

Psychology Department Learning Outcomes Evaluation

Third- Year Assessment of Outcomes, 2020-2021

UG committee, 2020-2021 academic year

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Executive Summary

1. History of Assessment

- a. Since the last review, we have been working to develop an approach to assessing our five essential learning outcomes that is
 - i. Based on student work, not merely subjective evaluations
 - ii. Based on student comments in course evaluations
 - iii. Ongoing and entails evaluating at least one outcome per year, making needed curriculum changes, and re-assessing our outcomes periodically
 - iv. Inexpensive in terms of faculty effort, and sustainable over time
- b. Revisit the initial assessment of all five learning outcomes that serves as our baseline from 2017:
 - i. The 5 outcomes we intended to assess have now multiplied given the sub-bullets for each of these 5 outcomes on our website (new outcomes in Assessor total 19):
 1. Develop a thorough and broad knowledge base of psychological concepts
 2. Demonstrate competence in scientific Inquiry and Critical Thinking
 3. Demonstrate ethical and social responsibility in a diverse world
 4. Develop strong written and oral communication skills
 5. Apply foundational knowledge and skills to career/professional development
 - ii. Initial re-assessment from the committee is that we need to return to these 5 outcomes and assess only those going forward (see Goal 1 below). There was also discussion about whether to delete the sub-bullets from the website to prevent further confusion in the future.
 1. However, we also discussed as a group that the current high-level 5 outcomes are not written specifically enough to easily assess. So, we will undertake a revision of these 5 going forward with work beginning on this as a committee in the fall of 2021.

2. Goal 1: Re-align outcomes associated with UG office

- a. At last formal assessment (spring 2017), we reported on 5 learning outcomes for the major, but in the Assessor and Reviewer tools in Canvas there are now 19, which reflect the sub-bullets of the outcomes we adopted from APA.
 - i. We would prefer to have 5 outcomes to assess going forward.
- b. We are not totally clear on how our understanding of the total number of outcomes changed, but discussion should occur to re-align our understanding with that of the UG office, with possible changes to our website to reflect this as well.

3. Goal 2: Outcomes of the 3rd-year Evaluation

- a. We generally focus on no more than 2 outcomes per year.

- b. We use a qualitative approach that involves reviewing small samples of student “products” (papers, assignments) selected randomly by the Reviewer tool and then rated to reflect work that does not meet, meets, or exceeds the outcome.
 - c. We supplement with student perceptions of classes for the learning outcomes collected with student evaluations.
 - d. We are doing a good job with the two learning outcomes assessed.
 - i. Independent faculty raters judged the sample of student assignments as showing clear evidence of competence in the outcome 69-71% of the time, with the remainder demonstrating some evidence of the outcome, but not full competence.
 - ii. We did find that some student assignments did not actually fully align with the outcomes they were meant to assess, so more discussion with faculty is needed in order to associate assignments appropriately.
 - iii. Students clearly perceive – across the core courses in our curriculum – the assessed outcomes as being addressed in their courses, with an increase in the coverage as they advance through the curriculum.
4. Plan for 2021-2022 academic year
- a. Discussion at faculty meeting in fall about the overall assessment and proposed revisions to the 5 learning outcomes (if we decide to stick with 5).
 - i. We also hope to use this opportunity to engage with faculty on how to incorporate more assignments into assessment and how to align more curriculum with the outcomes.
 - b. Re-evaluation of these outcome revisions in Spring 2022.
 - c. Meeting with all PSY 3010 instructors (research methods course that is final core in our curriculum) in next academic year to gauge whether certain assignments can be standardized across course offerings from different instructors to aid in assessment

The Department of Psychology has adopted five primary learning goals, adapted from those of the American Psychological Association's guidelines for undergraduate psychology majors. These learning goals, along with their associated, more-specific outcomes, are listed below.

