or anticipated Psychology majors or minors, and 60% of the participants in an introductory course. On average, participants had taken 2.27 previous psychology courses (sd = 2.81).

Responses on each item of the Knowledge and Misconceptions questionnaires were coded as correct or incorrect and a percent correct score was calculated for each participant on each questionnaire (see Appendix D for coding instructions). The average score on the Knowledge questionnaire was 46.49% with a standard deviation of 17.14% (N = 481). The average score on the Misconceptions questionnaire was 50.82% with a standard deviation of 11.47% (N = 490). Each item of the PAS questionnaire in the Self and Professor Condition was coded so responses which support psychology as a science were given a score of 7. The average PAS score in the Self Condition was 5.03 (sd = .72, N = 489) on the 7 point scale, and 5.47 (sd = .76, N = 489) in the Professor Condition. The two

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9 See the following papers:

measures were strongly correlated, \( r = .78, N = 489, p < .001 \), with students scoring higher in the Professor than the Self condition, \( t(488) = 19.92, p < .001 \), replicating Amsel et al.’s, (2009) findings.

To assess whether students’ psychological knowledge, values, and skills were related to each other, correlations were run between performance on the Knowledge, Misconceptions, and Self PAS questionnaires. Each correlation coefficient was found to be positive and significant, with the strongest correlation being between performance on the Knowledge and Self PAS questionnaires, \( r = .40, N = 481, p < .001 \), followed by the Knowledge and Misconceptions questionnaires, \( r = .30, N = 481, p < .001 \), and then Misconceptions and Self PAS questionnaires, \( r = .19, N = 488, p < .001 \). Performance on the three questionnaires formed a single dimension in a factor analysis accounting for 54% of the data. The factors scores \((M = 0, sd =1.00)\), representing the common source of variance among the questionnaires, were computed for each participant \((\text{range} = -2.48 \text{ to } 3.38)\) and defined a measure of Psychological Literacy.

The new measure of Psychological Literacy was used as the dependent variable in an assessment of whether it is influenced by students’ exposure and engagement in psychology. These variables were defined as Year in School (Freshman to Senior) and Major Status (Actual or Anticipated Major or Minor, or Neither Actual or Anticipated Major nor Minor). Both Year in School, \(F(3,373) = 8.27, p < .001\), and Major Status, \(F(3,373) = 6.77, p < .01\), showed an effect, suggesting that both exposure and engagement play a critical role in promoting psychological literacy.

Figure 5: Psychological Literacy score by Year in School and Major Status.
Previous Psychology Courses), measuring student characteristics and their exposure and engagement in psychology, and the PAS Prof score, measuring students’ ability to think like their professor. A four factor prediction model was statistically significant, \( F(4, 475) = 124.19, p < .001 \), which accounted for more than half of the variance in Psychological Literacy scores (Adjusted \( R^2 = .51 \)). Psychology Literacy was primarily predicted by higher PAS Professor scores, standardized \( \beta = .57, t = 16.93, p < .001 \), followed by Previous Psychology Courses, standardized \( \beta = .24, t = 7.40, p < .001 \), Age, standardized \( \beta = .14, t = 4.11, p < .001 \), and Anticipated Grade, standardized \( \beta = -.11, t = 3.37, p < .05 \).

Together these findings suggest that rather than changing in multiple distinct ways, students’ changes over the course of their undergraduate careers may be in the direction of greater psychological literacy, a unitary dimension which includes many, if not all, of the program-level SLO outcomes. Psychology literacy was shown to increase with exposure to and engagement in the discipline, and to be predicted by a combination of variables including the ability to adopt their professor’s thinking. This is significant as student exposure to their professors’ thinking is highest when students and faculty are engaged in authentic activities like research or practicum which are considered high impact courses and are classes which are valued in the curriculum.

F2. Evidence of Learning: High Impact Courses

The curriculum of the psychology department emphasizes engaging students in authentic activities such as projects and research, directed readings, and practicum. As Table 2 documents, increasingly more students have been enrolling in these courses.

Table 2: The enrollment of students in various individually supervised classes since the new compensation policy was introduced.

<table>
<thead>
<tr>
<th>Year</th>
<th>Projects &amp; Research 2800/4800/4910</th>
<th>Directed Readings 4830</th>
<th>Practicum 4380/4390</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>08-09</td>
<td>32</td>
<td>16</td>
<td>10</td>
<td>58</td>
</tr>
<tr>
<td>09-10</td>
<td>36</td>
<td>20</td>
<td>21</td>
<td>77</td>
</tr>
<tr>
<td>10-11</td>
<td>20</td>
<td>28</td>
<td>24</td>
<td>72</td>
</tr>
<tr>
<td>11-12</td>
<td>44</td>
<td>36</td>
<td>40</td>
<td>120</td>
</tr>
<tr>
<td>TOTAL</td>
<td>232</td>
<td>170</td>
<td>142</td>
<td>544</td>
</tr>
</tbody>
</table>

One consequence of these activities is that students are having opportunities to present research at conferences, obtain grants for their research, and work in the community. Appendix E documents the success students are having in all three areas. Requiring these courses, along with senior seminars and labs, is currently a topic of
discussion in the curriculum committee as part of the general consideration of a capstone requirement.

One notable source of evidence of more faculty members engaging in authentic activities with students is that students form closer and more significant ties with more faculty members. Over the past 12 years, graduating seniors have been asked to identify faculty members who have been particularly helpful in their experience in the psychology department. The number of faculty members identified has risen significantly from 3.7 in the 2004 cohort to 4.4 in the 2009 cohort, $F(1, 256) = 11.04, p < .01$. The number of faculty members identified is also positively correlated ($r = .23, N = 163, p < .01$) to the composite Educational Quality variable (which measures students satisfaction and rigor of their educational experiences), independently of Gender, University GPA and Departmental GPA.

F3. Evidence of Learning: General Education Courses

The department’s two Gen Ed courses (PSY 1010 and PSY 2000) were reviewed last year as part of the Gen Ed renewal process. We have taken the data reported last year in that document and added to it additional evidence collected over the past year.

