

**ACADEMIC PROGRAM REVIEW
SITE VISIT TEAM REPORT**

**DEPARTMENT OF PSYCHOLOGY
COLLEGE OF LIBERAL ARTS AND SCIENCES,
NATURAL SCIENCES
ARIZONA STATE UNIVERSITY**

Visit on February 23-24, 2017

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UPRA Office
Arizona State University

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After reviewing the Academic Program Review Self-Study Report, the Site Visit Team (Brian D’Onofrio, Amanda Reed, and Marsha Weinraub) visited the campus of Arizona State University (ASU) on Thursday, February 23 and Friday, February 24, 2017. On Thursday, the team met with representatives of the Provost Office (Andy Webber, Executive Director of Accreditation and Program Reviews and Pamela Garrett, Associate Director of Accreditation and Program Reviews), the Dean of Natural Science Ferran Garcia-Pichel of the College of Liberal Arts and Sciences, and the Psychology Department Chair Keith Crnic. After a tour of campus and interviews with faculty, students, and officers of the Psychology Department, the team returned on Friday to the Dean’s office to deliver an oral report to the representatives of the Provost Office and Dean Ferran Garcia-Pichel.

Below, we address the specific questions listed in the Academic Program Review Manual to complete our report.

1. Mission and Goals

The Site Visit Team was impressed by ASU’s New American University ideals of creating intellectual fusion with related disciplines resulting in transdisciplinary approaches to major social issues, being socially embedded in the community, and maximizing local impact and national stature to contributing to societal transformations. We found strong congruence between the University mission and the three-fold mission of the Psychology department. The department mission -- providing cutting edge psychological research and development of innovative psychological methods, educating and preparing undergrad and grad students, and serving the profession, the University and the local community -- is clearly being fulfilled.

Despite shrinking resources and organizational challenges, the department combines an inclusive approach to education with well-funded collaborative research addressing important basic questions and social problems, teaching excellence, and community outreach. The department has a national reputation which is strong and increasing, external funding is outstanding and among the strongest in the nation and researchers collaborate within and across the University as well as with other institutions in the community and across the nation. The undergraduate program is excellent and provides a national model of forward-thinking curriculum, strong advising, community internships, and careful tracking of at-risk students. The graduate program has dedicated faculty and strong researchers who attract well-prepared students; graduate students get excellent placements after graduation. The culture of the department is highly collegial and collaborative, with high priority set on sharing resources, inclusiveness, and innovation. Commitment to the community and emphasis on evidence-based practices is evidenced by the investments into the REACH Institute, expanded involvement with the Barrow Neurological Institute, Banner Health, the Phoenix VA, Mayo Clinic, the community preschool, and the introduction of the new Master’s program in Applied Behavioral Analysis (ABA).

This department review, mandated by the State of Arizona and the University, is one of the mechanisms that has helped the department to evaluate the currency and relevance of goals, both within the department and from without.

As described in the Self Study report prepared by the department, the ASU Psychology Department compares favorably to the six highly ranked, well-renowned flagship public universities selected for peer and aspirational comparison. Despite the larger number of undergraduate majors served

by ASU majors and the smaller number of service staff, ASU Psychology faculty have, per faculty member, authored more papers in the top 30 Psychology journals and generated more external funding (\$13.2M in 2015) than faculty in the peer comparison departments. At ASU, more than 87% of faculty members are PIs or Co-PIs on actively funded projects; the majority of funding comes from NIH and NSF.

2. Strategic Initiatives and Future Direction of the Unit

In 2005, the department identified four initiatives which are still timely and address major topics in Psychology. These initiatives include 1) Biological Bases of Human Behavior, 2) Health, 3) Culture and Social Dynamics, and 4) Prevention Science. These serve as cross-cutting themes across the six areas of graduate training. In this section of this report, we assess each of the graduate trainings areas in alphabetical order, and consider how they address each of these initiatives. We also include here a description of the ASU REACH Program, a program that cuts across graduate training areas and is a critical component in addresses the initiative of Prevention Science. Finally, we describe how the new Master's degree program in Applied Behavioral Analysis (ABA) promotes the department's ability to addresses these strategic initiatives. Site Visit Team recommendations are highlighted throughout the report, and summarized in the conclusions at the end of the report.

The Behavioral Neuroscience Area, consisting of relatively recent hires, is a victim of its own success. All six faculty members are actively engaged in highly collaborative research. Across the area, they address topics pertinent to three of the four of the initiatives. Three of the six faculty members are involved in collaborations with the ASU Bio-Design institute. Enrollments at the undergraduate level are particularly strong, especially with the rise of the new Neuroscience Major. Unfortunately, the growing demand for undergraduate and graduate courses in Psychology and in Neuroscience creates conflicts for faculty between research and teaching commitments. Due to their community spirit and dedication to the department goals, faculty members report not being able to take sabbaticals or buyouts in order to meet growing undergraduate needs. Limited graduate student support results in faculty members teaching relatively large undergraduate laboratory courses without adequate teaching assistance; junior faculty members may not have sufficient graduate student researchers for their laboratories. The Site Visit Team recommends that more graduate students be provided to assist members of the behavioral neuroscience area in meeting their teaching and research commitments, and additional teaching faculty be hired in this area to teach courses required for the neuroscience degree.

The Cognitive Area has six faculty members, all highly visible researchers involved in collaborative research with each other and with researchers in the community and across the nation. Their research addresses all four initiative areas. Sometimes considered the hub of the hub-science of Psychology, cognition and perception are central to many questions in bio-design and sustainability research. Faculty members in the Cognitive Area welcome greater interdisciplinary collaborations across the University but find themselves already swamped with active research projects.