1. Develop a thorough and broad knowledge base of psychological concepts

- 1.1 Describe key concepts, principles, and overarching themes in psychology
- 1.2 Develop a working knowledge of psychology's content domains
- 1.3 Describe applications of psychology

2. Demonstrate competence in scientific inquiry and critical thinking

- 2.1 Use scientific reasoning to interpret psychological phenomena
- 2.2 Demonstrate psychology information literacy
- 2.3 Engage in innovative and integrative thinking and problem solving
- 2.4 Interpret, design, and conduct basic psychological research
- 2.5 Incorporate sociocultural factors in scientific inquiry

3. Demonstrate ethical and social responsibility in a diverse world

- 3.1 Apply ethical standards to evaluate psychological science and practice
- 3.2 Build and enhance interpersonal relationships
- 3.3 Adopt values that build community at local, national, and global levels

4. Develop strong written and oral communication skills

- 4.1 Demonstrate effective writing for different purposes
- 4.2 Exhibit effective presentation skills for different purposes
- 4.3 Interact effectively with others

5. Apply foundational knowledge and skills to career/professional development

- 5.1 Apply psychological content and skills to career goals
- 5.2 Exhibit self-efficacy and self-regulation
- 5.3 Refine project-management skills
- 5.4 Enhance teamwork capacity
- 5.5 Develop meaningful professional direction for life after graduation

This report presents an analysis of whether and how courses required for the major, as well as student work completed within those courses, adequately ensure that students meet our learning outcomes. Based on that analysis, we sought to identify two learning outcomes for focus in 2020-2021. These outcomes were: “2.2 – Demonstrate psychology information literacy” and “2.4 – Interpret, design, and conduct basic psychological research.” Both specific outcomes fall under the larger outcome of developing competence in scientific inquiry and critical thinking.

Method

Background assumptions

- 1) For quantitative data, the committee believes it is useful to look at actual student work in lieu of just grades or tests, so we focused on rating assignments associated with the learning outcomes assessed by faculty in the Reviewer using a specified rubric.
- 2) For qualitative assessment, the psychology department maintains that students' course perceptions are meaningful in assessing outcomes. Thus, course evaluations for which students rate whether they believe the outcomes were met in both foundational and higher-level courses are taken into account in our assessment. We assume that higher ratings in the evaluations reflect the perception that the course is meeting the learning outcomes. Asking students to do this rating also allows us to remind students to be aware of these outcomes as well!

Goals

Our focus for this initial learning outcome evaluation was as follows: 1) For each learning outcome, identify whether student assignments at different levels within the major meet the objectives by examining materials that were relevant for that outcome; and 2) For each learning outcome, discuss and determine the extent to which the outcomes are aligned with our learning goals in order to re-evaluate our outcomes if necessary.

Approach

- 1) We gathered materials from two core courses (PSY 2010 and PSY 3010) chosen to reflect novice and more advanced achievements for each learning outcome. Materials included selected samples of student work, such as written assignments, that were chosen by instructors to reflect the learning outcomes we assessed in the Associator.
- 2) We constructed a rubric with which to evaluate the materials in the Reviewer tool in Canvas. All members of the committee were able to see the rubric and the learning outcome as they rated student work. Student work was randomly chosen by the Reviewer tool from two different courses (PSY 2010 and 3010) for each learning outcome for each committee member who did reviews.
- 3) After performing the review of course assignments separately, the undergraduate committee met to discuss what worked and did not work with the assessment (specifically with the regard to the adopted rubric for ratings and the Reviewer tool in relation to the chosen outcomes and assignments). A summary of the comments made during the meeting is given in Table 3 below.

The results of this discussion were a consensus on the need for re-evaluation of the outcomes for the major with more thought given to how to state outcomes such that they are clearly assessable. Another general consensus was the ease of the Reviewer tool for assessing student assignments.

- 4) Beginning in spring 2016, the psychology department decided to also assess student perceptions of the extent to which their courses fulfilled each of the five learning goals in the context of student evaluations. Students rated the extent to which a course had helped them attain each of the broad learning goals on a 6-point scale with 1 signifying very little, and 6 signifying that a course was important in helping them attain a particular learning goal. The data for ratings of Outcome 2 (Scientific and Critical Thinking) for all offerings in 2019-2020 for the courses assessed (PSY 2010 and 3010) are reported in Part 2 of the Results.

