

Annual Assessment Report

I. Executive Summary Statement

The psychology assessment committee selected three components from the psychology assessment plan for focused study and analysis. These included: 1) assessment of majors' knowledge base for the field of psychology in general and for each subdiscipline (Goal 1); 2) how the addition of a required 200-level foundations and methods course, and elimination of the 300-level hands-on research methods courses, had affected students' methodological proficiency (Goal 2); and 3) whether we were successful in preparing students for their careers beyond Wells and what we might do to enhance that (Goal 10). In conducting this assessment, we used both qualitative and quantitative measurements, including two measures from the senior comprehensive exam in psychology collected over several years (ETS field test in psychology overall and subtest scores; psychology major exit interviews) as well as an environmental scan of our peer institutions to compare practices and glean ideas. We discovered improvements (albeit non-significant) in the ETS overall score as well as in each subtest score, suggesting our students were starting to show signs of a stronger knowledge base, arguably the result of curricular restructuring which now requires students to take at least one course in each of five subdisciplines (social, developmental, clinical, biological, cognitive) as well as a foundational course in methodology. The environmental scan provided us with some insight into next steps we might take with regard to both career preparation and opportunities to provide students with hands-on research opportunities, a 'hole' that had been created by our curricular restructuring and that exit interview responders seemed to suggest was regrettable. We propose to focus on resolving this issue for the major in the coming year, as well as ways in which we might improve career preparation for our majors.

II. Summary of Annual Assessment Review and Planning Meeting(s)

Date, Length, Attendees, Topics. The members of the psychology faculty responsible for major assessment (Professors Gagnon, Markowitz, and Morfei) met three times during the fall 2012 semester to discuss assessment: on October 25 to select the assessment plan components that would be our objects of study and to assign responsibilities for those studies, on November 13 to share the results of our studies and generate ideas for improvement to program based on these results, and on December 6 to finalize our discussion and action plan. Each of these meetings lasted approximately one hour. A detailed description of our three assessment studies is provided in V: Summary of Data: Methods and Results

Changes in Program and Plan. See III: Action Plan and IV: Assessment Plan

III. Action Plan

Based on our assessment results (see V below), we generated a wide variety of potential ideas for program improvement. Below we describe some of those ideas, considerations, and action items. The

psychology assessment faculty will again meet in the spring 2013 semester, to continue development or implementation of these ideas and choose the next set of assessment goals.

Research Methods:

- Provide opportunities to practice applying research methodology through hands-on research projects (Goal 2). We lost this as a component of our curriculum when we eliminated PSY 360/365L. Exit interview responses suggest students see the removal of this requirement as regrettable and the environmental scan reveals that we lag behind our peer programs in our required/elective methods offerings. How can we reinstate this? And should we do so for *all* of our students or just *some*? Currently, students can obtain this experience only through independent study, off campus internship in a research laboratory, or through the thesis (research proposal option together with PSY 404). Some ideas for improvement in this area:
- SOCSCI 3XX Methods Course: Collaborate with our colleagues in the social sciences to create a division-wide, hands-on, upper level research methods course. To this end, we have already convened a meeting of other social science stakeholders (social science faculty teaching research methods courses) to determine whether a social science-wide research methods course is feasible or desirable. This meeting took place (on November 29) and included Professors Gagnon, Markowitz, and Morfei (PSY), Professors Renfrow and McClusky (SOC/ANTH), and Professor Tabrizi (POLS). While the meeting was certainly a fruitful discussion, it appears that a division-wide offering is not feasible at this time, given the disparate needs across the disciplines.
- PSY 3XX Course: Could we find a way to reinstitute a 300-level methods course in our curriculum, to offer the opportunity to do hands on research in either qualitative or quantitative methods to those students who desire it? There are enrollment concerns (would we get enough students? What if it were a 304/404?), as well as how to fit such an offering into existing course rotations. We will continue to study this issue and consider ways to satisfy this need.
- Social Sciences Lab: We have the space (in Zabriskie) to once again develop a social sciences lab in which students would have the space for conducting their own research projects/collecting data and for use with methods courses. Action Item: Collaborate with other SocSci faculty, Provost, and IT in creating such a space.
- Measurement Tools: While any types of research in the behavioral sciences require no more than a computer (or pen and paper), other types require specialized technology. Some of our students have expressed an interest in conducting such research and there seems to be an increasing demand for conducting bio-based research that would require an ability to make physiological measurements (e.g., in health psych – BP, O2 respiration rate, ECG; in neuropsych – EEG; in biopsych – EMG; in S&P – oculomotor, etc.) iWorx offers a product that is customized to making these particular types of measurements and has proven to be useful in the BCS labs. Just one such kit