With no faculty members at the Assistant Professor level and three faculty members on the cusp of retirement, members of the Cognitive area are concerned about the area's future. Generally, a strong Cognitive area is critical to maintaining a department's overall rankings. Site Visit Team suggestions for hiring include considering expanding the area of Cognitive Neuroscience. A growing area of research in psychology, there is only one department member who identifies specifically as a cognitive neuroscientist. His research is very exciting, and it may be wise to invest more hires in this area. Currently, students interested in cognitive neuroscience are taking courses, finding mentorship, and using facilities outside the department. While it is premature for the University to invest in an on-campus 3T scanner for fMRI research, support may be needed for current students and faculty who currently use fMRI and EEG data collection techniques. Should additional faculty be hired in this

area, additional support will be needed to ensure adequate collaborations with other scanning facilities in the area and nationwide. The Site Visit Team recommends that the department consider ways to provide additional support to the area to ensure continuing access to expensive data collection techniques.

The Clinical Area is an exceptionally strong area, known for its commitment to a Clinical Science model of training. It is accredited by the Psychological Clinical Science Accreditation System (PCSAS) and the American Psychological Association (APA). The area has preeminent faculty who are conducting research on clinical issues that span the translational continuum, from basic to applied science. The area encourages collaborative training across labs/areas of research. Clinical faculty members are active in each of the four initiatives. Furthermore, the clinical area has an in-house clinic that provides services to the local community in the context of graduate training in assessment and intervention. The area has expressed interest in expanding the clinical offerings (e.g., integrating evidence based practices from REACH, see below) and training opportunities in their in-house clinic. Recently, the area completed an extensive business plan outlining the benefits and feasibility of expanding their services. The Site Visit Team encourages the area, the department, and the college to further pursue business planning and consider the expansion of clinic training services. Furthermore, the Site Visit Team recommends the area consider slight alterations in their training program in light of changed APA accreditation requirements.

The Developmental Area is also a particularly strong area with well-known and highly respected faculty members. Their research spans all four of the cross-cutting initiatives. Faculty members have research collaborations with other units outside the department as well as with the Kyrene and Roosevelt public school districts, the Children's Museum of Phoenix, and the Southwest Autism and Resource Center. All of the faculty members are either PI or CoPI on at least one external research grant funded by NIH or NSF. Two faculty members are current or recent editors or associate editors of major journals in the field. At least two faculty members are joint members of the Clinical area, and faculty members serve as mentors on Clinical as well as Developmental research projects. Students across the University (e.g. School of Social work, Family and Human Development, Marriage and Family Therapy, College of Integrative Sciences & Arts) take developmental courses.

Like other areas, the Developmental Area is understaffed. The number of faculty is closer to 6 than 8; two faculty members have half-time appointments, two no longer mentor students due to retirement, and one is partially retired. Three faculty members retired in recent years. The area is preparing a hiring plan that addresses family systems, emotional, behavioral and attentional control, and developmental cognition with a focus on biomarkers, resilience, and normal aging processes. These hiring areas would increase the role of the area and the department in the Bio-Design and Sustainability Institutes. The Developmental Area is responsible for the Child Study Lab, a model community preschool program with 90 children on the ASU Tempe campus that also supported faculty research. The Site Visit Team recommends that the department and the College pay particular attention to hiring proposals from the Developmental Area particularly as they address cross-area topics related to the strategic initiatives.

The Quantitative Area is a world-renowned group of researchers who are dedicated to pedagogy at the undergraduate and graduate levels of training. Several faculty members in the area have won prominent teaching awards and new, as well as more seasoned, faculty members provide exemplary mentorship to students throughout the Department. The area is extremely successful in training graduate students who specialize in quantitative methods, as reflected by the excellent jobs their graduates obtain after graduation. Furthermore, the area is providing extensive quantitative training

and mentorship to students throughout the Department, as well as to other Departments at the University. The Department as a whole greatly values the area because of the tremendous service the area provides to researchers in other areas. In fact, the Department emphasizes, “At the core of doctoral training in psychology is an emphasis on the development of skill in research and quantitative methods.” Despite the strong values placed on quantitative faculty service, this takes time and energy away from individual quantitative faculty efforts. The Site Visit Team suggests that the Department consider possible ways of acknowledging the service the quantitative faculty provides as mentorship to students from other areas; course release time or additional RAs might be helpful. The area may also want to evaluate their own course offerings for their graduate students to ensure that they can receive the advanced coursework they require to graduate on time.

The Social Area makes especially strong contributions to the Culture and Social Dynamics initiative. Dr. Adam Cohen maintains ongoing collaborations with the Center for Religion and Conflict, as his research involves cultural and evolutionary psychology, especially as it relates to religion. Dr. George Knight’s research pertains to acculturation and enculturation of Mexican-American families and the mental health outcomes associated with these adaptations. Dr. Steven Neuberg leads the ASU Global Group Relations Project, a multidisciplinary study of factors that shape intergroup relations; he is also a founding member of the Center for Social Dynamics and Complexity. Dr. Delia Saenz studies tokenism, intergroup processes, and acculturation, and she has made significant contributions to the understanding of diversity in work groups. Dr. Michelle “Lani” Shiota incorporates the Biological Bases of Human Behavior into her research by studying (among other things) the psychophysiological underpinnings of positive emotion and emotion regulation.