F3.1 PSY 1010: Introductory Psychology

Below, we review evidence of Introductory Psychology achieving each of the 5 Social Science General Education SLO, with mapping to the Program to which they correspond.

<table>
<thead>
<tr>
<th>SOCIAL SCIENCE LEARNING OUTCOMES IN PSYCHOLOGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>All courses proposed for inclusion in the social science breadth category must address at least two of the skill criteria listed below. (Mark all that apply.)</td>
</tr>
<tr>
<td>___ Written, oral, or graphic communication</td>
</tr>
<tr>
<td>___ Abstract logic or reasoning</td>
</tr>
<tr>
<td>___ Use of information technology</td>
</tr>
<tr>
<td>___ Use of library or other research sources</td>
</tr>
<tr>
<td>___ Critical thinking, cognitive learning, and individual or group problem solving</td>
</tr>
<tr>
<td>___ Collaborative group problem solving</td>
</tr>
</tbody>
</table>

A student completing a social science general education course should be able to accomplish three of the following five outcomes. (Mark all that apply.)

___ Describe a social science approach to studying and understanding human behavior.
___ Describe basic assumptions about humans and their behaviors from a social science perspective.
___ Explain the basic elements and operation of a sociocultural system.
___ Explain the interactions between individuals and their sociocultural and/or natural environments.
___ Apply a social science perspective to a particular issue and identify factors impacting change (past or present).
Abstract logic or reasoning process (Psychology 1010 SLOs 1.1): The first general education learning outcome we assessed was students’ abstract logic or reasoning process, which corresponds to Program SLO 1.1. In a Spring 2012 assessment, 177 Introductory Psychology students across a variety of sections of the course were asked to report their use of and improvement in these skills during the course. As expected, they reported using abstract logic or reasoning skills in their Introductory Psychology regularly (Mean = 3.29 on a 5-point scale labeled as (1) never, (2) infrequently, (3) regularly, (4) often, and (5) frequently). They also perceive themselves as having moderately improved in their skills (Mean = 2.99 on a 5-point scale labeled a (1) none, (2) a little, (3) moderately, (4) substantially, and (5) extensively). Moreover, there was a strong positive correlation between ratings of the use of the skills and the improvement of them in the course ($r = .60, N = 177, p < .001$). The self-ratings data reflect students’ perception that they are indeed learning much more than just the content of psychology in their Introductory Psychology course, but also perceive a link between exercising and improving in their abstract logic and reasoning skills in the course. Evidence that students were justified in their perceptions of fairly moderate growth in their abstract logic and reasoning skills that can be attributed directly to their class was addressed in a 2006-2007 assessment of Introductory Psychology students’ methodological reasoning, as discussed earlier.

Critical thinking, cognitive learning, and individual or group problem solving (Psychology 1010 SLOs 2.1, 3.1, 3.2) The second General Education goal examined was critical thinking, cognitive learning, and individual or group problem solving, which corresponds to program SLOs 1.1 and 3.1. In the Spring 2012 assessment, Introductory Psychology students reported that their class often required use of the thinking strategies ($M = 3.22$) and that they assessed themselves as having made between a moderate and substantial improvement in these thinking strategies ($M = 2.89$). Students’ reported use of the strategies was positively related to their ratings of their improvement ($r = .61, N = 177, p < .001$), again suggesting that students believe that exercising these strategies is related to their improvement of such strategies in the class.

The 2008-2009 assessment addressed whether Introductory Psychology students used the findings from scientific psychology to revise their misconceptions about the discipline. Such a process, it was argued, required use of critical thinking, cognitive learning, and individual or group problem solving by students reflecting on, comparing, and contrasting the evidential support for their prior beliefs and scientific psychological claims, and monitoring the revision of the former by the latter. Evidence of such revisions suggests that students were not just superficially learning the material from class, but that the learned material was transforming how they think about the mind and behavior.

The assessment examined the status of Introductory Psychology students’ misconceptions about a variety of psychological phenomenon. It was borrowed from researchers who used the measure to analyze the impact of misconceptions on performance in Introductory Psychology classes (Thompson & Zamboanga, 2004). The 16-item Misconceptions Test requests that students rate statements on a 4-point scale, with options ranging from (1) Very sure it’s false to (4) Very sure it’s true. Some statements were false, meaning that they have been proven false by scientific psychology, but there was reason to believe that they would be accepted by students (examples are below).
People’s recall of early childhood experiences tends to be clear and accurate.

Eyewitness memory for events is vivid and accurate, and resistant to misleading suggestion.

The eyes, ears, and other sensory organs provide an accurate experience of the world as it truly exists.

People feel better when they express their anger than when they try to control it.

Other statements were true, meaning that they were proven true by scientific psychology, but there were reasons to believe that they would be rejected by students (examples are below).

Most children who are abused do not grow up to become abusive parents.

People will act in immoral, illegal, or dangerous ways if ordered to do so by a recognized authority.

The standards defining mental disorders have changed over the years.

Certain and accurate (e.g., consistent with scientific psychology) responses were given 4 points and certain and inaccurate responses received 1 point. Thompson and Zamboanga (2004) found that University of Nebraska Introductory Psychology students had a relatively low acceptance of scientific psychological claims ($M = 2.38$) when assessed on the first week of class. The average was significantly below an average of 2.50, suggesting that students had a stronger tendency to accept statements consistent with their prior beliefs than psychological sciences. By the end of the semester, students’ scores had increased significantly ($M = 2.81$), an average score significantly above 2.50, suggesting that students had a stronger tendency to accept statements consistent with psychological sciences than prior belief.

One hundred and fifty-eight WSU Introductory Psychology students were given the Misconceptions test during the 7th to 10th week of the spring 2009 semester. Their average score ($M = 2.52$) was significantly higher than the scores achieved by the Nebraska Introductory Psychology students at the beginning of the semester, $t(156) = 8.59, p < .001$, and significantly lower than the same students at end of the semester, $t(156) = 18.50, p < .0001$. The one shot assessment of WSU Introductory Psychology students in the middle of the semester shows that they are on the same trajectory as the University of Nebraska students in reversing a tendency to accept statements consistent with prior beliefs than psychological sciences. Future research will assess change in Introductory Psychology students’ performance on the Misconceptions test from the beginning and end of a semester.