might suffice for both pedagogical and small scale research purposes. This would help ‘bring to life’ the kinds of measurements that students are currently only able to read about in their textbooks, might enhance both the biological and methodological foundations for our students, and enable a type of research we currently cannot offer.

- Undergraduate Research Conference: Student exit interview responses indicate that those who were able to participate in undergraduate research conferences benefitted greatly and saw this as an exceptional experience. We should continue this practice (for *some* of our students – those who achieve at least an A on the thesis) and are invited to present. In order to sustain this practice, we need to budget for it accordingly and choose conference experiences wisely (e.g., the Western PA Undergraduate Conference is within driving distance, low registration costs, and an excellent experience.)
- Statistics: Exit interview, ETS scores, and our environmental scan all point to a need to more mindfully and intentionally tie our statistics course with our methods offerings. We should be in on the conversation with regard to the shape of the future of the statistics offering at Wells. Is there a way to more intentionally tie the statistics course to the behavioral sciences research methods courses? Is there an opportunity to change this model? Action Item: engage with our colleagues in MPS, Social Sciences, and the Provost to discuss this.
- Methods/Knowledge Base: ETS scores suggest our students are ‘merely’ average in their Measurement and Methodology understanding. We see this as insufficient, especially as it is tied to critical thinking goals (Goal 3). In addition to remedying the lack of hands-on methods opportunities, we might reshape the Foundations and Methods course so that we can ‘beef up’ the methods component and strengthen our students’ basic understanding of methodology. We might do this by reassigning some other components of the course to other parts of the curricular/extracurricular/advising program (see below.)

Careers:

- Psychology Speakers Bureau: Tying career preparation (resume, portfolio, etc.) in with senior seminar has not proven to be particularly popular (per exit interviews; students wish to focus solely on thesis). Students have been much more receptive to campus visits and guest lectures by professionals from a variety of careers, as has been the sharing of psychology faculty professional/career stories. Action Item: Create a Psychology Speakers’ Bureau, of guest speakers who can come in and talk about their own paths, careers, etc. Ideally, this would include Wells alums and especially psychology majors who went on to careers outside the traditional realm of psychology. Venues could include Psychology Club meetings, Senior Sem, other classes, lunchtime meetings, etc. In order to create a sustainable initiative, it needs to be explicitly funded: honoraria can be modest (more of a professional, alum service), food at event to attract attendees, travel

stipend if needed.

- **Developmental Advising:** career/graduate school advising is part and parcel of developmental advising. We currently have no checklist or guide for having such discussions with students during advising meetings. Action Item: create a major-specific guide so that we are all on the same page and have the same conversations with advisees at the critical junctures of their undergraduate career (e.g., discuss GRE prep for graduate-school bound students in the spring semester of junior year.)
- **Alum Database:** Where do our own graduates go? Action Item: Create a database to capture the occupational/career paths of our graduates. This could be a useful assessment tool as well (Goal 10). Collaborate with alumni affairs, communication, Office of Career Services to capture this information. Create Wells Psychology Facebook page to keep in touch with alums?