The ASU REACH Institute is active in forging collaborations with other agencies in local and national communities. Their emphasis on Prevention Science makes them a major contributor to the department’s Prevention Science initiative and reflects the national trend towards identifying human risk and protective factors associated with psychopathology and other negative life outcomes. The focus is currently on effectiveness models of interventions as well as translation, dissemination, and implementation of programs across community settings. The Site Review Team recommends that the Clinical Area and the interdisciplinary REACH Institute work to better integrate their activities and further strengthen graduate training in clinical psychology.

The Applied Behavioral Analysis Master’s Program is a strong example of academic-community partnerships. Indeed, the program was developed in collaboration with community agencies seeking increased numbers of licensed personnel with strong behavioral analytic skills. Students in the program are working in field placements throughout the Phoenix area, and many of them come from culturally diverse backgrounds. Many members of the advisory board of the ABA program are from local agencies. The Site Review Team was pleased to see that the department and university express clear and tangible support to the new program, providing one additional hire for next year.

Strategic Initiatives Summary. With these six graduate training programs, ASU REACH Institute, and the Master’s Program in ABA, all four strategic initiatives are addressed. The Health focus of the department reflects a biopsychosocial model of functioning, which parallels the national direction of research in Psychology; all 6 areas of the department along with REACH and the Master’s ABA contribute to this initiative. The Prevention Science initiative is well addressed by REACH, the Clinical area, and the Developmental area faculty. All graduate program concentrations maintain valuable connections with local and regional medical centers, including the Mayo Clinic, Veterans Wellness Research Center, Phoenix Children’s Hospital, Phoenix VA, and UT Dallas. Many research labs within the department utilize neuroimaging equipment at Banner Health and Barrow Neurological Institute.

The department's growing emphasis on Culture and Social Dynamics includes partnerships with institutes outside of the department. For instance, several research faculty members within the social and cognitive areas are actively engaged in collaborations with the Center for Religion and Conflict, and the REACH program is strongly connected to the School of Social and Family Dynamics.

The department's emphasis on the Biological Bases of Human Behavior is growing in response to national attention to this topic and increased funding available to researchers in this area. However, the lack of neuroimaging equipment within the department will soon become a limiting factor, unless more supports are provided for researchers to access these expensive data collection methods. The Neuroscience concentration is growing and will necessarily need additional research and teaching faculty and graduate students to support its contribution to the department and University as a whole. Currently, there do not appear to be sufficient resources to support this initiative, as graduate students within the Neuroscience concentration are forced to take courses outside of the department, due to the lack of available faculty to teach these courses. The Site Visit Team has recommended greater teaching resources to ensure adequate course staffing.

The Site Visit Team was struck with the number of research collaborations that faculty members across *all* areas of the department participate in. While many faculty members express interest in expanding their collaborations to specific areas targeted by the College and the University, they are also concerned about overextending their research teams' workload. They also expressed questions about how participation in these collaborations would benefit the research teams and the department directly. To further faculty collaborations valued by the College, the Site Visit Team recommends better communicating the importance and value of these collaborations, offering creative opportunities for increased faculty input regarding projects, and providing increased resources, such as graduate student research assistants to faculty members who participate in college-valued initiatives.

3. Learning Objectives and Curricular Effectiveness

Both the Undergraduate and the Graduate Program in the Psychology department at ASU are strong. We describe the learning objectives and curricular effectiveness of each separately.

Undergraduate Program. The Undergraduate Studies Committee is responsible for designing, supervising, and coordinating the Undergraduate Program. Their clearly articulated learning objectives for the Undergraduate Program are as follows: to provide a high-quality liberal arts education where students are likely to make a meaningful contribution to society; to develop in students special cognitive and scientific reasoning skills, which are useful both for careers in psychology and navigating the world in general; and to prepare qualified students for graduate study in psychological science and related disciplines.

The new Psychological Science concentration, which specifically appeals to students who are graduate school-bound within the BS degree, includes six additional hours of research requirements. This concentration also requires an advanced statistics course. These curricular changes are in response to national trends indicating increasing interest in STEM disciplines and decreasing interest in the general humanities, with more students choosing to pursue the BS than the BA degree.

Responding to nationwide trends from increased hand-on learning, the Undergraduate Internship program has made a concerted effort to connect students to a wide range of community settings, placing 178 students into 34 internship sites since 2009. These settings include healthcare, educational, legal, and social service placements, among others, meeting both community and student educational needs. The Honors Program and other research lab experiences connect students with diverse research opportunities that make both local and national community contributions.

Particularly impressive in the undergraduate curriculum is the Honors Program. This program provides highly individualized and intensive mentoring by distinguished faculty along with a year-long classroom seminar and an advanced statistics course. Results are impressive; honors students have produced high-quality research that published in top scientific journals. Undergraduate students also report that they received informal mentoring and exposure to non-clinical careers through their experiences working in research labs through the Honors Program.

The department has clear and appropriate learning objectives and outcome measures. In accordance with the APA undergraduate education task force's recommendations, the department determined that Psychology majors should be able to: 1) use psychological findings and theories to explain psychological phenomena, and 2) read scientific articles and effectively evaluate research related evidence in relation to psychological phenomena. Notably, the department has developed comprehensive assessment measures to determine students' progress towards these objectives, which include yearly scoring of both in-class and out-of-class writing products using a rubric scoring system. In 2016, student scores on these assessments ranged from 75% to 84%, showing overall attainment of the established learning objectives.

