2016-2017 Assessment Update for:

School of Psychology: Doctor of Philosophy

Program Purpose

The purpose of the Ph.D. program in the School of Psychology is to train scientists for employment in industry, government, and academe.

Responsibility and Implementation Process

The data required to assess this program results from faculty rating forms (such as the Dissertation Quality Assessment Instrument; Lovitts, 2007) of theses and other capstone projects and performance evaluations of . . .. The data are obtained on an individual basis, typically when the student reaches a milestone (prelims, Ph.D. defense). There are no set schedules for the collection of the data, except for the end-of-year graduate student evaluation meeting. Within this meeting graduate students are assessed by the whole faculty within their area of specialization with regard to course work, research, and departmental activities. The graduate coordinator is responsible for obtaining the data, maintaining the data set, and analyzing and reporting them. The Graduate Policy Committee (3 faculty members, one student), which meets at least once a semester, and reports to the graduate coordinator is responsible for suggesting and implementing changes based on the assessment results. Minor changes are implemented by the graduate coordinator. Major proposed changes are always discussed and voted upon in full faculty meetings.

Operational Objectives

The operational objectives are:

   1. Students will demonstrate advanced knowledge in the field of psychology and in their subfield of specialization.

   2. Students will demonstrate the knowledge and skills necessary to critically review and evaluate a relevant body of psychological literature.

   3. Students will demonstrate knowledge and skills to conduct fully independent research at a high level of proficiency.

Objective 1: Advanced area knowledge

Graduates will be able to demonstrate advanced general knowledge of concepts and theories in both general psychology and their specific area of concentration (industrial/organizational psychology, engineering psychology, cognitive aging, quantitative psychology, or cognition and brain science), as evidenced in their ability to articulate this knowledge and to use it effectively to inform their research questions.

      Method 1: Item on DQAI

'Theory' is a specific item on the Dissertation Quality Assessment Instrument, taken from Lovitts (2007; *Making the Implicit Explicit: Creating Performance Expectations for the Dissertation*, Stylus Publishing). This instrument is filled out after each PhD defense by the committee and signed by the Chair, based on the dissertation document. The item is scored on a 4-point scale (1=unacceptable, 2=acceptable, 3=very good, 4=outstanding), using criteria explicitly outlined in Lovitts (2007). Given that we expect our students to go beyond demonstration of a basic level of competence, we expect 100% of students to score 3 or above on this measure.

	Quality levels			
Component	4-Outstanding	3-Very good	2-Acceptable	1-Unacceptable
Theory	Creative, original; has a theory; discusses and works with more than one theory or model; articulates and compares competing theories; shows how competing theories are complementary; uses competing ideas to make hypotheses and develop studies; identifies and critically analyzes key theoretical assumptions and boundary conditions; identifies the theories' implications for the student's study; advances theory	Students has sophisticated knowledge of and ability to use relevant theories; figures out where the gaps are in theories and extracts what is useful; uses theory to inform the research questions and measures; discusses how observations are consistent or inconsistent what prevailing theory; suggests how diverse observations can be pulled together; makes some progress	No clear theoretical framework; provides a laundry list of relevant theories; question is not integrated into a theoretical perspective; does not critically analyze the theories' underlying assumptions or boundary conditions; accepts theories at face values; hypotheses are not logical deductions from theoretical premises; hypotheses do not synthesize multiple theories or test competing theories	Has no theory; does not have a good guiding theory; theory is misunderstood, misclassified, or underdeveloped; overlooks a certain body of theory; theory is unrelated to the literature review

Results of Item on DQAI:

For 2016-2017, we have DQAI *Theory* data for three students. Every student scored a perfect 4. These scores are at the level where we want them: 3 or higher. This directly demonstrates that students are competent in the domain of core knowledge and can apply this knowledge in 'creative', 'critical', and 'original' ways. Mean for 2014-2015 was 3.25; for

2015-2016, mean was 3.7.

Action/Improvement Summary for Learning Objective Advanced area knowledge :

We see no obvious trend in the data (for better or for worse), and so no action is required for the time being, over and beyond careful monitoring.

Objective 2: Review/Critique Psychological Literature

Graduates will demonstrate the ability thoroughly and critcally review the psychological literature within their field of interest, and communicate the findings from these readings effectively, both in oral and written form.