Tutorial: We discussed possibly offering a required one-credit tutorial that students would take in their junior year. This tutorial might cover many of the concerns we have about our curriculum/major preparation; such a 'Success Strategies' course at one of our peer institutions was discovered through our environmental scan. The tutorial might include: Careers (resumes/portfolios, guest speakers, etc.), APA format, provide assessment plan (exit interviewees suggested this would be useful), prepare students for senior comps and thesis, etc. Increasing workload/overload concerns were expressed, so we will continue to try to find creative solutions for meeting all of these needs without necessarily creating more work for ourselves. Ideas include:

- **Post-Major Declaration Meeting:** Meet with sophomores after March declaration date to provide Psychology Major Goals/Objectives, provide checklist of what to do when in course of undergraduate career and including how/when to prepare for post-Wells (resume/portfolio, GRE prep, grad school search, how/when to ask for LORs, etc.), describe internship program (requirements, purpose, where our students have interned), and where our graduates have gone (see alum database above.)
- **Junior Year Meeting:** meet with majors in the beginning of their junior year to describe senior thesis/sem/comps process. Should also encourage attendance at psychology senior thesis poster presentation in spring so they can experience it before having to do it themselves.
- **Professionalism:** Students seem to need more tips on professional appearance, protocol, etiquette, etc. Posture, dress, attitude, 'presence' during an oral presentation. This can be discussed at Poster Tutorial in spring of senior year, but should be incorporated into every classroom presentation. Incorporate into advising.

Curriculum: Some of our course offerings in each of the subdiscipline categories are not intended to cover ‘foundational’ knowledge in that area. Thus, depending on the particular courses a student selects, there may be a huge ‘hole’ in their foundational knowledge base for a particular area or areas. Should we consider requiring students to take the five ‘foundational’ courses (social; child/adolescent/adult development, abnormal, cognitive, and biological psychology)? Is that practical and if not, how else might we ensure that students are obtaining a foundation-level understanding and knowledge base for each of these areas? Is General Psychology and preparation for the ETS exam sufficient? Can we somehow place greater emphasis/focus on each to ensure students obtain this foundation?

Assessment: We will continue to administer the exit interview (which has proven a useful source of assessment information) but will include questions each year targeted specifically to assessment goals for that year. We will meet early in the spring 2013 semester to discuss what the focus of our next assessment study should be and to design the questions. We will also continue administering the ETS Field Test, as this seems to be a fruitful source of measuring how we are doing with regard to Knowledge Base development (Goal 1). We will continue to conduct environmental scans periodically to compare our program and curriculum to our peers’. We should also attend and participate in teaching conferences to keep ourselves up-to-date and gain new ideas about pedagogy, curriculum, and program. Things to think about: The APA offers a resource for psychology programs --The Psychology Department Program (~\$300), membership in Division 2: Teaching of Psychology (which some of us belong to), and an on-site visit by a professional team to help programs with assessment and development (which was cost-prohibitive the last time we looked.)

IV. Assessment Plan

A copy of the Psychology Major Assessment Plan is attached; the goals/objectives that were the focus of this assessment are highlighted in red with measurement methods (both actual and proposed) indicated in blue.

V. Summary of Data: Methods and Results

In this section, we summarize our assessment methods and results for each of the three measures we examined: Exit Interviews, ETS Exam Scores, and Environmental Scan.

A. Exit Interviews

Methods. As part of the senior comprehensive exam, all graduating seniors are required to provide anonymous responses to a series of questions on an exit interview (see Psychology Major Exit Interview). Fulfillment of this requirement is guaranteed by tying receipt of comprehensive exam letter to submission of the exit interview. Thus, we have a 100% participation rate (corresponding to 51 students in this analysis). The exit interview provides students with a copy of the psychology assessment plan and students are specifically asked to let us know how we are doing on fulfilling each of

our goals, so the mapping to assessment couldn't be more transparent. For this assessment analysis, the exit interviews for the past three years (2010, 2011, 2012) were examined to determine what themes emerged regarding research methods and career preparation. We identified the following themes.

Results.

Research Methods. Beginning in the 2010-11 academic year, the psychology major instituted a new, required methods course --Psy. 270, Foundations and Methods in Psychology. Previously, students majoring in psychology were required to take either Psy. 360L, Qualitative Methods in Psychology, or Psy. 365L, Quantitative Methods in Psychology. The change was made as a result of our concern that students were not getting an adequate grounding in methodology by taking only quantitative or only qualitative methods (rare was the student who elected to take both). Psy. 270 was designed to cover both methodologies (as well as a number of other concerns, such as history, APA formatting, and a survey of careers in psychology).