The department is dedicated to clearly articulating educational goals to students. Curriculum planning reflects a deep understanding of the field of psychology, sensitivity to University curricular initiatives, and conformity with national guidelines in Psychology issued by the American Psychological Association (APA). The department will soon launch a specialized committee to develop learning objectives specific to each course, as well as overall learning goals for the major, which will help to standardize the curriculum across course sections.

The department determines the effectiveness of the Undergraduate Program by calculating the graduation ratio (% of degrees awarded/senior headcount), department graduation rate vs. ASU graduation rate, % of returning freshmen to University vs. % of returning freshman to department, and undergraduate student satisfaction survey. These measures adequately provide data on the attrition and retention of undergraduate students in the Psychology department.

Undergraduate students report a high level of satisfaction with the breadth and depth of Psychology classes available to them. In exit surveys conducted by the Office of University Evaluation, graduating seniors in psychology report consistent satisfaction (98% in 2015-2016) with the overall experience in their major. Over the last seven years for which data were provided, satisfaction scores increased across all measures. (Some of the increase may be due to the strategic reduction in the number of students in the Psychology major.) Satisfaction scores in all measures except computing and using IT are about the same or slightly higher than the overall scores for the college. Student ratings of satisfaction with advising increased from 84% to 91%, probably due to the increase in the advising staff from 4 to 6 advisors. In interviews with the Site Visit Team, undergraduate students reported having easy access to research (track) and lecture (line) faculty for informal mentoring. Students receive a wealth of introductory Psychology information through PSY 191, a mandatory freshman seminar for Psychology majors.

Addressing the ever-changing needs of undergraduate students interested in pursuing a career in psychology, the program affords multiple opportunities for students to explore diverse career goals through the esteemed Honors Program, off-campus internships, and research lab experience, all of which also count towards course credit. Yet, in interviews with the Site Visit Team, faculty members expressed the concern that students underutilize professor office hours, the internship program, and the as-yet-required career class. At the same time, Site Visit Team

interviews with advanced undergrads revealed a desire for better and more useful career advising. Students said that while advisors within the department have variable knowledge of career opportunities in the discipline, the on-campus Career Center is clearly geared towards other (e.g., Business) majors. Students reported needing to be extremely proactive in order to obtain information regarding career options and the necessary steps required to reach certain career goals, such as admission to graduate school.

To address these concerns, the department is in the process of developing initiatives to enhance student use and satisfaction with career-related resources. Psychology advisors are now conveniently housed within the Psychology building, and the number of Psychology advisors has been increased. The introductory careers course will soon be mandatory, as recommended by the APA guidelines for undergraduate education. Visits to professor office hours will also be mandatory, and two meetings instead of one advisor meeting will be required for transfer students. The Site Visit Team encourages the department in making these well-thought-out changes.

The Site Visit Team recognizes the Undergraduate Program as a model for other schools. Indeed, at least one member of the Site Visit Team hopes to introduce some aspects of the outcomes evaluation to her own department.

Graduate Program: The graduate program in Psychology is structured into six doctoral areas (i.e., Behavioral Neuroscience, Clinical Psychology, Cognitive Science, Developmental Psychology, Quantitative Psychology, and Social Psychology) and a new Master's program in Applied Behavior Analysis (ABA).

According to the Self Study Report, the doctoral programs seek to develop the following skill sets: scholarship (knowledge of the history and contemporary nature of the respective fields); critical thinking (the ability to independently evaluate data and theoretical models); research training (expertise with empirical methods); creativity; and the highest ethical standards in the conduct of research. In addition, the Clinical Area aims to prepare skilled and ethical clinical scientists.

The new Masters ABA Program presents behavioral analysis as both a scientific discipline and as a professional occupation. The program aims to provide meaningful service through community partnerships and to prepare students to become fully competent professionals in the field of ABA.

The Graduate Studies Committee is responsible for overseeing graduate-level training across the entire department. The committee, which includes representatives from each of the six doctoral areas and the master's in ABA program, works to balance the needs of each area while managing funding streams from the University. The collaborative approach of the committee is strong, helping to make the whole departmental graduate program greater than the sum of its parts.

One of the main tasks of the committee is to coordinate graduate student recruitment and funding from multiple funding streams including block grants and college-level support. Unfortunately, the total funding pool is considerably below that of other universities. While the committee has worked diligently and collaboratively to secure as much funding as possible and to apportion it fairly across areas and students, ASU research faculty are disadvantaged in the nationwide competition for top students. For instance, graduate stipends at ASU are lower than stipends from comparable state universities. Unlike other universities, ASU funding cannot always be guaranteed for five years, the standard length of training in most psychology departments. Furthermore, insufficient fellowships for recruiting stellar students and students from diverse backgrounds run counter to the mission of ASU because of the otherwise strong graduate training in cultural studies. At the same time, the University

has wisely offered tuition support if a student secures his/her own funding (e.g., through NIH or NSF fellowships). While Psychology faculty research appeals to graduate applicants from diverse backgrounds, many are not able to attend ASU without significant support. This presents a missed opportunity to support the general ASU mission. Lastly, funding from state and University sources is not predictable. Tenuous funding streams result (understandably) in conservative decision-making by the department, further adding to financial strains on the committee and the department. It is clear to the Site Visit Team that two things are required: increased funding to assure more TAs, RAs, and fellowships, and a system that allows the Committee flexibility to carryover or borrow from one academic cycle to another.

The new Master's program in ABA is currently in its second year. The program was developed after carefully evaluating the clinical needs in the community and surveying master's level programs regionally. The ABA program is a two-year program that includes hands-on training that enables students to take their licensing exam at the conclusion of the program. The program has successfully recruited two classes of students. The Site Visit Team was pleased to see that the department and university express clear and tangible support to the new program, providing one additional hire for next year.