In the 2012 assessment, Introductory Psychology students were given the Misconceptions test either at the beginning ($N = 115, M = 2.45, sd = .026$) or the end ($N = 176, M = 2.52, sd = .020$) of the semester. The difference was small but approached significance, $F(1,286) = 3.25, p <$
.07, suggesting that WSU introductory psychology students demonstrate the critical thinking necessary to revise their misconceptions.

Describe a social science approach to studying and understanding human behavior (Psychology 1010 SLO 1.2, 1.3, 2.2, 4.1) The third General Education goal examined was to describe a social science approach to studying and understanding human behavior. Scientific psychology was presented as such a social science approach. In the Spring 2012 assessment, Introductory Psychology students reported that they were regularly exposed to “scientific psychology” as a social science approach to study human behavior (M = 3.49) and their understanding of it improved moderately (M = 3.21), with evidence again pointing to students believing that greater exposure to scientific psychology in the class was related to them improving their understanding (r = 0.63, N = 177 p < .0001).

In addition to performance on the Methodological Test previously described, a 2008-2009 assessment of Introductory Psychology students’ knowledge of scientific psychology was assessed on a 25-item multiple-choice test. The test was developed by Thompson and Zamboanga (2003, 2004), who created it based on recommendations from faculty members of the central concepts, issues, or ideas that they believed students in an introductory psychology course should know. The test items covered topics typically included in an introductory course and had questions addressing theories and research based on a diversity of theoretical approaches in psychology, including Biological, Behaviorist, Cognitive, Psychodynamic, Socio-Cultural, and Humanistic.

Thompson and Zamboanga (2003, 2004) found that University of Nebraska Introductory Psychology students had a relatively low understanding of scientific psychology (M = 38% correct) when assessed on the first week of class. The average was significantly above an average of 20%, suggesting that students had knowledge of scientific psychology that was significantly, but not substantially, above chance responding. By the end of the semester, students’ performance on the test had increased (M = 76%).

One hundred and sixty eight WSU Introductory Psychology students were given the Multiple-Choice test during the 7th to 10th week of the spring 2009 semester. Their average score (M = 47%) was significantly higher than the average score of Nebraska Introductory Psychology students at the beginning of the semester, t(167) = 6.53, p < .001, and significantly lower than the same students at the end of the semester, t(167) = 27.62, p < .0001. Again the one shot assessment of WSU Introductory Psychology in the middle of the semester shows that they are on the same trajectory as the University of Nebraska students in acquiring knowledge about scientific psychology. Future research will again assess change in Introductory Psychology students’ performance on the multiple choice test from the beginning to the end of a semester.

In the 2012 assessment, Introductory Psychology students were given the Knowledge test either at the beginning (N = 112, M = 38%, sd = .016) or the end (N = 176, M = 44%, sd = .013) of the semester. The difference was again small but this time significant, F(1,281) = 10.87, p < .01, suggesting that WSU introductory psychology students demonstrate the acquisition of knowledge about scientific psychology.
Describe basic assumptions about humans and their behaviors from a social science perspective (Psychology 1010 SLO 3.1, 3.2). Accepting a science of mind and behavior requires adopting a set of working assumptions about human nature, including its deterministic and materialist nature of mind and the value of experimental methodology to understand it. These assumptions have been characterized as working in the sense that students must at least temporarily adopt these positions to fully appreciate the meaning and value of the results generated by scientific psychological research (e.g., its soundness, generalization, and application) (Amsel et al., 2009, 2011; submitted).

In a series of assessments in 2007-2008, 2008-2009, and 2010-2011, we explored Introductory Psychology students’ understanding and adoption of the basic assumptions of scientific psychology. The assessments used the Psychology as Science (PAS) questionnaire (Friedrich, 1996). It is a reliable and valid assessment of students’ adoption (from 1= strongly disagree to 7= strongly agree, with 4 = neutral) of 15 statements tapping assumptions of scientific psychology, including the following:

- Psychological research can enable us to anticipate people’s behavior with a high degree of accuracy.
- Research conducted in controlled laboratory settings is essential for understanding everyday behavior.
- Our ability as humans to behave in any way we choose makes our attempts to predict behavior ineffective (reverse-scores)

A large (N = 420) assessment study of Weber State students in psychology courses across the curriculum revealed a weak agreement (overall average score of 5.18 on the 7-point scale) with assumptions that follow from treating psychology as a science. First year students (many of whom were in Introductory Psychology) weakly accepted the assumptions of scientific psychology (M = 5.01) which was significantly, but only moderately lower, than senior psychology students (M = 5.39). This small change in first year students’ acceptance of the assumptions of scientific psychology replicates other studies (Friedrich, 1996; Holmes & Beins, 2008).

In another assessment (Amsel et al., 2009), 227 Introductory Psychology students were found to score higher on the PAS when randomly assigned to answer the questionnaire from their Professor’s perspective (Professor M = 5.37) than their own (Self M = 5.01). The findings suggest that although Introductory Psychology students only weakly adopt the assumptions of scientific psychology, it is not because they do not understand the assumptions. They readily recognize that their professors adopt the assumption more strongly than they do.

In a more recent study (Amsel et al., submitted), 100 Introductory Psychology students were given the PAS in both the Self and Professor Condition at the beginning (Time 1) and the end (Time 2) of the semester. The results demonstrated small but significant semester changes in both PAS Self and Professor Conditions (see Figure 6).
The change from Time 1 to Time 2 in Introductory Psychology students’ PAS Self scores was related to their Time 2 PAS Professor scores ($r = .61$, $p < .001$), independently of Time 1 Professor scores, demographic variables, and academic variables. Moreover, students’ ability to adopt their professors’ beliefs was related to their academic success as measured by their final grade in the course. A stepwise multiple regression found that only Time 1 PAS Prof scores predicted students’ Introductory Psychology final course grade ($\beta = .27$, $p < .01$).