- Graduating students expressed some concern for the loss of the upper-level methods courses. These courses provided a deeper understanding of either quantitative or qualitative methods, and the lab included in those courses allowed students to do small-scale, hands-on research projects.
- Many students felt that the psychology major should have a course dedicated to understanding statistics in the context of the discipline. They felt that the current requirement to take Math 151 was not sufficient.
- Many students felt the need for more training in applied data analysis, particularly in the use of SPSS.

Careers. The psychology major has required a Psy. 290 internship for many years. During the past few years, we have also included career information in both Psy. 270 and Psy. 403. The following themes related to careers emerged from the 2010-2012 exit interviews:

- Many students found that their psychology internships had been very useful in either identifying a possible career path or eliminating previously considered careers.
- A number of students felt that more career planning is needed but that it should be divorced from Psy. 403, Senior Seminar in Psychology. They felt it should happen sooner and (presumably) build on what is covered in Psy. 270.

B. Educational Testing Service Major Field Test in Psychology

Methods. As part of their senior comprehensive exam, psychology majors are required to take the Educational Testing Services (ETS) field test in psychology. This is a standardized, nationally administered exam – similar to the GRE field test in psychology but targeted to an undergraduate

audience. According to ETS, “the content specifications for the Major Field Tests reflect the basic knowledge and understanding gained in the curriculum. They have been designed to assess the mastery of concepts, principles, and knowledge expected of students at the conclusion of a major in specific subject areas. In addition to factual knowledge, the tests evaluate students' abilities to analyze and solve problems, understand relationships, and interpret material. They contain questions that call for information as well as questions that require interpretation of graphs, diagrams, and charts based on material related to the field.”

The ETS Major Field Test in Psychology is administered at Wells early each spring semester. The tests are submitted to ETS in Princeton, NJ for scoring and the results are returned for the group as a whole and for each student, broken down into scores for the separate subfields in psychology as well as an overall score. The subscore categories include: Learning & Cognition: Language, Memory, & Thinking; Perception, Sensation, Physiology, Comparative, & Ethology; Clinical, Abnormal, & Personality; Developmental & Social. In addition, group averages (but not individual scores) are provided for the following Assessment Indicators (the terms used in the Wells curriculum structure are indicated in the parenthetical): Memory & Thinking ('Cognitive'), Sensory & Physiology ('Biological'), Developmental ('Developmental'), Clinical & Abnormal ('Clinical'), Social ('Social'), and Measurement and Methodology ('Statistics & Methods'). The national comparative data are also provided based on test takers from all domestic institutions over a five year period ($n = 220$ institutions, 7,077 test takers), so that we may compare our students' performance to their peers across the nation.

Our students overall scores and subscores were submitted to an independent t -test analysis, comparing pre-curricular restructuring years (2007, 2008, 2009) to post-curricular restructuring years (2010, 2011, 2012). The data from 53 students were included in the first group; the second group contained data from 51 students. All test takers were spring semester senior psychology majors, i.e., at the tail end of their undergraduate careers and training in psychology.

Results.

Overall ETS Score. The possible range for the overall score is 120-200. Our 2007-2009 group averaged 154.43 while our 2010-2012 group averaged 157.67. This represents a non-significant difference ($p > .17$), albeit a change in the right direction. The national average was 156.1 (median = 155.0), so our students are performing at about the national average, with the later group showing a slightly higher performance compared to the national average.

Learning & Cognition. The possible range for subscores is 20-100. Our 2007-2009 group averaged 54.23 on this subtest, while the later group showed movement in the right direction, scoring an average of 56.86. Again, this difference is non-significant ($p > .33$). The national mean is 55.6 for this subscore (median = 55.0; $SD = 15.2$), so our students are again showing improvement to a point slightly higher than the national average.

Perception, Sensation, Physiology. The average score on this subtest for the 2007-2009 group was 54.89; the average score from the 2010-2012 group was 59.92. This was a marginally significant result and the only difference that approached significance ($p = .057$). The national average for this

subtest is 56.1 (median = 55.0; $SD = 14.7$), so it seems our students are performing fairly well (relatively speaking) in this area.