Like departments across the nation, each graduate area in the ASU Psychology department has its own curriculum and sequence that are clearly articulated online and in the handbook along with departmental common requirements (e.g., training in quantitative methods). Nevertheless, at ASU, some graduate courses are not offered frequently enough, and students are often faced with limited choices. Graduate-level course offerings are sometimes insufficient and sporadic because of the limited number of faculty available to teach due to faculty's research commitments (i.e., course buyouts) and administrative duties. The department is clearly aware of these problems. They note in the Self Study Report that, "The Graduate Studies committee is also currently working to ensure that we continue to have a predictable set of offerings in the curriculum that allow all graduate students access to sufficient courses." The Site Visit Team applauds this effort, and encourages each area to reevaluate the number and breadth of their course requirements. For instance, the Clinical Area curriculum is quite heavy with coursework required by the APA, but forthcoming changes in APA requirements may make it possible to reduce the number of courses and combine content across courses. Anticipated changes in the mechanisms for Clinical students to demonstrate competence will further enable reduced course requirements. The Site Visit Team also recommends increased faculty hiring to provide for more consistent provision of graduate course offerings.

The skill sets articulated above are appropriate learning objectives for graduate program and consistent with other state universities. The department-provided alumni satisfaction indicates a high level of appreciation for the graduate training being offered. More importantly, the department has a strong record of job placements. It is important to emphasize that the quality of graduate training is also exemplified by the current T32 by the National Institute on Drug Abuse (Research Training in Primary Prevention). Clinical students appear to be well-prepared for internship placement, based on the match rate and quality of the internships the students receive.

The track record of training at the graduate level is quite strong. For example, the department's focus on quantitative methods and interdisciplinary training is state-of-the-art and serves as a model for psychology departments nationwide. The department also has numerous opportunities for training and mentorship in preparing and submitting applications for external funding.

Satisfaction surveys are the common metric for evaluating effectiveness, though they are limited. However, the department has tracked the placement of their students, which provides greater detail regarding the types of employment of the graduates.

4. Student Recruitment, Retention and Placement

At the Undergraduate level, the department practices effective student recruitment and retention practices. New protocols have been implemented to reduce the likelihood of incoming students “parking” in the Psychology department until they determine the right major for them. In particular, a yearly program fee is now charged to all majors within the Natural Sciences; this fee has led as many as 400 to 500 students to leave the Psychology major. Although the Psychology department does not benefit financially from this fee, it has succeeded in discouraging students who originally would have seen Psychology as an “easy” entry major. Several new academic standards were also put into place to ensure that students are qualified for success in Psychology, including a requirement that students transferring into the department must perform adequately in English, Mathematics, and Introductory Psychology courses. Additionally, the new Psychological Science concentration was added to prepare interested students for graduate school, which includes more challenging requirements of supervised research and an advanced statistics course. One of the major strengths of the department is that it attracts a diverse student population.

The depth and quality of efforts by the unit to retain students and foster graduation rates are impressive. For instance, several sections of the Introductory Psychology course (PSY101) are intended for majors specifically, are taught by the most skilled lecturers, and are capped at 200 students. Undergraduate students report learning a wealth of information about the field through this introductory course taught by dedicated instructors. Lecturers also find creative and effective ways to take attendance in both traditional and online courses, which helps to improve student accountability. The Freshman Seminar (PSY 191) is taught by advisors and takes place within a small group environment, facilitating optimal student interaction and engagement. Undergraduate students report that they were oriented to the content and requirements of the major at their initial meeting with their Psychology advisor, helping them to determine whether Psychology was a good fit for their interests and abilities. The Site Visit Team recommends improving the timeliness of this decision by mandating that students meet with their academic advisor at summer orientation. This would enable students to receive in-depth information about Psychology earlier. This would also allow for major changes prior to the start of the academic year, especially given that majors are declared upon entry to the University. An alternative solution would be to allow Undergraduate students more time to declare a major.

Students are identified as “at-risk” for failure in the major through several meaningful indicators and are tracked consistently via “academic status reports,” triggering advisors to reach out to students who need additional support. At-risk students are also recruited for participation in the “Early Start” program, which requires students to arrive two weeks prior to the semester start to participate in extra student engagement efforts. Activities include visiting on-campus research labs, conducting behavioral observations of animals at the Phoenix Zoo, and assessing recycling patterns as a window into the behavior of local families.

The Graduate program, with their growing reputation, has become more selective in student admissions. At the same time, limited financial resources have forced the program to admit fewer students. A major strength of the program is that graduate students come from diverse backgrounds.

Both the Undergraduate and Graduate programs have room for improvement in their efforts to advise students on career opportunities.

Undergraduate students report that they must be extremely proactive and seek out information on the various careers in Psychology, because this information is not readily available to them. Undergraduate students report that it would be helpful to take a mandatory career class during their freshman year, as many post-undergraduate opportunities (such as doctoral programs in Psychology) require preparation beginning in the early Undergraduate years. Undergraduate students report that they would also appreciate additional attention paid to Psychology-specific careers in the Career Center, as they claim that this on-campus resource is generally only helpful to Business majors. Undergraduate students would also prefer to be matched with advisors who have specialized knowledge of the field of Psychology, as many of them described working with advisors who know little about the discipline. Although opportunities such as internships, research lab experience, and the Honors Program assist with career development, Undergraduate students state that these experiences are not always useful for career paths that don't involve graduate school. The Site Visit Team notes that the Undergraduate Committee is sensitive to these problems and is working to address them with more careers advising early in the undergraduate years.