Method 1: Preliminary exam

The ability of Ph.D. graduates to critically review the psychological literature is formally assessed using the preliminary exam. In this exam, students review a large body of literature within their field of interest (typically about 100 articles or papers), and write a comprehensive, 50-70 page critical review paper, take a formal in-class exam, typically with a take-home portion, and/or present their findings during an oral defense. We use the following rubric, adapted from Lovitts (2007; *Making the Implicit Explicit: Creating Performance Expectations for the Dissertation*, Stylus Publishing), designed to tap into the ability to critically review a relevant body of literature. This instrument is filled out after each PhD defense by the committee and signed by the chair of the committee, based on the dissertation document. The item is scored on a 4-point scale (1=unacceptable, 2=acceptable, 3=very good, 4=outstanding), using criteria explicitly outlined in Lovitts (2007). We expect all students to score a 2 or higher, indicating at least acceptable skill in reviewing the literature.

	Quality levels			
Component	4-Outstanding	3-Very good	2-Acceptable	1-Unacceptable
Preliminary exam	Creative, incisive, comprehensive; sparkles; shows critical thinking about the literature; has breadth and depth; uses the primary literature, including classic papers, to make important points and generate hypotheses; has a lot of theory in it; is expansive, brings in different points of view; is not limited to the particular substantive area, integrates material from related fields;	A very critical review of the relevant literature; shows insight; has a theme or perspective; points out methodological flaws in studies; compares studies and draws connections between them; integrates things in a new way; draws conclusions; explains its relevance for the problem; demonstrates that the student can use the material, apply it to a	Adequate covering of the literature; mentions everything; talks about what others have said; student does not put herself or himself into it; is a laundry list of prior findings; lacks critical analysis and synthesis; critiques are derived from other people; makes obvious points.	Incomplete, misses or omits important studies or whole areas of literature; does not go back far enough in the literature; leaves out the most recent literature; does not make clear distinctions between theory and methods, talks about them s if they were the same; the literature's relevance to the question ands methods is unclear

	shows where all the pieces of the hypothesis come from; places the work within a larger context; makes reader look at the literature in a different way	problem, and develop hypotheses		

Results of Preliminary exam:

For 2016-2017, we have DQAI *Preliminary Exam* data for eight students. Range for *Theory* was 3 to 4, mean was 3.4. These scores are at the level where we want them: 3 or higher. This directly demonstrates that students are competent in the domain of core knowledge, as evidenced by their skill in 'critical[ly] review[ing] the relevant literature', in such a way that they 'demonstrate' that they 'can use the material, apply it to a problem, and develop hypotheses'. This is the first year we are collecting these data, so no historical trends are available.

Method 2: 2 item on the DQAI

'Introduction' and 'Literature Review' are specific items on the Dissertation Quality Assessment Instrument, taken from Lovitts (2007; *Making the Implicit Explicit: Creating Performance Expectations for the Dissertation*, Stylus Publishing), designed to tap into the ability to critically state the research problem in the student's research project and review the literature pertaining to it. This instrument is filled out after each PhD defense by the committee and signed by the chair of the committee, based on the dissertation document. The item is scored on a 4-point scale (1=unacceptable, 2=acceptable, 3=very good, 4=outstanding), using criteria explicitly outlined in Lovitts (2007). Given that we expect our students to go beyond demonstration of a basic level of competence, we expect 100% of students to score 3 or above on each of the items.

	Quality levels			
Component	4-Outstanding	3-Very good	2-Acceptable	1-Unacceptable
Introduction	Interesting, comprehensive, coherent, engaging, exciting, surprising; has a hook; draws the reader in; well organized; states the problem and shows why it is important; makes a persuasive, convincing case for the study; leads to the hypotheses; provides an	Less breadth, depth, and insight; presents well-articulated, interesting, and important questions about gaps in knowledge	Gap argument for a derivative, mundane project; has legitimate questions about gaps in knowledge, but they may not be interesting; does not try to make the case for or explain why the question is original, interesting, or the next logical step; does a poor job of connecting the	No hook, poorly written, incomplete; lacks structure; approach is formulaic; does not make the case for the importance of the topic; premise fails to take into account something that is already known