Description of Materials Evaluated for Each Learning Outcome

- 1) Scientific method/critical thinking: critical thinking exercises from Psy 2010 (Psychology as a Science and Profession; n = 11), and the research paper from Psy 3010 (Research Methods in Psychology; n = 31).
- 2) In order to assess outcome 2.2, Demonstrating Psychological Literacy, we chose assignments across Psy 2010 and Psy 3010 from 2019 and 2020 that asked students to find, read, and interpret academic journal articles. A summarizing assignment in Psy 2010 assigns students to simply read and summarize an article. Later in that course, they are asked to find several articles and summarize them, in an annotated bibliography. As a final project, they find, read, and critically analyze articles in a literature review. Although assignments from 3010 vary somewhat by instructor, all students write and revise a multi-draft research project in which they conduct a review of literature. We selected assignments from Psy 3010 that were either sections of or final drafts of those projects to assess students' ability to find, read, interpret, and synthesize the literature in psychology. The reviewer tool pulled papers at random, resulting in 10 papers from the assignments described above in the Psy 2010 course, and 11 papers from the more advanced Psy 3010 course.
- 3) Because of the multi-pronged nature of outcome 2.4 (Interpret, Design, and Conduct basic psychological research), we focused exclusively on student's final project for Psy 3010 in 2019 and 2020. Again, assignments vary somewhat across instructors, but all students are required to choose a research question, review the relevant literature, design a research project to answer their question, and either conduct or propose to conduct, with relevant description of the statistical tests and interpretation of results, the research project they've designed. Twenty-one assignments were pulled from student papers in Psy 3010 to assess this outcome.

In all cases where we examined student work, we asked instructors to associate assignments from their courses in the Assciator tool in Canvas with the specific learning outcomes (2.2 and 2.4). Once this was done, the Reviewer tool was used to randomly assign 7-8 assignments for each outcome (14-16 total) to all members of the UG committee (n=7 faculty) to review.

Rubric. Faculty were asked to review each student paper on a three-point scale. A simple rubric was chosen to promote clarity, and increase reliability among raters. For both learning outcomes, faculty members were asked to evaluate whether the sample of student work showed no evidence of the desired outcome (0), some evidence of the outcome, but insufficient to demonstrate competence (1), or that the outcome was achieved (2). This rubric was applied to both of the learning outcomes assessed, with the target outcome incorporated in the rubric language. For example, for Outcome 2.4, the rubric language was as follows:

0: There is no evidence of the ability to interpret, design, or conduct basic psychological research

1: Some evidence of ability to interpret, design, and conduct basic psych research, but insufficient to achieve competence

2: Clear evidence that the student can interpret, design, and conduct basic psychological research.

Results

Results Part 1: Qualitative and Quantitative examination of less and more advanced coursework and student work for each learning outcome

Critical Thinking/Scientific Inquiry. The committee reviewed examples of analyses of research articles (Psy 2010) and APA formatted research papers, including assignments that were drafts of particular portions of the papers (Psy 3010). These examples indicated an increasing sophistication of students' ability to understand important elements of research design (and their limitations) as students advanced within the major. Psy 3010 requires students to complete their own research projects, so this course serves as a sort of "capstone" for the curriculum in our major.

For Outcome 2.2, in which students need to demonstrate psychological literacy, 11 papers across 4 assignments in Psy 2010 were assessed and 10 papers from Psy 3010 were assessed. Multiple faculty members rated each paper. Overall, faculty did not rate any of the papers at 0 (no evidence of the outcome), rated papers as a 1 (some evidence, but insufficient to show competence) 31% of the time, and rated papers as a 2 (clear evidence of competence) 69% of the time.

Of the Psy 2010 assignments, the average faculty rating was 1.68. Six of the assignments unanimously earned scores of 2 (competence clearly demonstrated), while five of the assignments received a mix of scores (1's and 2's). Of the Psy 3010 assignments, the average faculty rating was 1.675. Five papers unanimously earned scores of 2, three got a mix of 1's and 2's, and two papers were rated by multiple raters as 1 (some evidence of outcome, but not enough to demonstrate competence). Notably, one of the assignments chosen from Psy 3010 garnished more 1's than 2's from faculty raters, and some faculty indicated that the assignment was not appropriately designed to allow demonstration of full competence for the outcome. In the future, better honing of how assignments are chosen may be helpful. Further, without the assignment in question, average ratings for assignments from the Psy 3010 courses rose to 1.78.

For outcome 2.4, Interpret, Design, and Conduct Basic Psychological Research, 21 papers from various assignments in Psy 3010 were reviewed by faculty raters. Because multiple faculty reviewed each paper, there were a total of 51 ratings. The average rating for the outcome was 1.69. Faculty awarded one rating of 0 (2%), a rating of 1 (some evidence, but insufficient for competence) 27% of the time, and a rating of 2 (full competence) 71% of the time. Only two of the 21 papers were rated by multiple raters as a one or below. Nine of the papers (roughly half) garnered split ratings from faculty, and ten of the papers were unanimously rated by faculty as 2's (full competence).

