Report 2017-04-20 from the Graduate Education Strategy Group

For: Senior Vice President for Academic Affairs Ruth Watkins

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1) Executive Summary
   a. The Graduate Education Strategy Group (GESG) presents primary findings and recommendations from self-study and campus dialogue regarding strategic directions for the Graduate School.
   b. Our primary recommendations are as follows:
      i. Self-study
         1. Obtain stipend data and directly from UU departments/colleges to ascertain actual amounts provided annually per capita. The comparative data available nationally (described below) seem invalid. Share best practices for comparison to PAC12 and other peers that are adjusted for cost-of-living (e.g., model from Economics)
         2. Record more specifically the ethnic minority and international components of the graduate student (and undergraduate student) population, as is performed by the National Science Foundation Survey of Earned Doctorates, to identify greatest recruitment and retention needs for underrepresented graduate students.
         3. Obtain peer data (e.g. PAC12, AAU) for graduate student quality and diversity comparisons, and particularly rates of graduate degree completion.
         4. Consider what opportunities are indicated by the observation that UU "under-produces" (relative to other PAC12 institutions) graduates in fields other than biological, biomedical, and health sciences.
         5. Consider facilitating departmental identification of optimal peers for comparison.
         6. Consider sharing of best practices among units that incentivize faculty to create funded opportunities for and to mentor graduate students.
      ii. Quantitative online survey data indicate that faculty prefer university-wide solutions for resource distribution rather than those focused toward particular sectors such as TEP hires. Faculty support initiatives, but resist additional administrative layers, and they prefer harnessing faculty expertise when possible. Whereas a number of issues were identified as relatively important by particular colleges (and are discussed below), the survey quantitative responses indicated uniform strong faculty support/concern for:
         1. Potential reductions in federal grant opportunities
         2. Recruitment and retention of diverse students
         3. Visa and immigration issues potentially negatively impacting applications, student success and post-graduation placement.
         4. Effects of the new budget paradigm on resources supporting graduate programs
         5. Broader skill development (particularly public speaking, networking, and career planning, including nonacademic placements)
         6. Development of named university-wide graduate fellowships, regardless of discipline, to improve acceptance yield for the most talented and diverse graduate applicants

7. Graduate writing support for faster degree completion and improved student writing
8. Improving the transition from coursework to research/scholarly/ creative activities

iii. Qualitative information from the online survey and town hall meetings yielded twelve suggestions:

1. Recognize that increasing stipend support to individual students at the cost of reducing numbers will compromise some programs. To maximize limited stipend funds it may be helpful for some programs to differentiate stipend amounts between master's-level and doctorate-level stipends.

2. Develop solutions for the discontinuous stipend support that delays completion of degrees in many graduate programs. There is strong faculty support for developing new funding sources to provide multiple years to improve recruitment of top students and to address summer or 5th year discontinuity of support to facilitate timely degree completion.

3. Regarding equity in distribution of support, there is strong faculty support for greater transparency in budget distribution for TAs. Differential tuition and the new incentive funding model each were identified as barriers to interdisciplinary collaboration and training.

4. There is strong faculty support for greater centralized support from the Graduate School for tracking graduate placement outcomes, and maintaining communication with graduates, which has additional benefit to: a) training grant generation; b) outcomes assessment; c) alumni fundraising; and d) demonstrations of the value of graduate education to legislators and potential donors.

5. Faculty support greater resources for recruitment and retention of diverse graduate students. Many specific suggestions were made to support this initiative (see combined qualitative results from online survey and town hall meetings).

6. Faculty suggest revising or removing limits on tuition benefits for students entering with a master's degree.

7. There was strong faculty support for greater resources toward writing, including making these and other professional development services available to distance students and more accessible to Health Sciences students.

8. Suggestions were also made regarding the timing of distribution travel funds to promote fair access.

9. There is consensus that the Thesis Office should be evaluated critically in terms of cost-benefit related to time to degree completion.

10. Faculty expressed support for graduate placement and career development training (including nonacademic placements), and offered several specific suggestions.
11. Some units are conducting and/or considering fee-based master's programs (e.g., Business, Health, Social & Behavioral Sciences, Mines & Earth Sciences, and Fine Arts). These programs are not only potential sources of revenue but also provide important training to serve community needs and industry demand– for example, Master of Software Development, Master of Arts in Teaching. The Graduate School/central administration should lower the barriers to developing these types of programs, and several suggestions were made in this regard.
12. There is strong support for the Graduate School/central administration to develop a strategic plan to lobby the legislature for greater funds for graduate training, while at the same time providing greater support to faculty, staff, and administrators who are trying to generate revenue through fee-based master's programs, grants, or industry partnerships.

c. The faculty would appreciate an explicit clear endorsement of, and demonstration of commitment to, graduate education at the University of Utah.

d. Limited available data suggest that our success in graduate program placement is very good. Yet it is not clear whether we stand out relative to peers in this regard, nor whether this success is general across the university, or appreciated by the public. We need objective data from across campus to document graduate placement in academic and non-academic jobs to inform our objectives, as well as to inform our stakeholders of the value provided by graduate training and degrees. We make this recommendation with recognition that we need to account for differences in placement goals and metrics among different disciplines. Placement tracking of graduate program alumni is tractable, because it can capitalize on local knowledge (faculty mentors) to populate a central database. The Graduate School could develop questions related to strategic planning goals (for example, to prepare students for a wider array of postgraduate placements, to create an inclusive and welcoming campus environment) to create a centralized ongoing data set, and reach out to mentors to populate it.

e. Limited availability of post-graduate positions in some disciplines of study raises the issue of what steps faculty should take to prepare graduates to find their place in the economy that capitalizes on their training. Perhaps a primary focus of writing and professional development support should be the ability to communicate effectively to a range of audiences; i.e., focus on developing skill in composition of ideas, and leading diverse audiences such as lawmakers and laypeople through scholarly and creative topics. We should support the goal of de-stigmatizing practical application by providing on-campus internship opportunities for graduate students in positions (e.g., administrative or evaluative) that capitalize on their developing skills.

f. That the concerns raised, and opportunities identified, are inter-related is well demonstrated in the preceding entries. Discussion of stipend and tuition benefit support for graduate education is another example. Many programs have already reduced their complement of graduate students in order to provide better financial support to a smaller number of trainees. However, we heard from multiple faculty representing multiple units across campus that further reductions would imperil graduate training by reducing the critical mass necessary to offer cutting-edge seminars and to mount creative productions. Further, programs that are primarily or exclusively at the graduate level face unique concerns in light of the new budget model for incentive funding that prioritizes undergraduate majors and student credit hours (SCH) at the 6000 level or below. These funding model issues are particularly acute for interdisciplinary programs that are staffed by faculty from home units that recoup most or all of the enrollment-based incentive funding.

g. We thank the 381 faculty from across campus who participated in town hall meetings (n = 166) and/or completed the online survey (n = 215) to provide their perspective on these challenges and priorities. We hope that our report will help in the development of a coherent strategy to enhance graduate education at the University of Utah.

2) Charge, timeline and process

a. A letter from SVPAA Watkins charged the GESG on January 31st, 2017 to provide a report by May 1, 2017 concerning our current standing, aspirations, and strategic agenda in graduate education at the University of Utah (UU). The group was tasked with two primary objectives: 1) a self-study of strengths and weaknesses using available institutional and peer data; and 2) fostering a conversation with faculty across campus regarding the strengths of the Graduate School, areas for improvement, and strategic direction.

b. Given the short timeline for these activities (three months), the group made plans to collect available data and to rapidly mobilize discussion and encourage participation. The committee was expanded by the addition of affiliate members to reach all colleges.

   i. Self-study data was obtained from readily available sources:

      1. National metrics

         a. National Science Foundation National Center for Science and Engineering Statistics Survey of Earned Doctorates 2015.

      2. University of Utah-specific metrics

         a. Office of Budget and Institutional Analysis

            i. GRE scores of incoming graduate students

            ii. Percentages of doctoral degree completion within six years

      3. UU comparison with peer institutions

         a. Oklahoma State University Graduate Assistant Stipend Study (2015-2016) comparing stipends offered to graduate students among 45 institutions (Table 1).

      ii. To garner input across campus, multiple access points were developed to ease/encourage participation

1. Website to explain charge and process, survey link, resources, and self-study materials (http://gradschool.utah.edu/graduate-education-strategy-group/).
2. Online survey open March 15 to April 10, advertised campus-wide by letter from Dean Kieda (Table 2 provides survey questions) with more than 200 respondents.
3. Town Hall meetings. Held at discretion of GSEC member/affiliate in consultation with home college, schedule provided on GESG webpage. Meetings were attended by 166 faculty members, and were held at the following colleges (attendance in parentheses): Business (10), Engineering (4), Fine Arts (8), Health (35), Humanities (16), Medicine (10), Science (14), Social & Behavioral Science (31), Medicine (10), Nursing (36), School of Social and Cultural Transformation (16).