Graduate students share similar concerns about their career development. Although some graduate students claim that their advisors are incredibly supportive of their decision to pursue non-traditional careers (e.g., non-academic positions or “industry jobs”), many graduate students share the opposite experience. They describe being shunned or ostracized by faculty members following their announcement that they do not plan to “follow in the footsteps” of their mentor. Along similar lines, many graduate students report that they do not feel prepared to enter the workforce post-graduation unless to apply for an academic job, as all areas of the department do not provide sufficient information or guidance on being competitive for other types of positions. Notably, there are no courses within the graduate curriculum that specifically discuss post-graduate career placements or how to obtain them. Students must seek out this information and hope that their mentors and other faculty are receptive. Conversely, graduate students interested in academic careers feel well-prepared to apply for these positions, and the department has an impressive track record of matching graduate students to tenure-track positions at esteemed universities worldwide. It is important to remember that the graduate program in Psychology at ASU is very clear that it is designed to prepare students primarily for academic jobs, so this goal is very clearly achieved. The Site Visit Team suggests that faculty across the training areas become more sensitive to students' interest in nontraditional career paths after graduation, given the shrinking number of tenure track positions available in the nation today. The Site Visit Team also encourages the department to evaluate and consider increased professional development training for employment outside of traditional academic careers. This is a major source of emphasis at national agencies and could greatly aid the training of graduate students in the program because of the high placement of students in such settings. Indeed, the March 2017 issue of the *APA Monitor* urges training in psychology careers outside of academia.

Interviews with graduate students yielded some concerns about the effectiveness of processes available for students to express grievances with their instructors. While the department does have a formal grievance process, the Site Visit Team recommends that students and faculty members be reminded annually of the different ways in which students can express their concerns about requirements in individual courses, the predictability of departmental offerings, and unreasonably long hours working on research or teaching assistantships assignments. The Site Visit Team also recommends that the Department Chair, the Associate Chair, and the Graduate Chair hold meetings,

preferably luncheons, with graduate students as a group at least once each semester to ensure adequate two way communication between students and faculty.

5. Faculty and Staff Quality

The level of faculty research/scholarly activity compares favorably with peer institutions. Data provided in Table 2A of the Self Study show that ASU faculty members authored more papers in the top 30 Psychology journals from 2011 to 2015 than faculty members at any other peer institution. For first authored papers, ASU ranked third of seven, ahead of UNC Chapel Hill, U Texas Austin, Indiana U, and U Washington. Since the last review, nearly all the tenured or tenure track faculty members published at least one paper each year for the last five years, 19 track faculty members are currently or have recently been editors or associate editors of major journals in the field, and one third of them are currently or have been members of standing NIH or NSF review panels. Most notably, 14 tenured or tenure track faculty have won major prestigious awards from APA, APS, or other national or international organization that support science scholarship. Wisely, ASU has recognized two faculty members as Regent's Professors, five as Foundation Professors, and one faculty member as "President's Professor".

The Self Study report indicates that, of the 12 personnel actions for faculty promotion in the past seven years, all have been successful despite rigorous standards and expectations. Major research universities across the nation have attempted to recruit as many as 18 ASU Psychology faculty members since 2010. While 8 faculty members left for other institutions, more than half of them were retained. This is a testament to the collegiality and strength of the department as well as to the support of the department from upper levels of the administration.

Research funding is at a very high level. With \$13.2M in research expenditures in 2015, ASU was *top* among the peer institutions. This is particularly remarkable, since three of the peer institutions had more tenured or tenure-track faculty members, and all but one (U Virginia) had more total faculty members. Currently, over 87% of faculty members are PI's or Co-PIs on funded projects, with a large proportion of the funding coming from NIH and NSF.

Numbers often don't tell the full story. Site Visit Team meetings with faculty members and students offered a view of both research(track) and teaching (line) faculty members who are passionately engaged in psychological inquiry, who care deeply about their students, and who work to combine teaching and research as best as they can, given the limits on their time, energy, and resources. Collegiality is high and faculty are well aware of the benefits of interdisciplinary research. As noted in the Self Study Report, "Senior faculty support own travel and research needs to the full extent possible from their own resources" (page 30). The faculty research/scholarly agenda is well integrated into student learning. Over 70% of track faculty supervise and mentor undergraduate students who earn credits working in faculty labs. Faculty members are dedicated to their students, often forming groups proactively to improve programs. Both faculty and staff have supported a campaign to fund scholarships (Psychology Scholars Award) that has resulted in an additional five to six awards for students each year.

Few institutions have a level of faculty diversity that they are proud of. Yet, ASU seems better positioned than most. Nearly 40% of the tenured or tenure track faculty are women, and 17% are from a minority group. The Site Visit Team supports the department, college and provost level plans to engage more systematic strategies to identify and pursue ethnic and gender minority candidates and compete more effectively for them.

Junior faculty reported that they felt supported by the department and involved in decision-making an appropriate level. They are prioritized for the assignment of graduate students to their labs, and they have the same amount of lab space as other faculty members. They reported satisfaction with the amount of and three-year access to their start-up accounts, and they felt that they could approach the department for any additional funding needs they might have. Despite strong informal mentoring, one or two junior faculty members expressed interest in having more formal mentoring support, and a few junior faculty members also expressed some concerns about what is required and expected of them for tenure and promotion. The Site Visit Team recommends that junior faculty mentoring systems be reviewed, and tenure and promotion standards be clearly communicated on an annual basis.