	overview of the answers; exhibits depth and breadth of understanding; puts forth implications		question with the literature and putting it in context	
	Quality levels			
Component	4-Outstanding	3-Very good	2-Acceptable	1-Unacceptable
Literature review	Creative, incisive, comprehensive; sparkles; shows critical thinking about the literature; has breadth and depth; uses the primary literature, including classic papers, to make important points and generate hypotheses; has a lot of theory in it; is expansive, brings in different points of view; is not limited to the particular substantive area, integrates material from related fields; shows where all the pieces of the hypothesis come from; places the work within a larger context; makes reader look at the literature in a different way	A very critical review of the relevant literature; shows insight; has a theme or perspective; points out methodological flaws in studies; compares studies and draws connections between them; integrates things in a new way; draws conclusions; explains its relevance for the problem; demonstrates that the student can use the material, apply it to a problem, and develop hypotheses	Adequate covering of the literature; mentions everything; talks about what others have said; student does not put herself or himself into it; is a laundry list of prior findings; lacks critical analysis and synthesis; critiques are derived from other people; makes obvious points.	Incomplete, misses or omits important studies or whole areas of literature; does not go back far enough in the literature; leaves out the most recent literature; does not make clear distinctions between theory and methods, talks about them s if they were the same; the literature's relevance to the question ands methods is unclear

Results of 2 item on the DQAI:

For 2016-2017, we have DQAI *Introduction* data for three students. All students scored a perfect 4. These scores are at the level where we want them: 3 or higher. This directly demonstrates that students are competent in the domain of core knowledge, making 'a persuasive case for [their] study' and 'exhibit depth and breadth of understanding'. Mean for 2014-2015 was 3.7; for 2015-2016, mean

was 3. We see no obvious trend in the data (for better or for worse).

For 2016-2017, we have DQAI *Introduction* data on three students. All students scored a perfect 4. These scores are at the level where we want them: 3 or higher. This directly demonstrates that students' literature reviews are 'creative, incisive, and comprehensive' and 'show critical thinking about the literature'. Mean for 2014-2015 was 3.8; for 2015-2016, mean was 3.5. We see no obvious trend in the data (for better or for worse).

Action/Improvement Summary for Learning Objective Review/Critique Psychological Literature:

Currenlty, students are performing within the goals set for this assessment, and there are no clear hisotrical trends. Consequenctly, no action seems to be needed over and beyond careful monitoring.

Objective 3: Ability to conduct independent research

Graduates will demonstrate that they can conduct independent research in the field of psychology at a professional level. This includes being able to explain, use, and apply statistical principles and techniques so as to design and interpret (and to assist others in designing and interpreting) psychological experiments, as well as efficient communication about results.

Method 1: Journal or Conference Publications/Presentations

The School encourages students to publish their research in peer-reviewed journals and to present at regional, national, and international conferences. We expect each student to publish at least two peer-reviewed papers while a student in the program. Data are collected by the graduate coordinator using the department's annual end-of-year evaluation, for which the student and their advisor fill out a form containing, among other things, this data point, as well as through the Institute's exit surveys.

Results of Journal or Conference Publications/Presentations:

The institute's exit survey (for the year 2016) shows that our 8 graduating students presented on average (i.e., per person) 6 papers at conferences on campus, and 6.6 papers at external conferences. Students indicated to have on average 5.0 papers published or accepted for publication, with an average of 0.63 under review.