3) Self-Study
    a. Observations
       i. National data:

1. Following 1970 the annual number of US doctorate recipients remained proportional to the number of doctorate granting institutions to yield steady mean (106 ± 9.9) and median (41 ± 3.3) values per institution (Figure 1).
2. Doctorate recipients with definite employment (1995-2015) (Figure 2) track primarily into post-doctoral positions for Health Sciences, Physical and Earth sciences, and toward non-post doctorate positions for Mathematics and Computer Sciences, Psychology and Social Sciences and Engineering, particularly so for Education, Humanities and Arts.
3. Employment sectors (Figure 3) have remained relatively constant from 1995 to 2015 with academe and industry dominating evenly for Science and Engineering versus academe dominating overwhelmingly for Education, Humanities and Arts. Psychology and Social Sciences slot evenly to government and industry sectors that together balance academe.
4. Gender demographics 1985-2015 (Figure 4) illustrate a greater proportion of men in Engineering, Physical and Earth Sciences, Mathematical and Computer Sciences and a greater proportion of women in Education. Relatively equal numbers of men and women attain doctorates in Life Sciences, Psychology and Social Sciences, Humanities and Arts, Architecture and Business.
5. Ethnic demographics 1995-2015 demonstrate predominantly (~65%-85%) White, with Asian and Black/African American and Hispanic making up the bulk of the ethnic minority component that also

included Native American, multi-racial, and unreported race or ethnicity. (Figure 5). The ethnic minority/international component was predominantly Asian in Life Sciences, Physical/Earth Sciences and Mathematical/Computer Sciences, and was predominantly Black/African American and Hispanic in Education, with relative parity in Psychology/Social Sciences, Humanities/Arts, and Architecture/Business.

ii. UU comparison to peer institutions or national metrics:

1. UU lies within the top 50 US doctorate-granting institutions according to the NSF Survey of Earned Doctorates 2015 (Figure 6). UU had approximately 380 doctorate recipients in 2015, which is 170 less than the 20th ranked institution. A separate table in the survey showed that UU is not among the top 20 institutions (in terms of doctorates granted) in any broad field.

2. UU lies within the middle of the PAC 12 in terms of number of degrees granted (combined bachelor's, master's, doctorate) (Figure 7). Higher ranked institutions tend to have greater numbers of master's and doctorate degrees.

3. UU runs in approximately the middle of the PAC12 regarding doctorates granted in 2015 according to the NSF Survey of Earned Doctorates, but with heavier weighting to health sciences relative to strongest institutions in the PAC12 (Figure 8).

4. UU graduate stipends (including tuition waiver) are competitive according to the Oklahoma State University Graduate Stipend Study (Figure 9). Notably, UU stipends show even greater competitiveness without inclusion of tuition waiver (data not shown). Most departments indicated during town hall meetings that they independently obtained contrary data demonstrating poor competitiveness of their stipends relative to peers. There was uniform sentiment that the data do not accurately represent reality.

5. Gender composition in UU graduate programs roughly follows national graduate program statistics (Figure 10). Men are disproportionately represented in Engineering, Mines & Earth Sciences, Dentistry, Business, and to a lesser extent Science and Law. Likewise, women are disproportionately represented in Nursing, Social Work, and Education.   Gender parity occurs within year-to-year standard deviation in Architecture & Planning, Fine Arts, Health, Humanities, Medicine, Pharmacy, and Social & Behavioral Science.

6. Race/ethnic demographics at UU (Figure 11) breakout differently than national graduate student metrics described above. Ethnic minorities at UU comprise approximately 10% to 20%, and international students comprise approximately 5% to 50%, of graduate student populations in different colleges. It is not clear how these

components compare to the Asian or Black/African American groups identified in the NSF Survey of Earned Doctorates.

    iii. UU-specific data currently lacking peer comparison:

        1. GRE scores for entering graduate students show variability among colleges (Figure 12). Predictably, verbal scores were significantly higher than quantitative scores for Humanities, Law, Nursing, Social Work, Health and Education whereas the opposite was true for Engineering, Science, and Mines & Earth Sciences. Verbal and quantitative scores were similar for Medicine, Business, Architecture and Social & Behavioral Science. Writing scores were highest for Law, followed by Humanities and Medicine. The utility of the GRE score information is limited without comparisons to peer institutions, which were not readily available.

        2. Reported rates of doctorate completion within six years (averaged over a five-year period) vary significantly among colleges, ranging from 10% for Nursing to more than 60% for Health and Fine Arts (Figure 13). The variance around the average is large given the limited numbers of individuals per college. The utility of the six-year doctoral completion rate information is limited without comparison to peer institutions, which was not readily available. Some concern has been expressed regarding the accuracy of these data.

        3. The GESG also received information from the College of Engineering regarding placement of graduates, and from the Department of Economics regarding graduate stipends and comparison to peer institutions with corrections for cost-of-living. This information may guide future development of information more generally from other UU departments/colleges.

b. Conclusions regarding self-study

    i. The per-institution market for doctorates in the US has been steady since 1970 despite increased (pre-millennium) then decreased (post-millennium) international student participation during this period. Strategies to improve graduate education should consider the ongoing decrease in international student participation.

    ii. UU lies in the middle of PAC12 institutions regarding number of graduate degrees granted, but is relatively under-weighted in non-health sciences disciplines relative to PAC12 peers.

    iii. The OSU Graduate Stipend Study likely does not account for actual relative to projected stipend support (stipend amounts may not be provided consistently through a doctoral career). Values for actual provided support are needed to support critical evaluation.

    iv. Specific comparison relative to peer institutions is needed for critical evaluation of gender and race/ethnicity demographics, quality of entering graduate students, rates of graduate degree completion, and placement of

graduates. Attention to Latinos is also necessary to assess the effects of recruitment and retention efforts.

   c. Suggestions for future self-analysis

      i. Obtain stipend data and directly from UU departments/colleges to ascertain actual amounts provided annually per capita.

      ii. Record more specifically the ethnic minority composition of the graduate student (and undergraduate student) population, as is performed by the National Science Foundation Survey of Earned Doctorates.

      iii. Obtain peer data (e.g. PAC12, AAU) for graduate student quality and diversity comparisons, and rates of completion.

      iv. Consider what opportunities are indicated by the observation that UU under-produces (relative to other PAC12 institutions) graduate students outside of biological, biomedical, and health sciences.

      v. Consider facilitating departmental identification of optimal peers for comparison.

4) Online survey quantitative results

   a. Observations

      i. Respondents numbered 215. Response numbers for each college are in the legends of Figures 14 & 15, and Table 4. Figures 14 & 15 show the survey quantitative results as series and stacked bars, respectively, for each college, and Tables 3 (summary view) & 4 (comprehensive view) provide the same importance ratings (1 = not important, 5 = very important) for each topic in Table 2. Most colleges participated in both town hall meetings and the on-line survey whereas some participated solely via the online survey. Other units held meetings of Department Chairs and Directors of Graduate Study in place of a town hall meeting.

      ii. Averages for colleges on ratings of the importance of different issues facing graduate education at the U yielded similar trends to the average for all respondents (red line) (Figures 14 & 15). Variances within colleges (error bars denoting standard deviation) were similar to variance across all respondents, indicating that priority of a given issue varies within a given college. The level of support for various issues indicated by the numerical results is described below.

      iii. Issues having strong and relatively uniform support (relatively high average and relatively low variance among colleges, tend to be on right hand side of charts, as well as highlighted in Tables 3 & 4):

         1. Potential reductions in federal grant opportunities (4.4 ± 0.9).

         2. Recruitment and retention of diverse students (4.3 ± 0.9).

         3. Visa and immigration issues potentially negatively impacting applications, student success and placement (4.2 ± 0.9).

         4. Effects of the new budget paradigm on resources supporting graduate programs (4.2 ± 1.2)

         5. Broader skill development (academic integrity, public speaking, networking, time management, career plans, leadership) (4.1 ± 0.8)

6. Develop named university-wide graduate fellowships, regardless of discipline, to improve acceptance yield for the most talented and diverse graduate applicants (4.1 ± 0.9).
7. Graduate writing support for faster completion and improved student writing (4.1 ± 1.0).
8. Improve the transition from coursework to research/scholarly/ creative activities (4.1 ± 1.0).

iv. Issues with relatively strong support (importance ratings of 3.7 to 4.0) tend to be near middle of the figures). Table 3 highlights the colleges that rated these topics as particularly important.
1. Develop mid-candidacy fellowships for excellence in research, e.g. funds to cover summer research (4.0 ± 1.0)
2. Develop viable models to increase responsiveness to shifts in placement opportunities (3.9 ± 0.9)
3. Develop viable models to increase responsiveness to shifts in funding opportunities (3.8 ± 0.9)
4. Improved placement tracking of graduate school alumni (3.8 ± 1.0)
5. Strengthen the fellowship office to facilitate student applications to many existing programs (e.g. NSF-GRFP, NSF-NRT, Fulbright, Hertz, Boren, Gates, etc.) (3.7 ± 1.0)

v. Issues for which rated importance contrasted significantly among colleges (variant scores in Figure 14, with variable highlighting in Table 4). Table 3 highlights the colleges that rated these topics as particularly important.
1. Increase per-student support to increase quality of applicants, even if it reduces available assistantships (3.8 ± 1.2). This topic garnered high importance ratings from faculty in Education, Health, Humanities, Law, Social & Behavioral Science, and Social Work.
2. Elimination or reduction of federal student loan programs (3.6 ± 1.3). Education, Fine Arts, Humanities, Law, Health, and Social Work rated this issue important.
3. Encourage professional certificate or degree programs at master's level incentivized by tuition return to program, and support from Graduate School to set up the structure (3.4 ± 1.2). Strong interest from Education was observed (4.7 ± 0.6).

vi. Issues for which there was low interest on average (relatively low average and relatively low variance, on left side in Figure 14, few highlights in Table 4):
1. Provide graduate support for new academic initiatives (e.g. interdisciplinary or TEP hiring) (3.5 ± 1.1), although Architecture, Education, and Social Work rated it important.
2. Develop targeted fellowships for students recruited by assistant professors (3.4 ± 1.2), although Education rated it important.
3. Programs that participate in interdisciplinary initiatives may offer different stipends, creating inequities among students (3.3 ± 1.1).