A look at the difference between faculty ratings suggests that for this outcome, one reviewer (who also expressed some confusion early in the process) gave harsher ratings than the others. We suspect that reviewer in particular may have been rating papers based on assignment requirements (quality of writing, use of APA style, etc.), rather than strictly looking at the outcome under review. In future terms, we can spend more time instructing faculty reviewers. Overall, however, **our conclusion is that the major is also doing an excellent job in assessing the critical thinking/scientific inquiry outcome**, with faculty rating student assignments in outcomes 2.2 and 2.4 as demonstrating clear competence 69 and 71 percent of the time, respectively.

Results Part 2: Student Perceptions of Learning Outcome for Scientific Inquiry and Critical Thinking by Semester from 2019-2020.

“Backbone” Courses Required of all Majors	2019 Average for Spring, Summer, Fall semesters	2020 Average for Spring, Summer, Fall semesters	Average across all semesters
Psy 2010 Psychology as a Science and Profession	5.00	5.40	5.19
Psy 3010 Research Methods in Psychology	5.60	5.56	5.58

For the above table, 271 students responded over the 2 years for the PSY 2010 course (n=10 sections) and 213 students responded in the same period for the PSY 3010 course (n=14 sections). Students rate individual course contributions to department learning outcomes very highly, on average (range of possible ratings is from 1-6). More importantly, there is a clear “progression” of ratings in that the ratings increase across the two courses assessed, with PSY 2010 being a core course intended for students just entering the major and PSY 3010 being the culmination of the core curriculum. Students clearly perceive that 3010 meets the critical thinking and scientific inquiry objective at a higher rate than 2010. Notably, PSY 2010 also received fairly high ratings, which suggests that outcomes centered around this core theme for our major are being perceived across our curriculum by students. These findings

underscore the value of assessing student perceptions of whether learning outcomes are being met in addition to quantitative and qualitative evaluations of student work. Unfortunately, the change in the way that course evaluations are being conducted will likely limit our ability to continue this practice of assessing student perceptions. We will discuss as a committee alternative ways to possibly assess these perceptions going forward.

Results Part 3: Faculty Perceptions of Learning Outcome Reviews.

In the process of reviewing assignments, we also assessed faculty perceptions of the systems and procedures to investigate further opportunities for change. The discussion included points at different levels of analyses. For example, we discussed that the learning outcomes that were adopted from the APA (American Psychological Association) are roughly associated with the outcomes we favor as a major, but that they may be better written in order to be more clear in terms of HOW to assess. Thus, we are considering revising the outcomes in order to align them better with a clear process for evaluation, but also to be sure they reflect our beliefs about what we would like our majors to take away from the curriculum. More intentionality around designing the outcomes and also emphasizing them in course syllabi and assignments was also discussed. With regard to assessing outcomes, we struggled with coming up with the right rubrics. The question of whether we had too few metrics for assessment was raised, but the other issue was our lack of understanding for each assignment that instructors associated with the outcomes of what constituted minimum competency. Advising from faculty teaching courses and creating assignments for assessment is needed in future reviews with the goal of making sure all assignments meet the outcome listed and also that the rubric accurately reflects faculty intention for the assignment in light of the outcome. Finally, we wondered whether all assessment can/should take place in our final core course in the curriculum (PSY 3010). We considered discussing with faculty who teach that course all of the outcomes to see if they could be incorporated and assessed in one course.

Summary and Plan for 2021-2022

In sum, the committee concluded 1) that the major is adequately covering the learning outcomes assessed; 2) that five learning outcomes need to be re-stated in order to be able to adequately assess all going forward; 3) that outcomes may need to be revised in order to be stated in such a way that assessment is clear. In the coming year, we will work as a committee to revise the outcomes to be 5 or less total and then also restate them to be in alignment with assignments in courses that can be used to assess them. In order to ensure that this is the case, we will also organize a meeting with all instructors of PSY 3010 to better understand the assignments in the course, but also to confer with faculty about how to ensure assessment of most, if not all, outcomes is possible within the course. In so doing, we would know that all graduating majors who finish the core curriculum will be exposed to all outcomes and potential assignments with which to assess them. We will also share the findings of the current report with the broader faculty, and engaging in departmental discussion of the results and potential actions that could be taken by faculty across courses as well.