The findings from the previous assessments were mostly confirmed in the Spring 2012 assessment of Introductory Psychology students. They were given the PAS questionnaire to complete in the Self and Professor Conditions at the beginning ($N = 114$) or end ($N = 177$) of the semester. The results again demonstrated small but significant semester changes in the Self but not in the Professor Condition (see Figure 7).

The studies show that students’ perception of their professors’ adoption of the assumptions of scientific psychology increases over the semester of an introductory course and may play a role in students’ own acquisitions of such assumptions. This should not come as a surprise as adopting values for oneself involves more than just understanding such values, but rather having firsthand knowledge of the usefulness of those values. Additionally, students recognizing professors as adopting these assumptions promotes their academic success in Introductory Psychology.
Explain the interactions between individuals and their sociocultural and/or natural environments (Psychology 1010 SLOs 1.2, 1.3)

The fifth General Education goal examined was to explain the interactions between individuals and their sociocultural and/or natural environments. In the Spring 2012 assessment, Introductory Psychology students reported that they were exposed to psychological explanations of human behavior which highlight biological, psychological and social interactions ($M = 3.79$), and their understanding of them improved moderately ($M = 3.49$), with evidence again pointing to students believing that greater exposure to interactive psychological explanations in the class was related to them improving their understanding of them ($r = 0.70$, $N = 173$, $p < .0001$).

Interactive scientific psychological explanations of most phenomena were described as more sophisticated than students’ own spontaneous explanations which involve single variables or simple additive effects of multiple variables. For example, as previously noted, students tend to enter Introductory Psychology classes with a naïve realism view of perception, which holds that perception of the external world is direct, without interactions between factors. However scientific psychology accounts for perceptual phenomena with complex interactions between biological, psychology and social process. Only 16% of the students were certain that a statement reflecting naïve realistic view of perception was false (e.g., The eyes, ears, and other sensory organs provide an accurate experience of the world as it truly exists). However 54% of students were somewhat certain that it is false, suggesting that a majority of students recognize the value of interactive explanations. However, as the assessment was made midterm, students may still be in a process of revising their most simplistic beliefs.

Similarly, students enter Introductory Psychology with simplistic understanding of controlling the behavior of children. They advocate using standards which evoke both rewards and punishers. However, scientific psychology explains the control of children’s behavior as a
complex process, with important differences between mechanisms of reinforcement and punishment. Again only 12% of the students were certain that a statement reflecting a simplistic view of the control of children’s behavior was false (e.g., *It doesn’t matter whether you use rewards or punishments to manage a child’s behavior, as long as your standards are consistent*). Thirty-seven percent of students were somewhat certain that it is false, suggesting that a total of 49% of students recognize the value of interactive explanations.

These findings from the Misconception test suggest that Introductory Psychology students were learning to revise simplistic in favor of complex explanations. The complex explanations highlight interactive processes in understanding natural and socio-cultural phenomenon in psychology. Further research will explore the changes from the beginning to the end of the semester in students’ tendency to give interactive explanations of psychological phenomenon.
G. Summary of Artifact Collection Procedure

No artifacts were collected last year.
H. Please respond to the following questions.

1) Reflecting on this year’s assessment(s), how does the evidence of student learning impact your faculty’s confidence in the program being reviewed; how does that analysis change when compared with previous assessment evidence? To answer this question, compare evidence from prior years to the evidence from the current year. Discuss trends of evidence that increases your confidence in the strengths of the program. Also discuss trends of concern (e.g. students struggling to achieve particular student outcomes).

The faculty members were encouraged to hear that the multi-dimensional assessments we have identified as SLOs, including all forms of disciplinary knowledge, values and skills, seem to be interrelated and form a single dimension which is affected by students’ exposure to and engagement in the discipline. This finding is consistent with faculty members’ overall impression of their impact on students, which can be summarized as helping them to think as “scientists of behavior.” That is, they believed that their impact is broad and deep on students, despite the assessments being narrow and somewhat superficial. So they have become more confident about their role and impact on students. Moreover, as such the integrative measure of Psychological Literacy was shown to be predicted by students’ ability to think like their professors, a process made easier by engaging in authentic activities (research, practicum, etc.), faculty members are more convinced than ever of the importance of their out-of-class work with students and have recommitted to a curriculum that promotes students engaging in serious application of disciplinary knowledge in research and community service. This confidence faculty have their about their role, impact, and the curriculum has not been as strong from previous assessments which have targeted specific knowledge, values or skills.

One concern that remains is the paucity of assessment of student knowledge of disciplinary ethics and applications. This is being addressed directly in 2012-2013 by using a new Ethics and Application questionnaires. Also, faculty members realize the importance of adding direct measures to the assessment, which up to this year was based on indirect measures.

2) With whom did you share the results of the year’s assessment efforts?

The department members have reviewed all of the data collected prior to Spring 2012 that were presented in reports (Gen Ed renewal and Regents Review). They were also given a preliminary review of the Spring 2012 data at the faculty retreat in August.

3) Based on your program’s assessment findings, what subsequent action will your program take?

As noted above, the department has recommitted to promote more authentic activities in the curriculum including research and practicum classes.
Appendix A

Report of progress on ‘non-learning-outcome recommendations’ from previous 5 year program review (optional):

<table>
<thead>
<tr>
<th>Date of Program Review: 2012</th>
<th>Recommendation</th>
<th>Progress Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic Plan</strong></td>
<td>A recommendation is for them to develop at least a 5-year strategic plan that reflects their mission and can guide their energy.</td>
<td>Regular departmental planning meetings to discuss themes in the strategic plan. Discussion with other psych departments about their policies and procedures to develop a reservoir of ideas.</td>
</tr>
<tr>
<td><strong>Capstone</strong></td>
<td>Address several opportunities for students’ synthesis and reflection that can be achieved without formally adding a capstone course; for example, through practicum and other high impact courses.</td>
<td>Working through new classes to be added to curriculum. Finding consensus to increase the required hours in the discipline.</td>
</tr>
<tr>
<td><strong>External Advisory Committee</strong></td>
<td>We recommend that the Department consider developing an External Advisory Committee.</td>
<td>No actions have been taken at this time.</td>
</tr>
</tbody>
</table>
Appendix B: Revised Graduating Senior Survey

Weber State University
Psychology Graduation Evaluation

Please complete the following questions to the best of your knowledge.