The following graph presents the historical trends:
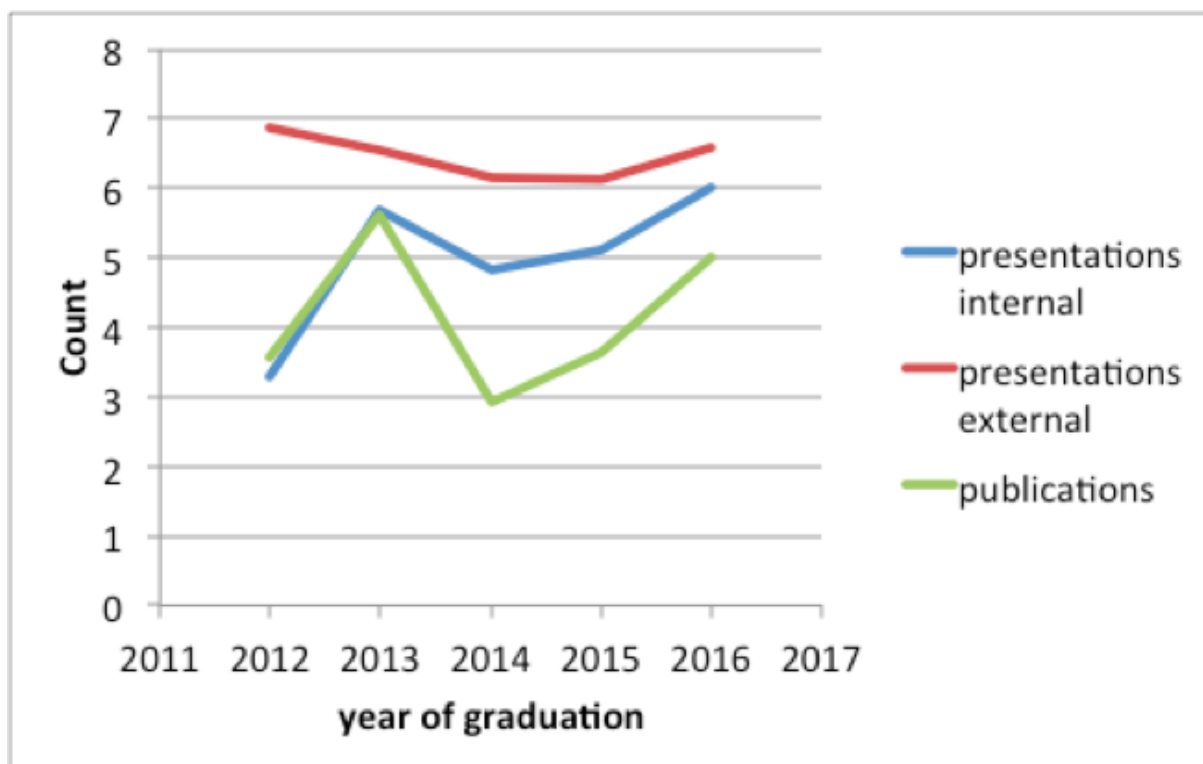
We see a more or less flat line for external presentations, and an increasing trend for on-campus presentations, as well as a flat regression line for number of peer-reviewed papers. We do note that our individual goal was not met this year: In 2016, 3 graduating students published fewer than 2 papers. This is a reason for concern, warranting at least a discussion in a Faculty Meeting.

In 2016-2017, our students (n = 57) published a total of 34 peer-reviewed papers (0.6/person), 14 of which were first-authored, as well as an additional 28 non peer-reviewed papers (0.5/person). Students also presented a total of 68 papers at conferences (1.2/person). Looking only at students in or past their fourth year (i.e., past MS level), we find an average of 0.9 peer-reviewed papers/person. This is the first year we collected these data, and so we have no historical trends to present.

Method 2: External Awards Won by Students

External awards and funded grants by graduate students demonstrate the ability to design (and in some cases conduct) independent research. We do not have explicit expectations for individual students, but we expect the program to have at least a few of these each year. These data are collected as a response to a departmental email sent out for this explicit purpose at the end of each academic year. Data are compiled and reviewed by he graduate coordinator.

Results of External Awards Won by Students:

External awards won by students:

- NSF Doctoral Dissertation Research Improvement Award ($12,000_

- NSF PETRA Conference Doctoral Consortium Award ($1800)

- 2017 APA Student Conference Travel Award ($300)

- 2017 APF Ungerleider/Zimbardo Travel Scholarship ($300)

- Two students received a 2017 Human-Robot Interaction Conference Student Volunteer Award ($476.15)

- 2016 Emerald Group Publishing and the Higher Education Teaching and Learning Association (HETL) Outstanding Doctoral Research Award ($1,500)

- 2016 Georgia Gerontology Society Virginia M. Smyth Scholarship ($3,000)

- 2 students received a 2017 Elder Health Scholarship from the Residential Care Facilities for the Elderly Authority of Fulton County

Method 3: Alumni placement

The placement of alumni is an important indicator of success of the program. Excellent placement is a function of many factors, but the School thinks it reasonable to assume that the proven capability to conduct outstanding independent research is likely the main reason for hiring a PhD graduate. We expect 75% of our graduates to find employment within the field of their study within one year of graduation, either within academia or industry. Data are collected at the end of the student's tenure in the program and – if possible – through follow-up surveys. Data are compiled and reviewed by he graduate coordinator.

Results of Alumni placement:

All 8 PhD graduates in 2016 found employment, 5 in academia (assistant professor positions at Georgia State, Idaho State, the University of Georgia, and California State; postdoctoral researcher at UC Berkeley), and 3 in industry (GTRI, Coca-Cola, and FMP Consulting).