6. Resource Utilization

The Psychology Department makes full use of its physical (lab, office space) resources. Square footage indicates show that, at least before the recent departmental expansion, the department was averaging \$427/sq. foot, one of the highest in the University. With the recent renovation and expansion, the space appears well-configured for a 21st century department, with comfortable, attractive, and welcoming collaboration/work spaces. Spread out across campus, faculty seem to have ample research and instructional space, and undergraduate students have easy access to advising within the department.

Internal fiscal resources and administrative functions appear to be professionally managed by highly skilled staff competently managed and supported by the Department Chair.

7. Community Engagement

At ASU, involvement in the community is strong. In accordance with the Health and Biological Bases of Human Behavior initiatives, all graduate program areas maintain valuable connections with the Mayo Clinic, Veterans Wellness Research Center, Phoenix Children's Hospital, Phoenix VA, and UT Dallas. Neuroimaging equipment is provided by Banner Health and Barrow Neurological Institute for use by the department, further facilitating community engagement and collaborations.

The new Culture and Social Dynamics initiative has helped to foster partnerships with institutes outside of the department but still on-campus. These collaborations include the Center for Religion and Conflict and the School of Social and Family Dynamics. Given that this initiative is applicable to other communities, both local and across the globe, it would be interesting to see the department forging new partnerships with agencies outside of ASU. Arizona is a diverse state, with recent statistics showing that Hispanics comprise over 30% of the Phoenix population. The valuable research being conducted in the department related to Mexican-American culture and intergroup relations would be applicable to both local and national concerns. The Site Visit Team recommends that, as part of the Culture and Social Dynamics Initiative, faculty members and research teams consider how their findings could be used to further service the unique needs of the Hispanic population in Phoenix and Arizona.

Currently, the REACH program is collaborating with the Air Force, Nevada Medicaid, early intervention programs nationwide, as well as the Mayo Clinic here in Phoenix. The focus is currently on effectiveness models of interventions as well as translation, dissemination, and implementation of programs across community settings. The director of the REACH program, Dr. Tom Dishion, reports that there are multiple opportunities for increased local community collaboration, but assistance and

support from the University administration is needed to facilitate these discussions and bring the plans to fruition. For example, Dr. Dishion described a recent grant with Phoenix Children’s Hospital that was stalled just prior to submission. Effectiveness studies involving an intervention for divorcing families were previously conducted within the Arizona court system, but this work was discontinued due to other logistical barriers. The Site Visit Team suggests that the department and College work with Dr. Dishion to bring his research to the attention of the Provost and President’s office, so that they might assist him in identifying and overcoming these institutional barriers to further community collaborations.

8. Other Considerations

ASU is *One University in Many Places*, with little coherence across campuses and curriculum. Three different colleges plus ASU Online all offer Psychology degrees, but the differences between these programs are not well-articulated, and there are no consistent standards for the quality of education across programs/campuses. It is confusing for high school students to locate the “right” program for them, as an ASU website search of “Psychology” brings up nine (vastly different) matches. Many members of the department believe that there should be one central administration controlling all Psychology-related programs, which would lead to consistency and quality of education. The Site Visit Team recommends that the University address these multiple psychology degrees at multiple campuses, possibly renaming the programs with their campus identifiers and highlighting the unique aspects of each degree program in all publications, brochures, and on line.

Conclusions and Recommendations

Departmental strengths. The congruence between the departmental mission and the overall mission of University is laudable. The department, the college, and the University emphasize and enact their values of inclusivity, excellence, collaborative research along with a commitment to collegiality and community involvement. The strategic initiatives of Biological Bases of Human Behavior, Healthy Culture and Social Dynamics and prevention science have strong buy in from all areas in the department. Despite shrinking resources and organizational challenges, the department combines an inclusive approach to education with well-funded collaborative research addressing important basic questions and social problems, teaching excellence, and community outreach. The department has a national reputation which is strong and increasing, external funding is outstanding and among the strongest in the nation, and researchers collaborate within and across the University as well as with other institutions in the community and across the nation. Faculty productivity is high, with a publication rate that compares favorably with peer institutions at a higher rank. The undergraduate program is excellent and provides a national model of forward-thinking curriculum, excellent teaching and research faculty, strong advising, community internships, and careful tracking of at-risk students. There is a strong commitment to assessment and outcome evaluation, with explicit undergraduate learning goals and assessments. The department has shown willingness to “right size” the undergrad program and make it more demanding of students and is working hard to address needs in the areas of advising and career development. The Honors Program and the Honors College (Barrett) are excellent, attracting both top students and faculty. The graduate program has dedicated faculty and strong researchers who attract well-prepared students; graduate students get excellent placements after graduation. Students and alums at all levels express strong satisfaction with their training.

Staff members, though overworked, are professional and supported by the departmental leadership. The culture of the department is highly collegial and collaborative, with high priority set on sharing resources, inclusiveness, and innovation. Commitment to the community and emphasis on evidence-based practices is evidenced by the investments into the REACH Institute, expanded involvement with the Barrow Neurological Institute, Phoenix VA, Mayo Clinic, the community preschool, and the introduction of the new Master's program in ABA. The REACH Program is involved in strong preventive science at the national level. The graduate clinical and quantitative graduate training areas address the increasingly complex demands of the discipline, and are among the top in the nation. Other areas are close behind. The new Master's Program in Applied Behavioral Analysis is training therapists who can have a major impact addressing clinical needs in the community and region.