Q1 Gender:
○ Male (1)
○ Female (2)

Q2 Year of Graduation:

Q3 Age:

Q4 Cumulative University GPA:

Q5 Psychology GPA:

Q6 Ethnicity:

Q7 What was your primary area of interest in Psychology?
○ Biological (1)
○ Cognitive/Behavioral (2)
○ Abnormal/Therapeutic (3)
○ Social/Developmental (4)

Q8 Explain in brief detail why you decided to major in psychology at Weber State University.

Q9 After choosing to major in psychology, what goals did you hope to accomplish through your studies? (Please select only one–the most important to you)
○ Generalist education (1)
○ Preparation for graduate school (2)
○ Preparation for professional school (3)
○ Preparation for employment (4)
○ Preparation for life skills (5)
○ Personal growth (6)
○ Other (7) _______________
Q10 What are your plans/goals after receiving your Bachelor’s Degree? (Please check all that apply.)
- Employment (1)
- Graduate school in Psychology (2)
- Other graduate or professional school (3)
- Military Service (4)
- Volunteer service (5)
- Homemaker (6)
- Other (Please specify) (7) ____________________

Q11 Did you apply to graduate school?
- Yes (1)
- No (2)

Answer If Did you apply to graduate school? Yes Is Selected

Q12 If you applied to graduate school, please list the top 3 program(s) (Clinical Psychology, Counseling Psychology, Social Work, Neuropsychology) and 3 school(s) to which you applied. Please note the program to which you were accepted and will attend.

Answer If Did you apply to graduate school? No Is Selected

Q13 If you have not applied or been accepted, are you planning to apply to graduate school in the next 5 years? If so, please list the top 3 program(s) (Clinical Psychology, Counseling Psychology, Social Work, Neuropsychology) and 3 school(s) to which you plan to apply.

Q14 Imagine that you are just beginning your college education. Knowing what you know now, would you choose psychology as you major?
- 1 Definitely No (1)
- 2 (2)
- 3 Undecided (3)
- 4 (4)
- 5 Definitely Yes (7)

Q15 How satisfied are you with your education in Psychology at Weber State University?
- 1 Definitely Unsatisfied (1)
- 2 (2)
- 3 Undecided (3)
- 4 (4)
- 5 Definitely Satisfied (5)
Q16 How satisfied are you with your general education at Weber State University?
- 1 Definitely Unsatisfied (1)
- 2 (2)
- 3 Undecided (3)
- 4 (4)
- 5 Definitely Satisfied (5)

Q17 Do you believe that your education in the Psychology Department at Weber State University prepared you for graduate school?
- 1 Definitely No (1)
- 2 (2)
- 3 Undecided (3)
- 4 (4)
- 5 Definitely Yes (5)

Q18 How would you rate the overall academic standards of the Psychology department?
- 1 Poor (1)
- 2 (2)
- 3 Average (3)
- 4 (4)
- 5 Excellent (5)

Q19 How much did your experience in the Psychology Department help you develop your skills in the following areas?

Q20 Oral communication (your ability to express yourself verbally)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q21 Written communication (your ability to express yourself on paper)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)
Q22 Reading comprehension (your ability to grasp the material you read)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q23 Conceptual reasoning (your ability to think through problems and develop your own ideas and perspectives on psychological issues)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q24 Information technology (your ability to effectively use technology)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q25 Interpersonal relationships (your skills to deal with others)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q26 Research (your ability to design studies, collect data, analyze data, etc.)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)
Q27 Ethical reasoning (your ability to behave appropriately in professional and personal circumstances)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q28 Application of theory and research (your ability to find real world relevance of theory and research)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q29 Career preparation (your preparation for graduate school or a job)
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q30 Briefly described your best and worst educational experience in the Psychology Department
Q31 From this list, please check any of the Psychology faculty you found to be particularly helpful to your experiences at Weber State University. Please select all that apply.

- Eric Amsel (1)
- Aaron Ashley (2)
- Todd Baird (3)
- Norris Bancroft (Now retired) (4)
- Lauren Fowler (5)
- Azenett Garza (6)
- Richard Grow (Now retired) (7)
- Joseph Horvat (8)
- Theresa Kay (9)
- Maria Parrilla de Kokal (10)
- Melinda Russell-Stamp (11)
- Matthew Schmolesky (12)
- Leigh Shaw (13)
- Other (please list) (14) ________________

Q32 How much do you agree with the following statements?

Q33 The Psychology Adviser helped me understand the graduation requirements for the Psychology Major/Minor

- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q34 The Psychology Adviser showed me useful resources in CatTracks.

- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)
Q35 The Psychology Adviser treated me with respect.
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q36 The Psychology Adviser answered my questions.
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)

Q37 The Psychology Adviser directed me to those who could offer me career and graduate school advice.
- 1 Not at all (1)
- 2 (2)
- 3 Somewhat (3)
- 4 (4)
- 5 A lot (5)
- N/A (6)
Appendix C: Methodological Survey

1. An investigator has found a negative correlation between the amount of vitamin C people take and the number of colds they get. The investigator could safely conclude from this finding that:
   a. The more vitamin C taken is associated with getting fewer colds
   b. People who get few colds are compelled to take vitamin C
   c. Taking vitamin C causes people to get few colds
   d. the more vitamin C taken is associated with getting more colds

2. An explanation using an integrated set of principles that organizes and predicts observations is called a(n):
   a. experiment
   b. hypothesis
   c. theory
   d. survey

3. In a study involving the effects of drug use on dreams, the type and amount of drug used would be the _____ variable and the effect on a person’s dreams would be the ____ variable.
   a. dependent, independent
   b. independent, dependent
   c. empirical, rational
   d. rational, empirical