4. Develop targeted fellowships for students mentored across disciplines (3.2 ± 1.1), although Social Work rated it important.
5. Constraints on disciplines in which the master's-level degree is terminal (2.8 ± 1.4), although it should be noted that some concern was registered for this issue by Education, Social Work and Business. Fine Arts raised this issue during town hall meetings.

b. Conclusions regarding quantitative online survey results
   i. Eight issues were highly prioritized by faculty across campus, as listed above.
   ii. Faculty on the whole prefer university-wide approaches rather than those focused toward particular sectors (such as TEP) for stipend distribution, excepting those designated for underrepresented students.
   iii. Faculty support initiatives, but resist additional administrative layers. Faculty prefer harnessing faculty expertise when possible.
   iv. The Faculty expressed concern for: a) the impact of the new budget paradigm; and b) more rapid student transition from coursework to research. Programs focused on graduate education may be adversely affected by the new incentive funding model. With respect to the research transition, the Graduate School can take the lead in organizing forums to share best practices among colleges to improve outcomes.
   v. Units with large numbers of master's degree students or for whom the master's degree is the terminal degree (e.g., MFA) may face unique challenges in supporting students and actual or perceived barriers to full participation in the training and fellowship support offerings provided by the Graduate School.

5) Combined qualitative results from online survey and town hall meetings
   a. We summarize narrative comments received via the online survey and expressed during the town hall meetings below in twelve primary areas of suggestion. We provide the synthesized "raw" narratives in Appendix I. The order of these suggestions does not necessarily reflect their relative importance. Longer entries do not necessarily indicate greater faculty support; instead, longer entries may indicate either diversity of opinion or a large number of constructive suggestions.
      i. Stipend support is noncompetitive regionally and nationally for some programs (e.g., CSBS, Fine Arts, Molecular Biology graduate program), but increasing stipend value at the cost of reducing their number may make some programs nonviable. Some programs will fail if graduate student numbers drop below a threshold needed to support production or other creative activities, or if numbers fall below a necessary cohort. To maximize limited stipend funds it may be helpful for some programs to differentiate stipend amounts between master's-level and doctorate-level stipends. Notably, in some colleges, increased support for graduate education is also needed the form of performance and/or laboratory space; e.g., in Fine Arts, more space is needed for showcases and recitals.
      ii. Discontinuous stipend support delays completion of degrees. There is strong faculty support for developing new funding sources to address summer or

5th year discontinuity of support. Further, being able to offer multiple guaranteed years of support would greatly aid graduate recruitment efforts. There is strong faculty support for university-wide (equal odds across colleges) fellowships for recruitment or continuity of stipend support. There is not uniform faculty support to direct fellowships toward specific sectors such as TEP hires or junior faculty (instead, stipend support should be built into start-up packages). With respect to enhancing graduate fellowship applications (e.g., to NSF or other agencies), faculty suggest to not hire another administrator, rather pull faculty from units (e.g., DOGS) to advise and create resource of best practices for fellowship applications. Make greater use of the RATS training.

iii. Regarding equity in distribution of support, there is strong faculty support for greater transparency in budget distribution for TAs. Master's-terminal programs are concerned that their students are not prioritized for stipend support and/or that these students self-select out of applying to fellowships and other opportunities that are labeled or otherwise marketed as applying to doctoral students. We recommend an explicit rationale for any given approach to graduate fellowships. Stipends for core and interdisciplinary programs need integration equally and early in the annual budget process for planning purposes. Fundraising via differential tuition poses a barrier to students taking classes across campus and impedes the interdisciplinary training focus of many programs (see also fee-based master's programs below). There is concern regarding the adverse impact of the new funding model on productivity funds for graduate training, including drastic reductions in funding received by individual departments despite their continued success in SCH, majors, and graduates.

iv. There is strong faculty support for greater centralized support from the Graduate School for tracking graduate placement outcomes, and maintaining communication with graduates, which has additional benefit to: a) training grant generation; b) outcomes assessment; c) alumni fundraising; and d) demonstrating value of graduate education to legislators and potential donors. Specific suggestions include allowing students to keep their UU email addresses and coordinating tracking efforts with the alumni association. UCSF has an exemplary graduate school alumni association.

v. Faculty support greater resources for recruitment and retention of diverse graduate students. The following suggestions were made regarding recruitment: a) increase travel funds for underrepresented students to visit campus; b) increase fellowship support for underrepresented students (we are not currently able to offer competitive stipends nationally either in terms of level of stipend or fellowship support for an initial year without teaching – some competitor institutions are offering four- and even five-year packages); c) assist recruitment at historically black colleges and universities; d) increase support for Summer Research Opportunity Programs for underrepresented and/or disadvantaged undergraduates to create a potential pipeline for

graduate programs at the U; e) facilitate diversity recruiting by Graduate School; f) remove the barrier posed by the requirement of a separate diversity funding application by the student; g) allow diversity stipends to serve as enhancement rather than replacement of stipend support; h) enhance graduate student housing options (possible donor interest?); i) recruit more underrepresented ethnic minority faculty to improve recruitment of underrepresented minority graduate students. The following suggestions were made regarding retention: a) monthly lunches or dinners for underrepresented students and faculty hosted by the Graduate School to promote a sense of community and to foster mentorship; b) fund TAs for faculty in Ethnic Studies which lacks a graduate program, but who play key roles in mentorship of underrepresented students; c) offer professional development training in how to navigate academia, for example, how to interact with a professor when serving as a TA; d) conduct progress and exit surveys regarding of inclusion and climate in conjunction with graduate placement tracking. Two additional suggestions were made that would benefit all students: e) survey graduate students with respect to their training and placement needs (and health insurance needs), and f) promote more active graduate student associations for peer activities including underrepresented students and international students.

vi. Faculty suggest revising or removing limits on tuition benefits for students entering with a master's program. These limits make our doctorate programs much less attractive to students who hold a master's degree. There is no path for them to finish in the years of support provided, and the completion of a master's degree in several fields does not speed acquisition of the doctorate. This also poses a barrier to underrepresented students who may be more likely to acquire a master's degree before applying to doctoral programs. This is already becoming a barrier to recruiting students to our top-notch clinical psychology PhD program. It was noted as a problem by multiple programs in CSBS, the School of Medicine, Neurobiology and Anatomy, biosciences, Oncological Sciences, Physics and Astronomy, Chemistry, and Pharmacy.

vii. There was strong faculty support for greater resources toward writing, including making these and other professional development services available to distance students and more accessible to Health Sciences students. Suggestions included: a) continued expansion of brief formats (workshops and boot camps); b) summer writing courses for graduate students, with good compensation to instructors; c) professional development training on the presentation of research ideas to a diverse audience; d) easily accessible central calendar for training and professional development activities across campus (improving access for Health Sciences and distance students). Requested expansion of library writing support include expanded support for night and weekend work. Examples of successful interdisciplinary writing groups (composed of 8 graduate students

and faculty from different disciplines, funded by $2K per year) were offered. Other suggestions involved funding faculty as Writing Fellows in specific departments so that expanded discipline-specific support for writing could be provided more effectively. Somewhat related: help colleges optimize graduate training in subjects such as statistics and methods to avoid duplication of efforts.

viii. Suggestions regarding the timing of distribution travel funds included: a) have three funding cycles so that people in fields whose major conferences don't issue acceptances until later in the year are able to fairly apply for funding; b) increase per-person amount since $400, even with matching, doesn't cover full cost of travel and conference registration; c) consider sliding scale to reflect differences in departmental resources and disciplinary differences in the costs of registration; d) change format so that travel funds don't create tax burdens for students.

ix. There is consensus that the Thesis Office should be evaluated critically in terms of cost-benefit related to time to completion. There seems to be a staffing shortage in the thesis office. Faculty express a sense of "mission creep," with wordsmithing and other seemingly unnecessary efforts. Time to defense vs. time to degree can be drastically different, sometimes because of Thesis requirements. Thesis Office deadlines are misleading. If this detailed degree of oversight is required and delays cannot be improved, then that office should require earlier submission to prevent delays that impede employment and awarding of degrees. Faculty wondered how thesis standards might have evolved with the trend toward electronic publication now that microfiche is not an issue.

x. Faculty expressed support for graduate placement and career development training, and offered the following suggestions: a) increase placement staff to assist graduates and consider merging this with support for internships; b) provide meaningful support to de-stigmatize pursuit of public or applied work or other opportunities outside of academia; c) consider special job-placement needs of international students; d) develop fellowships to allow students to broaden experience or expertise to increase their competitiveness for academic and nonacademic positions; e) provide on-campus administrative assistantships (grant writing, events, development, outreach, etc.) to give students real responsibility and experience while progressing towards their degrees.

xi. Some units are conducting and/or considering fee-based master's programs (e.g., Business, Health, Social & Behavioral Sciences, Mines & Earth Sciences, and Fine Arts). These programs are not only potential sources of revenue but also provide important training to meet industry demand or serve community needs. The Graduate School/Central Administration should lower the barriers to developing these programs by: a) ensuring that differential tuition and credit hour based funding for existing and new programs does not create barriers to other goals such as interdisciplinary

training; b) providing greater summer support, or course releases for faculty to develop and/or teach in these programs, or considering these credits as counting toward yearly workload; c) providing greater return on this investment since some new programs have 10% return on tuition back to program, which is insufficient for growth. Compare to professional master's degree programs at University of Maryland, which provide a 90% return back to departments. Providing centralized support for the development and administration of such programs would reduce the burden on individual units to reinvent the wheel.

xii. Develop Graduate School/central administration strategic plan for lobbying legislature for greater funds for graduate training, while at the same time providing greater support to faculty, staff, and administrators who are trying to generate revenue through fee-based master's programs, grants, or industry partnerships. The Graduate School needs to take the lead in outreach, marketing graduate degrees, particularly doctorates, outside academe, articulating what skills and values they bring to non-academic positions. Graduate School should develop greater support for marketing and promotional materials, including website profiles for graduate programs, and should be an active partner in marketing graduate programs. Training for nonacademic placements should also be part of this public relations campaign with individual success stories.