Department Challenges

The imminent retirement of critical senior faculty members due to retirement is a critical challenge to the reputation, research funding, and teaching capacity of the department. How and in what areas to hire new faculty is a challenge for the entire department to address at a time with shrinking resources and a new, incoming chair. The Site Visit Team recommends that caution be taken to avoid the easy route of simply replacing retiring faculty with new faculty in similar areas of research. The Site Visit Team believe that the areas of cognitive science, neuroscience, and addiction research, possibly with developmental overtones, have strong potential for departmental expansion and collaboration with other strong areas in the university and agencies in the community, and recommend that the department consider expanding in these areas.

Onboarding a new Department Chair after many years of a very popular and successful chair is a major challenge for any department, even a strong department such as ASU Psychology. The chair will need to work diligently to continue the culture of shared responsibility in the department (e.g., sharing and concerns for the common good, respect for autonomy and professionalism of staff, etc.). The Site Visit Team recommends that the new chair review procedures for departmental decision-making, particularly regarding hiring, to ensure that faculty at all levels of the professoriate feel involved and engaged. Furthermore, given that many major service roles in the department have been held by senior faculty for many years, the Site Visit Team recommends that the new chair develop a system of succession planning, training, and development so that junior faculty can move into these roles.

Change is inevitable, and junior faculty are nearing promotion. The Site Visit Team recommends that the new chair engage in systematic mentoring with all junior and associate level faculty members to ensure that all faculty members understand the requirements and expectations for tenure and promotion and have the resources to succeed in being promoted in a reasonable time frame. This mentoring can be group level mentoring, so that junior faculty feel supported as a group and can help support each other as well. The Chair can also assign one-on-one senior level faculty members as mentors to junior faculty. The Department needs to be sensitive to differences in the listing of authorship in behavioral neuroscience than in areas of psychology. In the behavioral neuroscience arena, lab directors and main authors are often listed last.

A challenge for a new chair selected by the Dean is to mediate the demands of both dean and department faculty. The Site Visit team recommends that the chair work closely with the Dean of Natural Sciences to understand the value of involvement in the Biodesign and Sustainability initiatives, to ensure that faculty have the resources they need to participate, and to understand the value of participation in these initiatives.

The Undergraduate Neuroscience major offers great possibilities for training excellent students and increasing enrollments in the department and the college. However, there are not enough faculties to meet both the undergraduate and graduate needs in this growing area. How to fund those required faculty and space to put their laboratories is a major challenge for the department, the college and the university. The Site Visit Team recommends that teaching level faculty be hired to teach more neuroscience courses, and research track faculty be hired to accommodate advanced undergraduate and graduate students in their labs.

Graduate training, while excellent in quality, suffers from too few graduate students for such a productive department and too small stipends to compete for the best graduate students nationally. Funding is unpredictable from year to year, resulting in too conservative admission decisions. The challenge is to identify more funds for graduate student stipends. The Site Visit Team recommends that the new chair communicate these needs to the College and request additional and more reliable graduate student funding.

Course availability at the graduate level is limited by insufficient numbers of faculty members available to teach the courses needed for on-time program completion in light of the large undergraduate teaching mission. The challenge is two-fold. First, to identify more line faculty to teach at the undergraduate level as well as more tenure track faculty to offer more advanced training and laboratory opportunities. And second, to consider ways to reduce the graduate student course requirements while maintaining the quality and reputation of the department. The Site Visit Team recommends that the Department take advantage of anticipated changes in APA clinical course requirements to combine advanced topics into more creative and exciting cross-disciplinary courses that might appeal to graduate students from a variety of areas.

Because a large proportion of the graduate student assistantships are funded by external research grants, the challenge is how to weather anticipated reductions in federal research funding. This has major implications for junior faculty who are dependent on federal grants for tenure and promotion. How to support faculty through these difficult times is a challenge that may require additional financial support from private foundations, regional contracts, and the University. The Site Visit Team recommends that faculty members explore additional cross-college research collaborations to increase their competitiveness and explore options for regional level contracts.

The large number of psychology programs across the ASU campuses has led to confusion and lost student opportunities and enrollments. How to differentiate the ASU Psychology Department in the College of Liberal Arts and Sciences is a systemic challenge that may require vision and intervention from administrators above the college level. The Site Visit Team recommends that administrators at the provost level assemble a task force to address these issues.

Opportunities for future development

With its strong reputation, collegial approach, and unique location, the ASU Psychology Department is poised to attract rising star tenure-track faculty members who are capable of generating strong collaborative research programs, substantial research funding, and highly competitive, ambitious and diverse graduate students. The areas of cognitive science, neuroscience, and addiction research have strong potential for departmental expansion and collaboration with other strong areas in the university. However, doing this requires strategic replacement of key faculty members, additional lines, expanded laboratory space, and increased, more dependable funding for graduate student stipends and

fellowships. While it is probably the case that every Site Visit Team in the history of departmental reviews has recommended increased space, new lines, and funding for every department ever reviewed, this case is different--different because ASU is already on a trajectory to become a world leader in psychological research and graduate education. Moreover, because of the strengths of other departments and sectors of the university and the highly diverse student body, collaborative research across these many units with these diverse individuals can create synergy that can lead to breakthroughs in our understanding of the biological bases of human behavior, our approach to important public policy issues of health, cultural diversity, and our nation's approach to prevention science. The department's strong leadership and hard-working staff and faculty have brought it to a cross-road. The crisis now is how to grow and expand under the new incoming leadership. The Site Visit Team believes that strategic hires combined with additional research space, more expansive and dependable graduate student lines, increased fellowships, and sensitive leadership can lift ASU Psychology to become a major player in the field.