Method 4: Two items on the DQAI

Two items on the DQAI, namely 'Results/data analysis' and 'Discussion and conclusion' are directly relevant to the two objectives mentioned under independent research. The Dissertation Quality Assessment Instrument, taken from Lovitts (2007; *Making the Implicit Explicit: Creating Performance Expectations for the Dissertation*, Stylus Publishing), is filled out after each PhD defense by the committee and signed by the chair of the committee, based on the dissertation document. The item is scored on a 4-point scale (1=unacceptable, 2=acceptable, 3=very good, 4=outstanding), using criteria explicitly outlined in Lovitts (2007). Given that we expect our students to go beyond demonstration of a basic level of competence, we expect 100% of all students to score 3 or above on each of these items.

	Quality levels			
Component	4-Outstanding	3-Very good	2-Acceptable	1-Unacceptable
Results/data analysis	Creative; uses proper, defensible statistical and analytical methods; uses best, most powerful, and sensitive analytic procedures to address the experimental question; uses cutting-edge	Appropriate; clear; does not conduct supplementary analyses; leaves open data analysis opportunities	Meets the standard of thoroughness or comprehensiveness; has done the minimum analysis required for address the original questions; results go back to the hypothesis; does not develop a meaningful story	Analyses are wrong, inappropriate, or not well matched to the research question; analyses are not reported completely enough; presents the results poorly; does not follow up on alternative interpretations

	techniques; takes existing commercial software and develops new models; applies newer and different models to the data set; provides information about why each analysis is being conducted; analysis is thorough and seamless; integrates among and across levels of analysis; develops new ways to look at the data and makes the most of the data; tells a story; makes a theoretical argument; analyses map back to the hypotheses and answer the questions; shows curiosity through relentless exploration of the data; iteratively explores questions raised by each analysis; pays attention to detail; communicates analyses very clearly; discusses the limitations of the analysis			allowed by the analyses	
	Quality levels				

Component	4-Outstanding	3-Very good	2-Acceptable	1-Unacceptable
Discussion/conclusion	Deep, accurate, creative, enthusiastic; goes beyond summarizing the findings; draws things together; goes back to the introduction; states the hypotheses and answers each one; provides an in-depth account of the findings; develops a novel framework or explanation for unanticipated results or results that have internal contradictions; goes back to the literature and discusses the differences between student's findings and other people's findings; discusses big surprises and the strengths and limitations of the current design or research; puts the study in a larger context; says what it means for the rest of the field;	Less of the same; does not close the circle, does not come back to the beginning and address the problem	Summarizes the results; provides a superficial interpretation of the findings; references to the literature simply state that the findings are consistent with other people's findings; has a rote discussion of strengths and limitations; provides some very general directions for future research that do not provide structure for the next study; makes wild speculations that have nothing to do with the topic	Shows lack of understanding and careful thought; the discussion and conclusion do not adequately reflect the journey; is a disconnect between data and conclusions; restates the result without providing any interpretation; misinterprets the results; interprets the results beyond what the data allow; generalizes too broadly

		identifies future directions; speculates on why and how the field might need to change; moves the field forward				

Results of Two items on the DQAI:

The three students for whom data are available for the *Results/data analysis* item all scored a perfect 4, indicating 'creative, proper, and defensible se of statistics' and the use of 'cutting-edge methodology', and exceeding the School's goal. In 2014-2015, the mean was 3.6; in 2015-2016 it was 3. No clear historical trend emerges.

The three students for whom *Discussion/conclusion* data are available scored either a 3 or 4, with a mean of 3.7, indicating a very good grasp of what a scientific discussion is, thus meeting the School's goal. In 2014-2015, the mean was 3.5; in 2015-2016 it was 2.5. No clear historical trend emerges from these data.

Action/Improvement Summary for Learning Objective Ability to conduct independent research :

For the most part, the students met the School's goals. One exception was publication rate: In 2016, three of our eight graduating students published fewer than 2 papers. This is a reason for concern, warranting at least a discussion in a Faculty Meeting. One likely venue for intervention is the yearly end of evaluation meeting within each of the School's emphasis areas, where the faculty will encourage students in the post-Masters stage to actively work on publishing their Masters project and any follow-up studies.

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