Table 1. 2015-2016 Oklahoma State University Graduate Assistant Stipend Survey
The following 45 institutions contributed data:

Arizona State University
Auburn University (AL)
Bowling Green State University (OH)
Clemson University (SC)
Florida A&M University
Florida State University
Kansas State University
Kent State University (OH)
Louisiana State University
Mississippi State University
Montana State University
New Mexico State University
North Dakota State University
Oklahoma State University
Oregon State University
Purdue University
Southern Illinois University at Carbondale
Texas A&M University
Texas Tech University
University of Alabama
University of Arkansas
University of Connecticut
University of Delaware
University of Idaho
University of Iowa
University of Louisville
University of Missouri at Kansas City
University of Missouri at St. Louis
University of Montana
University of Nebraska at Lincoln
University of Nevada at Reno
University of New Mexico
University of North Carolina at Greensboro
University of North Dakota
University of North Texas
University of Oklahoma
University of Rhode Island
University of Tennessee at Knoxville
University of Texas at Austin
University of Utah
University of Wisconsin at Milwaukee
University of Wyoming
Utah State University
Washington State University

Table 2. Online survey questions.

1. What actions can be taken (within our current resource base) to strengthen graduate education at the University?
    a. Should per-student support be increased to increase quality of applicants even if this change decreases the number of assistantships?
    b. Develop viable models to increase responsiveness to: a) shifts in funding opportunities; b) shifts in post-graduate placement opportunities
    c. Improve the transition from coursework to research/scholarly activities
    d. Develop process to provide graduate student support to ensure success of new academic initiatives (e.g. interdisciplinary or TEP hiring)
    e. Develop graduate writing support for faster completion and improved student writing and publications/faculty productivity.
    f. Foster the development of broader skills (academic integrity, public speaking, networking, time management, career planning, and leadership) in our graduate student population.
    g. Improved placement tracking of graduate school alumni – will also support outcomes assessment and donor relationships.
    h. What other strategies can we employ?
2. Pathways toward additional resources (e.g., from grants, private donations, corporations, foundations, tuition or state sources). What strategies or priorities for investment would you prioritize/recommend to strengthen graduate education at the U?
    a. Strengthen the fellowship office to facilitate student applications to many existing programs (e.g., NSF-GRFP, NSF-NRT, Fulbright, Hertz, Boren, Gates, etc.).
    b. Development of named University-wide (regardless of discipline) graduate fellowships to improve the acceptance yield for the most talented and diverse graduate applicants
    c. Development of summer term mid-candidacy fellowships for excellence in research.
    d. Development of targeted fellowships for students recruited by Assistant Professors.
    e. Development of targeted fellowships for students co-advised by PIs from multiple colleges and multiple discipline.
    f. Encourage professional certificate or degree programs at master's level with incentivizing via tuition return to program, and support from Graduate School to set up the structure.
3. What challenges exist or are emerging for graduate education at the U?
    a. Effects of the new budget paradigm on resources supporting your graduate programs.
    b. Constraints on disciplines in which the master's-level degree is terminal.
    c. Interdisciplinary program discrepancies for stipend amounts offered in different participating departments.
    d. Diversity recruiting and retention programs.
    e. Elimination or reduction of some federal student loan programs.
    f. Potential reductions in federal grant opportunities.
    g. Visa and immigration issues impacts on: a) application to UU graduate programs; b) student success; c) post-graduation placement and other effects.
4. What elements of the Graduate School support you successfully? What services are:
    a. Critical;   b. Missing and need to be added;   c. Critical and in need of expansion?
5. What changes in the mode of distribution would better support you?
    a. Timing of travel fund distributions
    b. Candidacy limits on tuition and health insurance benefits
6. Additional ideas/issues?

Table 3. Average importance ratings and standard deviations (n=215) for online survey.

	Online Survey Topic (1=not important, 5- very important)	Campus average	SD	Units[1] rating issue as important or very important
Top priority across campus	Reductions in federal grant opportunities	4.4	0.9	11 of 14 colleges (see Table 4)
	Recruitment and retention of diverse students	4.3	0.9	11 of 14 colleges (see Table 4)
	Visa and immigration issues	4.2	0.9	11 of 14 colleges (see Table 4)
	Effects of the new budget paradigm	4.2	0.9	10 of 14 colleges (see Table 4)
	Broader skill development	4.1	0.8	11 of 14 colleges (see Table 4)
	Named university-wide graduate fellowships	4.1	0.9	11 of 14 colleges (see Table 4)
	Improve transition to research	4.1	1.0	10 of 14 colleges (see Table 4)
	Graduate writing support	4.1	1.0	11 of 14 colleges (see Table 4)
Next greatest overall priority	Mid-candidacy graduate fellowships	4.0	1.0	Education, Health, Humanities, Social & Behavioral Science, Social Work
	Increase responsiveness to placement shifts	3.9	0.9	Education, Humanities, Law, Social & Behavioral Science, Social Work
	Increase responsiveness to funding shifts	3.8	0.9	Education, Humanities, Social Work
	Improved placement tracking of graduates	3.8	1.0	Architecture, Business, Fine Arts, Humanities, Law, Medicine
	Increase per-student support, reduce #	3.8	1.2	Education, Health, Humanities, Law, Social & Behavioral Science, Social Work
	Fellowship office to facilitate student apps	3.7	1.0	Education, Engineering, Social Work
Lower overall priority	Reduction of federal student loan programs	3.6	1.3	Education, Fine Arts, Health, Humanities, Law, Social Work
	Graduate support for initiatives (e.g., TEP)	3.5	1.1	Architecture, Education
	Professional certificate or degree programs with tuition return	3.4	1.2	Education
	Targeted fellowships for assistant professors	3.4	1.2	Education
	Inequitable stipends in interdisciplinary programs	3.3	1.1	None
	Targeted fellowships for multi-disciplinary PIs	3.2	1.1	Social Work
	Constraints on master's-terminal degrees	2.8	1.4	None but issue was at the forefront of Fine Arts town hall

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[1] Entries provided for units with three or more survey respondents. Some units prioritized participation in town hall meetings relative to the online survey and visa versa.

Table 4. Quantitative online survey results. All-respondent average importance rating increases to right. Colleges with average rating of 4 (important) or greater on any issue are highlighted in green.