4. A correlation between self-esteem and annual income of -.75 would indicate that:
   a. higher levels of annual income are associated with lower levels of self-esteem
   b. lower levels of self-esteem are associated with lower levels of annual income
   c. higher levels of self-esteem are associated with higher levels of annual income
   d. it is impossible to predict annual income levels from knowledge of self-esteem levels

5. The key advantage of the experimental method is that it
   a. allows for direct cause-effect conclusions
   b. enables experimenters to study more phenomena
   c. is best suited for the investigation of abnormal behavior
   d. enables replication or empiricism

6. The part of an experiment that the experimenter deliberately manipulates is the:
   a. hypothesis
   b. control group
   c. dependent variables
   d. independent variable
7. A group of researchers wanted to determine if people will eat more food in a room with red paint and red decorations than in a room that is decorated in blue. Half the participants in this study ate in a red room and half ate in a blue room. The researchers then measured how much food was consumed in each of the two rooms. In this study, the independent variable was
   a. the type of food that was available during the study
   b. the amount of food that was consumed
   c. the color of the decorations in the room
   d. how hungry the participants were at the end of the study

8. Which of the following correlation coefficients expresses the strongest degree of relationship between two variables?
   a. -.88
   b. .81
   c. .15
   d. 1.12

9. What is a representative sample?
   a. a small population
   b. a group of participants who know each other
   c. a sample that is identical in size and characteristics to a population
   d. a sample selected to reflect the characteristics of a population of interest

10. Which of the following is the best description of the use of inferential statistics?
    a. procedure used to explain the relationship between two variables
    b. a method for summarizing a large amount of data with a few numbers
    c. method used to determine the practical importance of research findings
    d. procedure for determining if differences are due to chance or non-chance
Appendix D: Psychological Literacy Assessment

Questionnaire

Please answer each question by writing in the answer or circling the best answer

1) Name, W Number, and Email Address ________________________________

2) Sex  Male  Female

3) Year in School  Freshman  Sophomore  Junior  Senior

4) Age  __________

5) Anticipated Final Grade in Introductory Psychology Class (Circle 1)
   A  A-  B+  B  B-  C+  C  C-  D+  D  D-  F

6) Are you a
   Psychology major  Psychology minor  Neither

7) If NEITHER, are you planning to become a
   Psychology major  Psychology minor  Neither

8) How many of the psychology courses have you taken PRIOR to the one in which you are enrolled? (Please give the title and course and whether it was a high school or college course)

Psychology as Science Questionnaire

Listed below are 20 statements, each of which presents an opinion regarding some aspect of psychology. Read each of these statements carefully and indicate the extent to which YOU PERSONALLY (SELF) and YOUR PSYCHOLOGY PROFESSOR PROFESSOR agree or disagrees with each statement. Do so by identifying the appropriate number under each statement on a scale from 1 (strongly disagree) to 7 (strongly agree) for yourself and your Psychology Professor. For example:

Psychology should be a required course for college students.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self 1 2 3 4 5 6 7</td>
<td>Prof 1 2 3 4 5 6 7</td>
<td></td>
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</table>

If you decide that you disagreed slightly with the statement, then circle the number 3. If you decide that your psychology professor agrees strongly with the statement, then circle the number 7. Be sure to circle a number for each statement.
1. A psychology course is an important part of any person’s college education
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7

2. The different areas within psychology seem very unrelated to each other
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7

3. An undergraduate degree in psychology should be a Bachelor of Science rather than a Bachelor of Arts degree
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7

4. It’s just as important for psychology students to do experiments as it is for students in chemistry and biology
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7

5. An introductory psychology course should cover as broad a range of topics as possible
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7

6. Research conducted in controlled laboratory settings is essential for understanding everyday behavior
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7

7. Even though each person is unique, it is possible for science to find general laws explaining human behavior
   Strongly Disagree Neutral Strongly Agree
   Self 1 2 3 4 5 6 7
   Prof 1 2 3 4 5 6 7
8. Carefully controlled research is not likely to be useful in solving psychological problems

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>Self</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Prof</td>
<td>1</td>
<td>2</td>
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</table>

9. Our ability as humans to behave in any way we choose makes our attempts to predict behavior ineffective

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>Self</td>
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<td>2</td>
</tr>
<tr>
<td>Prof</td>
<td>1</td>
<td>2</td>
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</table>

10. Psychological advice given in popular books and magazines is often as useful as more research-based claims

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
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<td>2</td>
</tr>
<tr>
<td>Prof</td>
<td>1</td>
<td>2</td>
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</table>

11. Studying specific examples of how psychology is used is the most interesting part of a psychology course

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>Self</td>
<td>1</td>
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<tr>
<td>Prof</td>
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</table>

12. Governments funding of experimentation is as necessary for expanding what we know about psychology as it is for gaining knowledge in areas like chemistry and physics

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
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<th>Strongly Agree</th>
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<tr>
<td>Prof</td>
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13. The study of psychology should be seen primarily as a science

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
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<tbody>
<tr>
<td>Self</td>
<td>1</td>
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<tr>
<td>Prof</td>
<td>1</td>
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</table>
14. Courses in psychology place too much emphasis on research and experimentation

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Neutral</th>
<th>Strongly Agree</th>
</tr>
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<tbody>
<tr>
<td>Self: 1 2 3 4 5 6 7</td>
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<tr>
<td>Prof: 1 2 3 4 5 6 7</td>
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15. Psychology courses should spend time covering various job possibilities for people with psychology degrees

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
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<th>Strongly Agree</th>
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16. Psychological research can enable us to anticipate people’s behavior with a high degree of accuracy

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17. Psychologists working as counseling professionals don't need to be so concerned with research findings

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18. Psychological theories presented in the media should not be trusted unless they are supported by experiments

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19. Psychology will never be a true science because its predictions of individual behavior are seldom exact or certain

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20. Students get little benefit from learning about procedures for conducting psychology experiments

<table>
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CODING:

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PROFESSOR: \((\text{PASP3} + \text{SP4} + \text{PASP6} + \text{PASP7} + \text{PASP12} + \text{PASP13} + \text{PASP16} + \text{PASP18} + (8 - \text{PASP8}) + (8 - \text{PASP9}) + (8 - \text{PASP10}) + (8 - \text{PASP14}) + (8 - \text{PASP17}) + (8 - \text{PASP19}) + (8 - \text{PASP20})) / 15\)
Psychological Knowledge

Check answer for each of the following questions which you think is the best. Be sure to read each of the five options carefully before selecting your answer.