Clinical, Abnormal, Personality. The average score on this subtest for the 2007-2009 group was 55.19; the average score for the 2010-2012 group was 57.45. Again, this is movement in the right direction but again, represents an insignificant difference ($p > .34$). Nationally, the mean on this subtest was 56.4 (median = 58.0; $SD = 15.4$) so the improvement again moves our students beyond the national average.

Developmental & Social. The average score on this subtest for the 2007-2009 group was 55.13; for the 2010-2012 group it was 58.14. As was true for all the other subtests, this improvement did not reach significance ($p > .2$). The national mean for this subtest was 55.5 (median = 55.0; $SD = 14.8$), so we again appear to be doing slightly better, especially in the later years.

Assessment Indicators. Assessment Indicator data is only available as group averages. Following are the national average (median; SD) for the 220 administering institutions and Wells' average for each of the six Indicator categories (using Wells' labels). Note: Numbers below represent Wells' data for only the most recent four years (2009-2012).

	<u>National</u>	<u>Wells</u>
1. Cognitive	44.2 (44.0; 11.6)	48.5
2. Biological	49.6 (49.0; 11.5)	46.5
3. Developmental	51.7 (52.0; 11.9)	50.0
4. Clinical	62.6 (64.0; 11.2)	67.8
5. Social	59.3 (61.0; 12.9)	63.8
6. Statistics & Methods	54.8 (56.0; 11.7)	54.5

While it is not possible to conduct statistical analyses on these data, casual analysis suggests that none of these likely represent significant differences between Wells' and the national averages. However, we can see that Wells' students are performing better than their peers in the cognitive, clinical, and social areas, about the same in the statistics and methods areas, and slightly worse in the biological and developmental areas.

Discussion. We cannot make too much of insignificant differences with regard to the overall and subscore comparisons of our pre-curricular restructuring versus our post-curricular restructuring groups but it is heartening that the move in every case is in the positive direction (increased scores). The only subscore that approaches a significant difference is in the area of Perception, Sensation, & Physiology.

It is difficult to really know what to make of such subtle comparison differences in the Assessment Indicator scores either: we should neither congratulate ourselves too vigorously where we score higher than the national average nor denigrate ourselves too harshly where we seemingly fall short. The ETS results are useful as a general gauge of where we stand compared to our own past performance as well as our students' cohort across the nation and again, it is heartening to see that we are moving in the

right direction with our students' scores in *all* of the subtest categories. This suggests our focus on curriculum has had some beneficial impact on students' knowledge base in the field of psychology, at least as measured by this yardstick. Of course, there are other factors at play as well, including a more stable faculty composition in the major these past couple of years.

C. Environmental Scan

Method. We reviewed the psychology curriculum at 16 of our peer institutions paying particular attention to their solutions for research methods and career preparation, using the same list of peer institutions that majors were asked to scan during Curriculum Committee's 2010 curricular review process. These include: Albion, Allegheny, Beloit, Centre, Cornell (IA), Hanover, Hartwick, Hobart & William Smith, Juniata, Know, College of Wooster, Randolph-Macon, Ripon, Ursinus, and Wheaton.

Results.

Research Methods. Most (9) institutions require one research methods course and a separate statistics course (some offered by the psychology major, and others offered by a math department). Five institutions require a two-semester sequence of research design and analysis, which integrates analysis (statistics) into the treatment of methods. Two institutions require two separate methods courses, in addition to the statistics or analysis requirement. Most of the schools have an additional requirement of one or more laboratory psychology courses, where (presumably) students get experience and instruction with research design and methods. A couple of institutions offered electives in either qualitative methods or advanced methods. Given the laboratory requirement present at most schools, our current requirement and course offerings in research design and methods are below that of many of our peer institutions.

Careers. Only one of our peer institutions has a specific course that explicitly deals with career preparation. Randolph-Macon requires a two-credit course called "Success Strategies," which is designed to orient students to the field of psychology, including career options. Most of our peer institutions offer internships and research opportunities in the field of psychology.

More detailed notes taken on each institution are included as an attachment (Environmental Scan Notes).