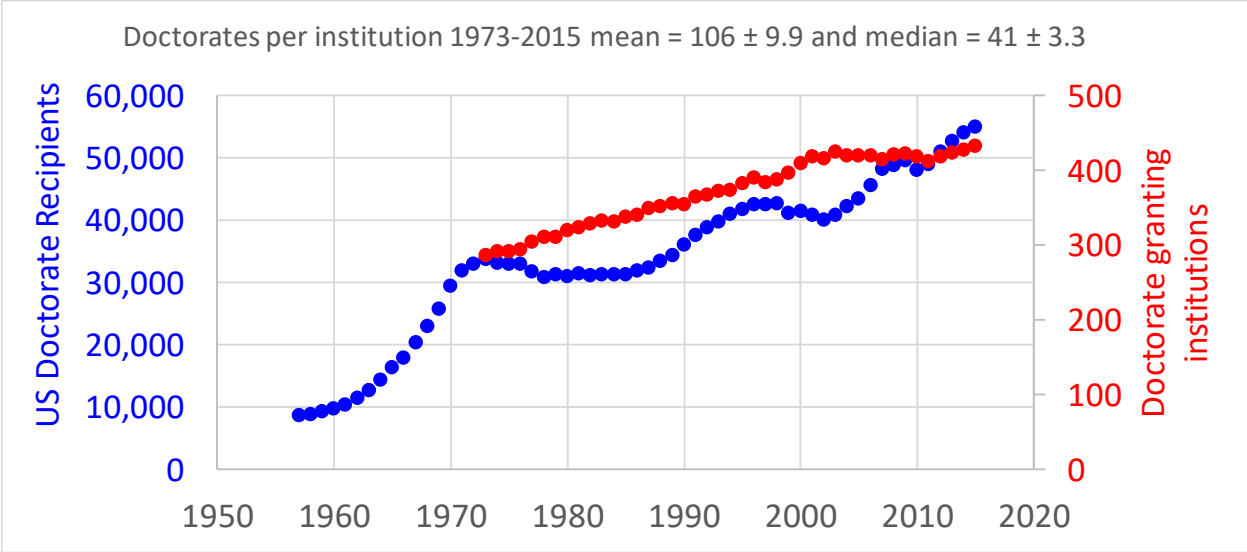|		Constraints on master's terminal disciplines	Targeted fellowships via multi-discipl. Pls	Inequitable stipends in interdisciplinary programs	Professional degree programs with tuition return	Targeted fellowships via assistant professors	Graduate support for initiatives (e.g. TEP)	Reduction of some federal student loan programs	Fellowship office facilitate student apps e.g. NSF-GRFP	Improved placement tracking of graduates	Increase per-student support, reduce #	increase responsiveness to funding shifts	Increase responsiveness to placement shifts	Mid-candidacy graduate fellowships	Graduate writing support	Improve transition to research	Named university-wide graduate fellowships	Broader skill development	Effects of the new budget paradigm	Visa and immigration issues	Recruitment and retention of diverse students	Reductions in federal grant opportunities
Averages	All Respondents n=215	2.8	3.2	3.3	3.4	3.4	3.5	3.6	3.7	3.8	3.8	3.8	3.9	4.0	4.1	4.1	4.1	4.1	4.2	4.2	4.3	4.4
	Architecture n=8	3.1	2.9	2.8	3.8	3.1	4.1	3.6	3.1	4.0	3.8	3.8	3.6	3.5	4.5	4.4	3.5	4.0	3.0	4.4	4.7	3.6
	Business n=7	3.3	2.0	2.3	3.3	2.1	3.7	3.3	3.3	4.1	3.9	3.6	3.9	3.7	4.0	4.3	3.9	4.0	4.2	3.8	3.7	3.4
	Dentistry n=13	2.7	3.5	3.5	3.7	3.5	3.8	3.7	3.5	3.5	3.5	3.9	3.8	3.5	3.8	4.2	3.6	3.9	3.6	3.6	3.9	4.4
	Education n=3	3.7	3.0	3.3	4.7	4.0	4.0	4.3	4.3	3.7	4.7	4.7	4.3	4.3	4.0	4.7	4.7	4.7	5.0	4.3	5.0	5.0
	Engineering n=5	3.0	3.6	3.3	2.4	3.6	3.8	2.8	4.4	3.0	3.8	3.4	2.8	3.6	4.0	4.4	4.2	4.2	4.0	5.0	4.6	5.0
	Fine Arts n=24	3.1	2.9	3.5	3.5	3.0	3.5	4.0	3.1	4.2	3.8	3.9	3.9	3.8	3.7	3.9	4.1	3.7	4.6	4.1	4.3	4.3
	Health n=9	3.1	3.8	3.6	3.6	3.7	3.4	4.0	3.9	3.7	4.2	3.9	3.6	4.1	4.7	4.6	4.2	4.3	4.7	4.0	4.4	4.4
	Humanities n=20	3.2	3.3	3.7	3.9	3.4	3.7	4.2	3.9	4.3	4.8	4.2	4.6	4.6	4.2	4.6	4.2	4.4	4.3	4.5	4.5	4.3
	Law n=13	2.7	3.6	2.9	3.4	3.4	3.5	4.0	3.7	4.0	4.5	3.9	4.5	3.7	4.4	4.0	4.4	4.2	4.1	3.7	4.2	3.5
	Medicine n=19	2.4	3.0	3.1	2.9	2.9	3.2	2.9	3.8	4.0	3.1	3.7	3.8	3.8	3.8	4.1	4.3	4.2	3.8	4.2	4.3	4.6
	Mines & Earth Sciences n=23	2.7	3.4	3.0	3.3	3.8	3.2	3.2	3.7	3.3	3.4	3.5	3.3	3.9	4.1	3.7	4.1	4.1	3.7	4.1	4.0	4.4
	Nursing n=1	3.0	3.0	3.0	3.0	3.0	3.0	4.0	4.0	5.0	4.0	3.0	3.0	3.0	4.0	5.0	3.0	4.0	5.0	4.0	4.0	5.0
	Pharmacy n=2	1.5	3.5	3.5	2.5	3.5	4.5	1.5	3.5	4.0	2.5	4.5	4.0	4.5	4.5	5.0	4.5	4.0	4.0	4.5	4.0	4.5
	Science n=40	2.1	3.1	3.3	3.2	3.3	3.5	3.1	3.8	3.5	3.3	3.7	3.7	4.2	4.0	3.9	4.0	4.2	4.2	4.5	4.4	4.7
	Social & Behav. Sci. n=14	2.5	3.6	3.3	3.0	3.6	3.4	3.9	4.0	3.5	4.5	3.8	4.0	4.3	4.2	3.9	4.2	3.9	4.7	4.3	4.3	4.4
	Social Work n=13	3.8	4.0	3.7	3.7	3.9	4.2	4.7	4.2	3.8	4.1	4.1	4.1	4.2	4.6	4.4	4.5	4.4	4.7	4.7	4.9	4.5
Standard Deviations	All Respondents n=215	1.4	1.1	1.1	1.2	1.2	1.1	1.3	1.0	1.0	1.2	0.9	0.9	1.0	1.0	1.0	0.9	0.8	1.2	0.9	0.9	0.9
	Architecture n=8	2.0	0.4	1.6	1.4	1.2	0.4	1.4	1.1	0.6	1.2	1.4	1.1	0.8	0.8	1.2	0.8	0.9	2.2	0.8	0.5	1.3
	Business n=7	1.0	1.2	1.5	1.6	1.1	1.2	1.0	1.0	0.9	1.1	0.8	0.7	0.8	0.8	1.0	1.1	0.6	0.8	0.8	1.2	0.5
	Dentistry n=13	1.4	0.8	0.9	0.9	0.8	1.3	1.3	0.8	0.9	1.5	0.6	0.6	1.0	1.2	1.0	0.9	0.6	1.4	1.0	1.2	0.8
	Education n=3	0.0	0.9	0.5	1.1	0.5	0.8	0.8	0.5	1.0	1.1	0.5	0.4	1.1	1.2	0.9	0.8	1.3	0.7	0.0	0.5	0.0
	Engineering n=5	0.6	1.0	0.6	0.6	1.0	0.0	1.2	1.2	0.6	0.6	0.6	0.6	1.2	1.0	0.6	0.6	0.6	0.0	0.6	0.0	0.0
	Fine Arts n=24																					
	Health n=9	0.9	0.8	0.7	1.1	0.5	1.1	0.7	0.9	1.1	0.8	0.6	0.5	0.6	0.5	0.7	0.7	0.7	0.7	0.7	0.7	0.5
	Humanities n=20	1.1	1.2	0.9	1.0	1.3	1.1	0.9	0.7	0.8	0.6	0.8	0.8	0.6	0.9	0.6	1.1	0.8	1.3	0.8	0.8	0.8
	Law n=13	1.5	1.3	1.0	1.2	1.2	1.2	0.7	1.3	1.0	0.7	1.4	0.7	1.2	0.9	1.2	0.8	1.1	1.1	1.5	0.8	1.1
	Medicine n=19	1.4	1.2	1.1	1.2	1.3	1.3	1.3	0.9	0.7	0.9	0.7	0.8	0.9	1.2	0.9	0.7	0.8	1.2	0.8	0.9	0.8
	Mines & Earth Sciences n=23	0.7	1.1	0.8	1.2	0.7	0.9	0.9	0.9	1.0	0.8	0.9	0.9	0.8	0.8	0.9	0.6	0.6	1.0	0.9	0.6	0.7
	Nursing n=1																					
	Pharmacy n=2	2.1	0.7	0.7	0.7	0.7	0.7	2.1	0.7	1.4	0.7	0.7	0.0	0.7	0.7	0.0	0.7	0.0	0.0	0.7	1.4	0.7
	Science n=40	1.6	1.0	1.3	1.0	1.2	1.3	1.5	1.0	1.2	1.2	1.0	0.9	0.9	1.0	1.1	1.1	0.7	1.3	0.7	1.0	0.8
	Social & Behav. Sci. n=14	1.3	0.9	0.9	1.0	0.6	1.3	0.9	0.8	0.7	0.8	0.7	0.9	0.7	0.6	0.9	0.8	0.7	0.5	0.6	0.6	0.8
	Social Work n=13	1.1	1.0	1.2	1.1	1.2	1.0	0.8	0.7	1.1	1.4	1.1	0.8	1.2	0.5	1.2	1.0	0.7	0.9	0.5	0.3	0.9