1. Which of the following sayings is confirmed by psychological research on interpersonal attraction?
   1. “Opposites attract”
   2. “Beauty is only in the eye of the beholder”
   3. “Absence makes the heart grow fonder”
   4. "Birds of a feather flock together"
   5. “Familiarity breeds contempt”

2. The person who is recognized as the founder of psychology is:
   1. Sigmund Freud.
   2. B. F. Skinner.
   5. John Watson.

3. If an instructor wanted to teach Introduction to Psychology using the ideas of the behavioral perspective, (s)he would:
   1. let the students choose for themselves the type of material they wanted to study so it would be personally meaningful and reflect their goals and values.
   2. give students many opportunities to test their knowledge of the material so they could be rewarded and reinforced for learning.
   3. focus on cognitive aspects of brain functioning that facilitate new learning.
   4. have to consider how learning occurs differently for people in different societies and cultures, and in different situations.
   5. try to understand the unconscious influences on students’ interest in psychology.

4. A psychologist compares the test performance of two groups of students. One group was told to study regularly for several days before the exam. The other group was told to study only the night before the exam. The psychologist then compared the test performance of the two groups. In this experiment, what was the independent variable?
   1. how well students performed on the exam.
   2. the types of questions asked on the exam.
   3. when students studied for the exam.
   4. the IQ of the students in each group.
   5. how anxious were students prior to the exam.

5. According to humanistic theorists, mental health consists of:
   1. a strong ego that can resist the id and the superego.
   2. adjusting to the hereditary traits underlying one’s personality.
   3. striving for wholeness and trust in oneself.
   4. trying to avoid relying on defense mechanisms.
5. knowing how to obtain rewards and avoid punishment from the environment.

6. According to Piaget, in which stage of cognitive development is thinking intuitive and illogical but involves language and symbolic play?
   1. formal operational
   2. sensorimotor
   3. concrete operational
   4. postoperational
   5. **preoperational**

7. Schizophrenia is best described as:
   1. a tendency to extreme mood swings.
   2. irresponsibility, immaturity, lack of conscience, and potential for harmful behavior.
   3. a **split from reality, resulting in confused and disconnected thoughts, emotions, and perceptions**
   4. a division of the personality into multiple identities.
   5. persistent feelings of sadness.

8. The right hemisphere of the brain is somewhat more specialized for what intellectual functions?
   1. movements of the right side of the body
   2. step-by-step logical reasoning
   3. **creativity and intuition**
   4. memory
   5. reading

9. Your mind alters or reorganizes new information before putting it in memory. This process is called:
   1. storage.
   2. adaptation.
   3. **encoding.**
   4. procedural memory.
   5. sensory memory.

10. According to psychologist Abraham Maslow, self-actualization describes:
    1. how young children develop self-awareness and a personal identity.
    2. how individuals achieve self-control and the ability to regulate their behavior.
    3. the fulfillment that occurs in close, intimate relationships.
    4. **how people identify and achieve their unique potential.**
    5. the emotions that accompany heightened, prolonged physical activity.

11. Erikson proposed a series of stages of psychosocial development. Which of the following stages corresponds to adolescence?
    1. generativity vs. stagnation
    2. **identity vs. role confusion**
3. basic trust vs. mistrust
4. integrity vs. despair
5. industry vs. inferiority

12. All of the following are true of hereditary influences on behavior except:
   1. genes interact with the environment to affect human characteristics.
   2. it is rare that a single gene affects a specific human characteristic. More commonly, genes interact with other genes.
   3. **genetic influences account for individual differences between people, but not for how people are similar.**
   4. some genes are dominant and others are recessive, but most genes have additive (or blended) effects on human characteristics.
   5. hereditary influences on offspring can be estimated, and thus genetic counseling can be important for young adults anticipating parenthood.

13. Biofeedback procedures depend on the knowledge that physiological processes can be:
   1. regulated by another person.
   2. **brought under voluntary control.**
   3. monitored by machines.
   4. controlled chemically.
   5. tolerated with special training techniques.

14. REM sleep is best described as:
   1. the period of deepest sleep in which the heart and breathing rates are lowest.
   2. a period of sleep in which delta waves occur.
   3. **the period of sleep in which the eyes dart back and forth, and during which most dreaming occurs.**
   4. a sleep disorder in which a person sometimes stops breathing during the night.
   5. a period when a person is actually asleep but, upon waking, does not recall having been asleep.

15. You are probably aware of feeling somewhat anxious or worried while sitting in your doctor's or dentist's office. This is probably because you have previously experienced uncomfortable examinations there. To a psychologist, this illustrates:
   1. short-term memory.
   2. operant conditioning.
   3. cognitive social learning.
   4. defense mechanisms.
   5. **classical conditioning.**

16. Sensation accounts for which of the following?
   1. Your ability to experience the world in three dimensions.
   2. Your awareness that objects remain the same shape and size despite your changing visual perspective to them.
   3. **Your awareness of energy from environmental events.**
   4. Your capacity to focus your attention on the things that interest you.
   5. Your ability to enjoy the music you listen to.
17. The part of the nervous system that accounts for your energized, aroused feeling in emotional situations (such as rapid breathing, heart-rate, perspiration) is called the:

1. **sympathetic nervous system**.
2. adrenal gland.
3. central nervous system.
4. parasympathetic nervous system.
5. thalamus.

18. To decrease a child's disruptive behavior in the classroom, a teacher takes away 10 minutes of recess time for each instance of poor behavior. This is an example of:

1. negative reinforcement.
2. extinction.
3. higher-order conditioning.
4. **punishment**.
5. classical conditioning.