Figure 1. U.S. doctorate recipient and US doctorate granting institutions. From NSF Survey of Earned Doctorates, 2015.
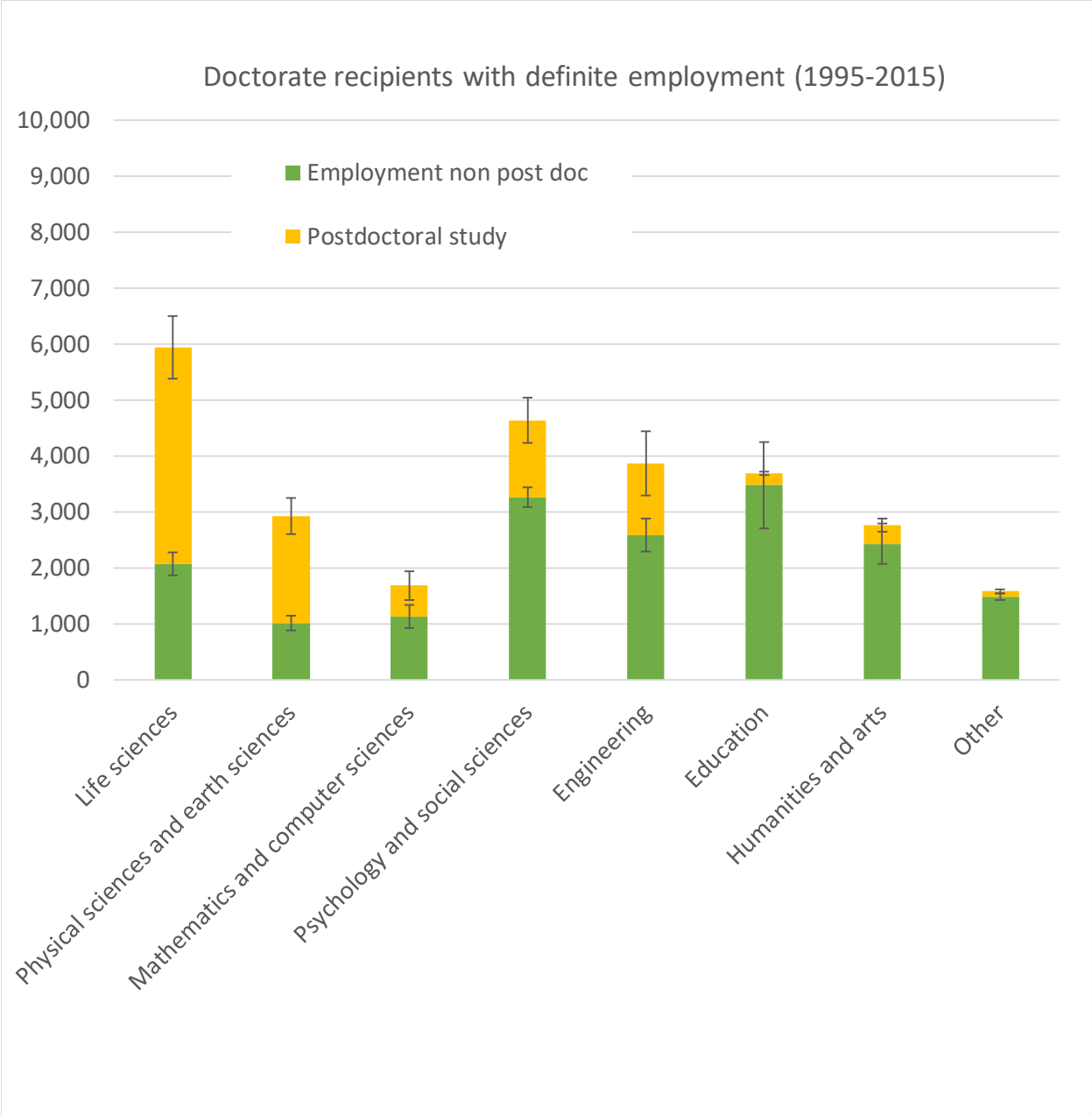
Figure 2. Doctorate recipients with definite employment 1995-2015. Error bars represent variation (standard deviation) across time. From NSF Survey of Earned Doctorates, 2015.
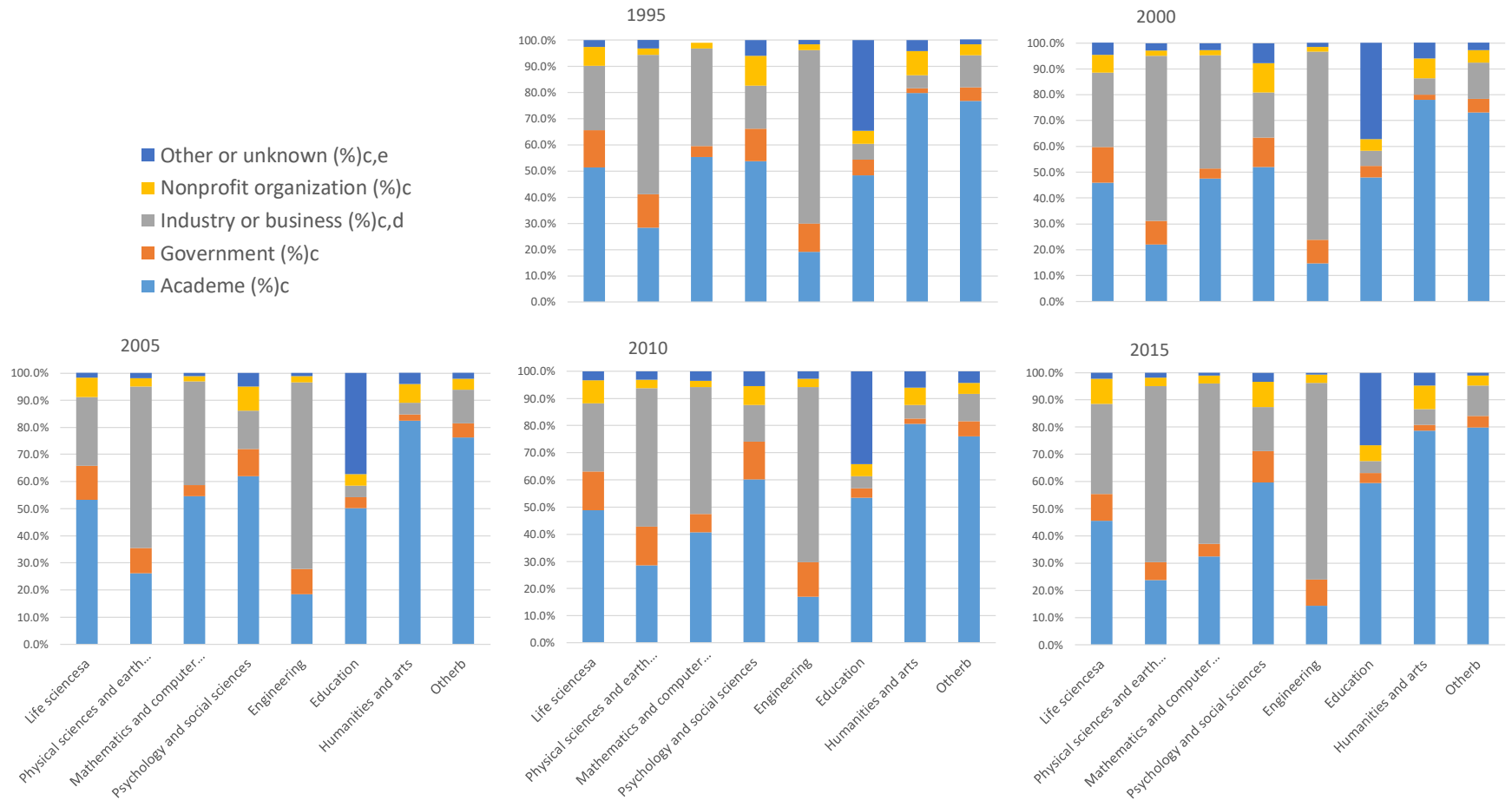
Figure 3. Employment sectors for doctorate recipients, 1995-2015.   From NSF Survey of Earned Doctorates, 2015.
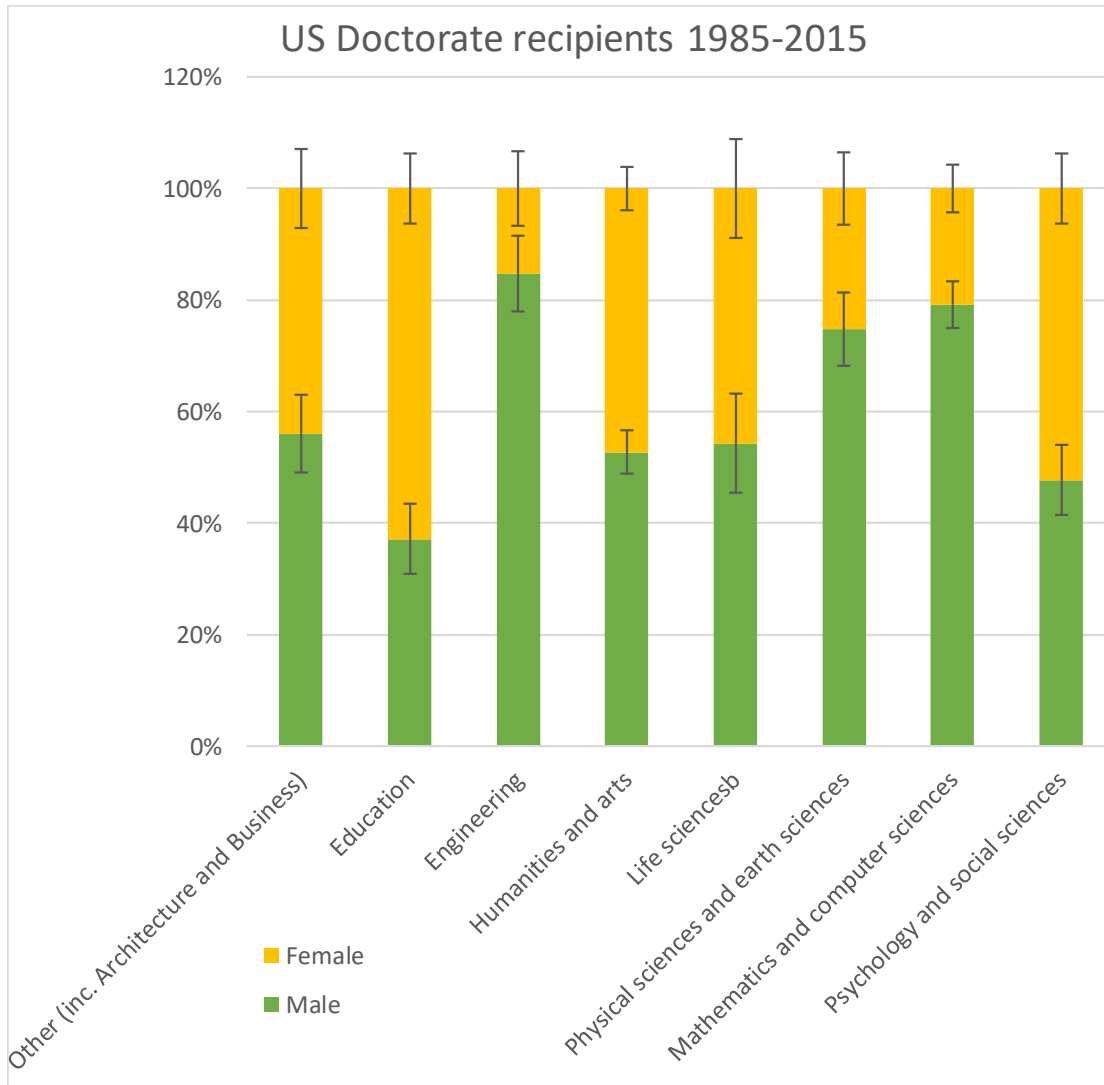
Figure 4. Gender demographics versus discipline for U.S. doctorate recipients, 1985-2015.   From NSF Survey of Earned Doctorates, 2015.
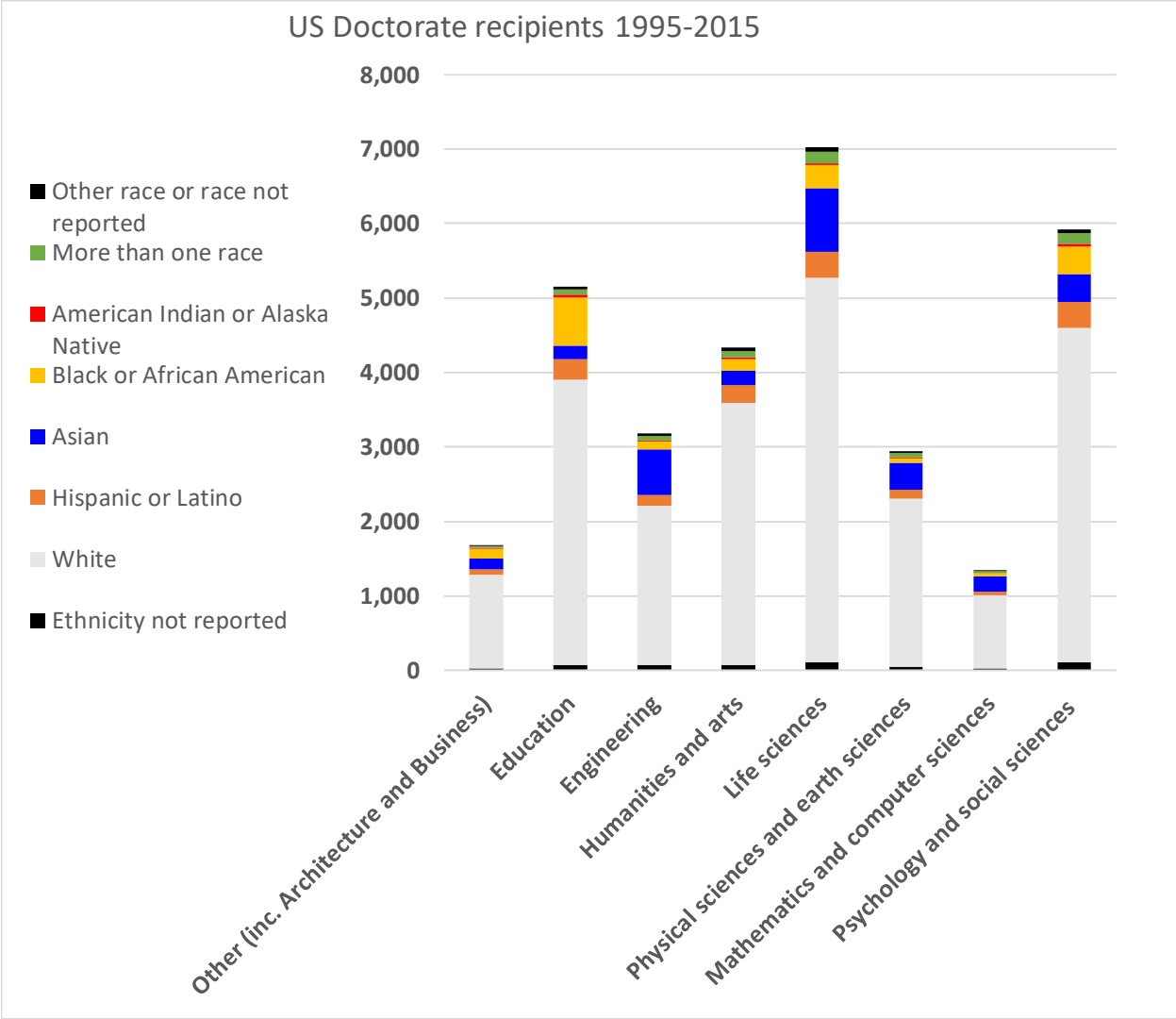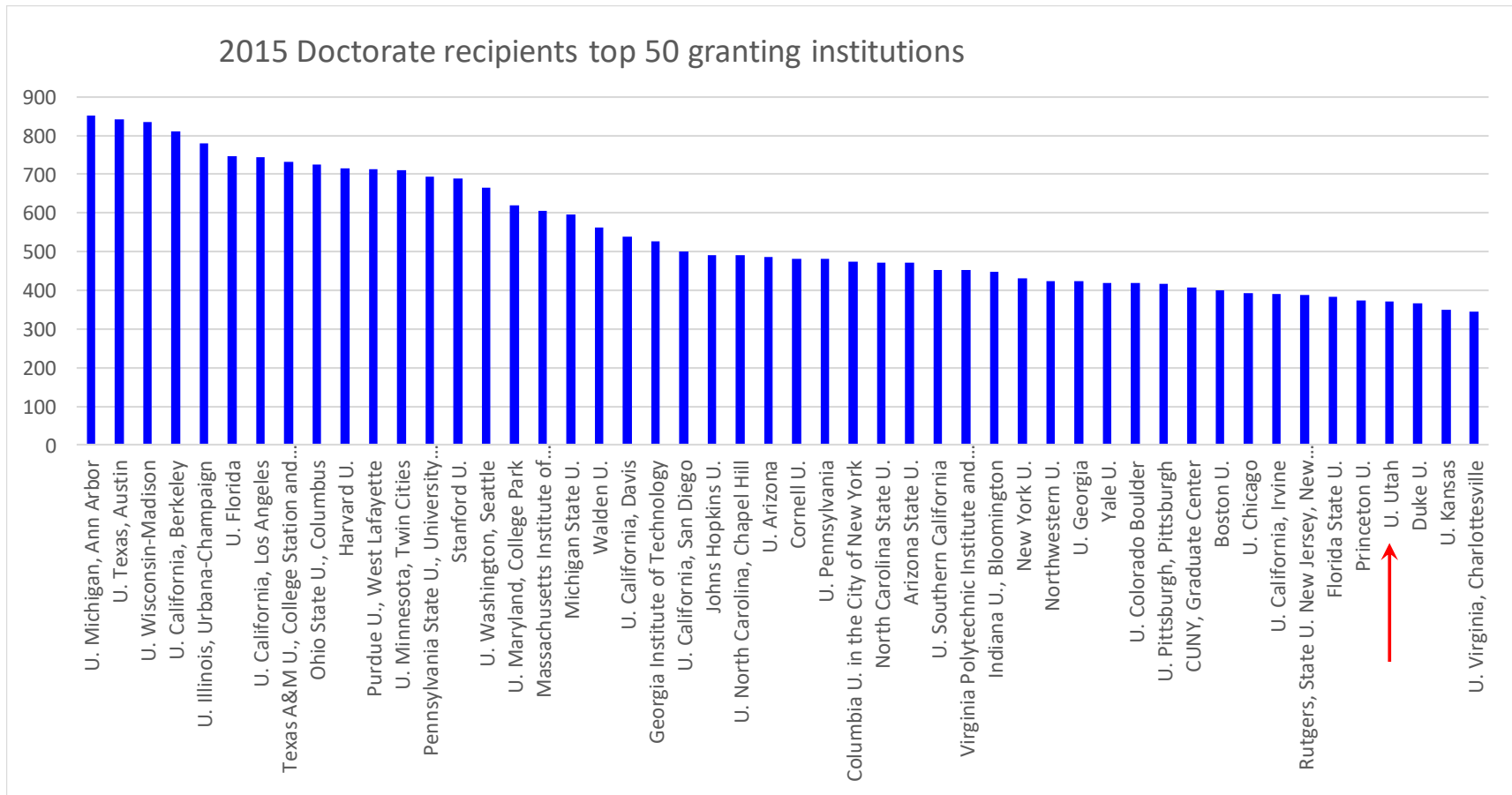
Figure 5. Race/ethnic demographics versus discipline for U.S. doctorate recipients, 1995-2015.   From NSF Survey of Earned Doctorates, 2015.