19. Experienced tennis players know what kinds of shots will be more successful under different weather conditions on clay or grass courts. This is because they use intuitive rules-of-thumb that they have acquired over time called:

1. insights.
2. algorithms.
3. latent learning.
4. mental sets.
5. **heuristics**.

20. An emphasis on how childhood experiences shape adult personality and the unconscious influences on behavior would be true of which kind of theorist?

1. humanistic
2. behavioral
3. **psychoanalytic**
4. biological
5. cognitive

21. You have always considered yourself a conservative, but recently a friend gently pointed out that some of your attitudes and beliefs are rather liberal. After thinking it over, you modified those attitudes so they would be more consistent with your overall conservative philosophy. You did this because of:

1. **cognitive dissonance**.
2. primary process thinking.
3. the fundamental attribution error.
4. scripts for social behavior.
5. the reality principle.
22. Once you have learned to ride a bicycle, you can ride it easily and without consciously thinking about how to do so. This is because, stored in your mind, is:
   1. sensory memory.
   2. motor memory.
   3. semantic memory.
   4. **procedural memory**.
   5. conditioned reflexes.

23. A woman is discovered years after her disappearance from her family, living a new life in a community far away. She has assumed a new identity and has no memory at all of her previous life. You suspect that she is experiencing:
   1. a **dissociative disorder**.
   2. schizophrenia.
   3. a mood disorder.
   4. a personality disorder.
   5. a somatoform disorder.

24. “Operational definitions” of psychological variables are defined:
   1. in scientific, precise terms.
   2. in ways which can be easily understood.
   3. in terms that are consistent with the psychological theory to be tested.
   4. **in terms that specify the objective procedures for measuring it**.
   5. in non-intuitive ways.

25. Lisa believes that if she works hard, plans carefully, and uses her natural gifts, she will do well in school and obtain a good job. We would describe Lisa as:
   1. demented.
   2. experiencing diffusion of responsibility.
   3. showing the effects of persuasive influence.
   4. experiencing cognitive dissonance.
   5. having an **internal locus of control**.

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\]
Misconceptions Questionnaire

Please read following statements and rate each on the following scale according to your own personal opinions:

1. Very sure it's false
2. Somewhat sure it's false
3. Somewhat sure it's true
4. Very sure it's true

1. The standards defining mental disorders have changed over the years. T

2. Your eyes, ears, and other sensory organs provide an accurate experience of the world as it truly exists. F

3. People feel better when they express their anger than when they try to control it. F

4. People’s recall of early childhood experiences tends to be clear and accurate. F

5. Even a skilled hypnotist cannot force hypnotized people to do things against their will. T

6. People will act in immoral, illegal, or dangerous ways if ordered to do so by a recognized authority. T

7. IQ tests are culturally biased. F

8. Most children who are abused do not grow up to become abusive parents. T

9. The effects of alcohol on behavior arise from its chemical effects on the body. F

10. Obesity is primarily the result of overeating. F

11. Beauty is in the eye of the beholder. F

12. Eyewitness memory for events is vivid and accurate, and resistant to misleading suggestion. F

13. It doesn’t matter whether you use rewards or punishments to manage a child’s behavior, as long as your standards are consistent. F

14. Adolescence is a period of considerable conflict, turmoil, and stress. F

15. Early brain development research shows that a lot of stimulation is essential early in life for the brain to grow properly. T
16. People tend to believe that the world is a fair place, in which bad people are punished and the good are rewarded. 

CODING: \[((\text{Misq}1 \geq 3) + (\text{Misq}2 \leq 2) + (\text{Misq}3 \leq 2) + (\text{Misq}4 \leq 2) + (\text{Misq}5 \geq 3) + (\text{Misq}6 \geq 3) + (\text{Misq}7 \leq 2) + (\text{Misq}8 \geq 3) + (\text{Misq}9 \leq 2) + (\text{Misq}10 \leq 2) + (\text{Misq}11 \leq 2) + (\text{Misq}12 \leq 2) + (\text{Misq}13 \leq 2) + (\text{Misq}14 \leq 2) + (\text{Misq}15 \geq 3) + (\text{Misq}16 \geq 3)) / 16\]
Appendix D: 2011-2012 Accomplishments of WSU Psychology Students (*) (faculty members bolded)

PRESENTATIONS

National Council on Undergraduate Research


Rocky Mountain Psychology Association


Ahmad*, T., & Baird, T. (April, 2012). Scientific thinking and ad skepticism in college and high-school students. Poster presented at Rocky Mountain Psychology Association, Reno NV.


Ahmad*, T., & Kay, T. (April, 2012). *Problematic text messaging, attachment style, and obsessive-compulsive tendencies.* Poster presented at Rocky Mountain Psychology Association, Reno NV.


**Community Involvement Center Symposium**


**Society for Research in Adolescence**


**National Poster on the Hill: Washington**


**State Poster on the Hill: Salt Lake City**


Association of Psychological Science


OFFICE OF UNDERGRADUATE RESEARCH GRANTS

Amy Blunck, $875 (Eric Amsel and Leigh Shaw, Supervisors)
Karen Harms, $575 (Aaron Ashley, Supervisor)
Trevor Hicks-Collins (Lauren Fowler, supervisor)
Sterling Haws (Lauren Fowler, Supervisor)
Matt Fullmer (Lauren Fowler, Supervisor)
Nicholas Smith, $3500 (Matthew Schmolesky, Supervisor)
Andrew Russett $3300 (Matthew Schmolesky, supervisor)

COMMUNITY OUTREACH ACTIVITIES

International Brain Awareness Week (BAW). Students gave brain-related presentations given to 1350 K-12 students at nine schools, reaching 42 classes. O'Keefe*, K., Weitzeil, M., Knight*, A., Mecham*, B., Smith*, N.


DaVinci Academy of the Arts and Science. Students worked with students promoting college participation. Howard*, J., and Tadmarsh*, T.

WSU Counseling Center. Students worked with counseling staff to promote mental health on campus.