Figure 6. Top 50 U.S. doctorate-granting institutions. From NSF Survey of Earned Doctorates, 2015.
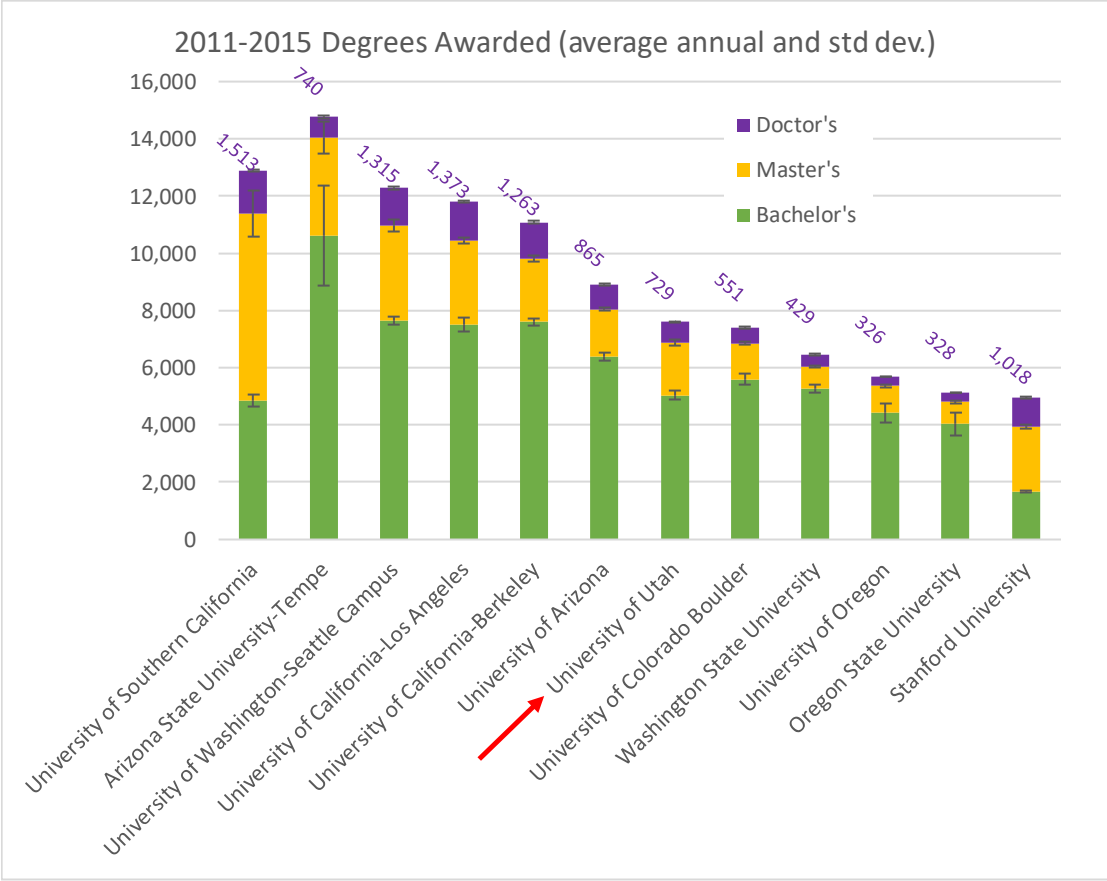
Figure 7. Degrees granted from PAC12 institutions 2011-2015. Error bars represent standard deviation across years over the five-year period. From OBIA.
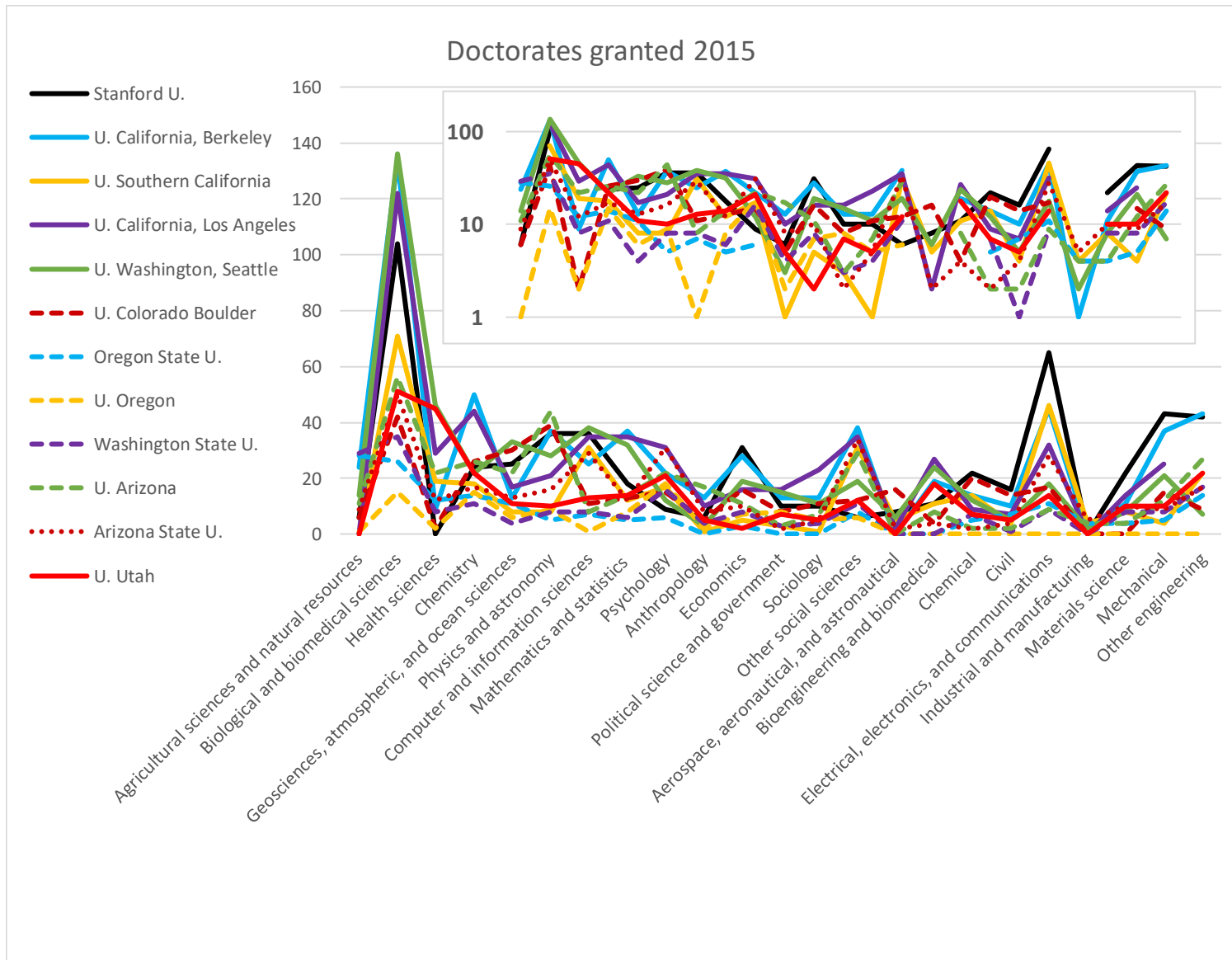
Figure 8. Doctorates granted in 2015 from PAC12 institutions. Inset shows log values to clarify low numbers. From NSF Survey of Earned Doctorates 2015.
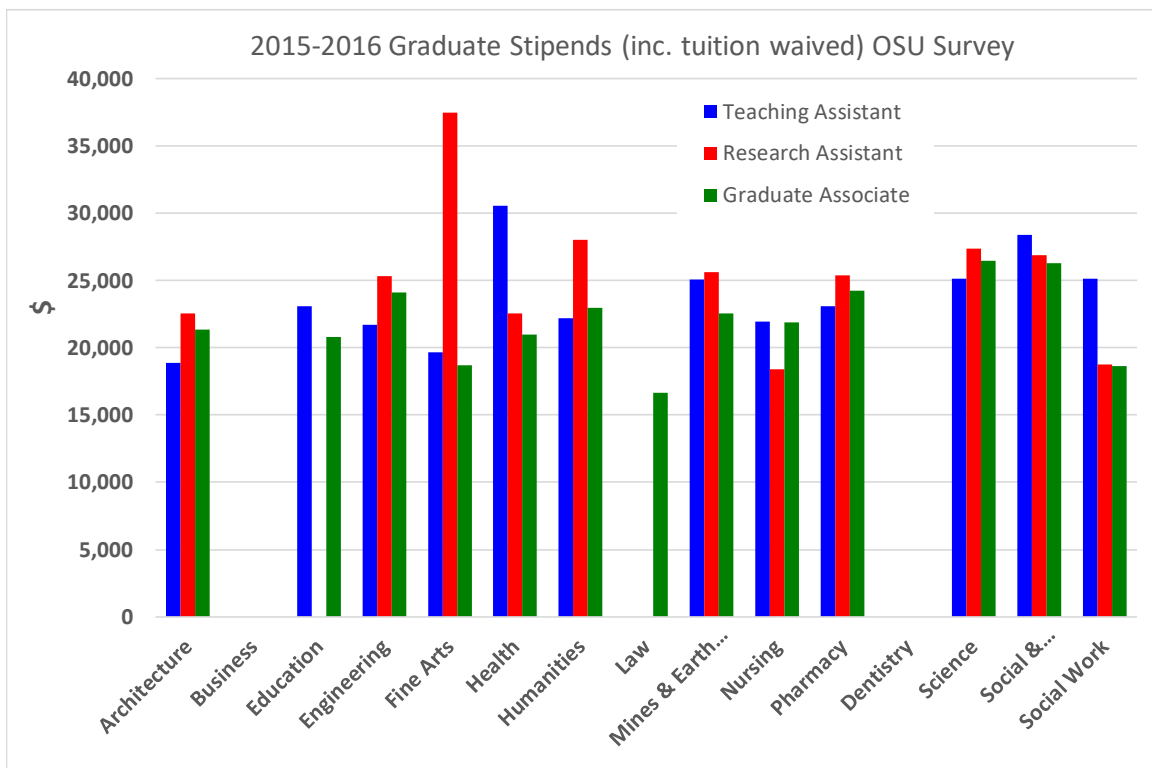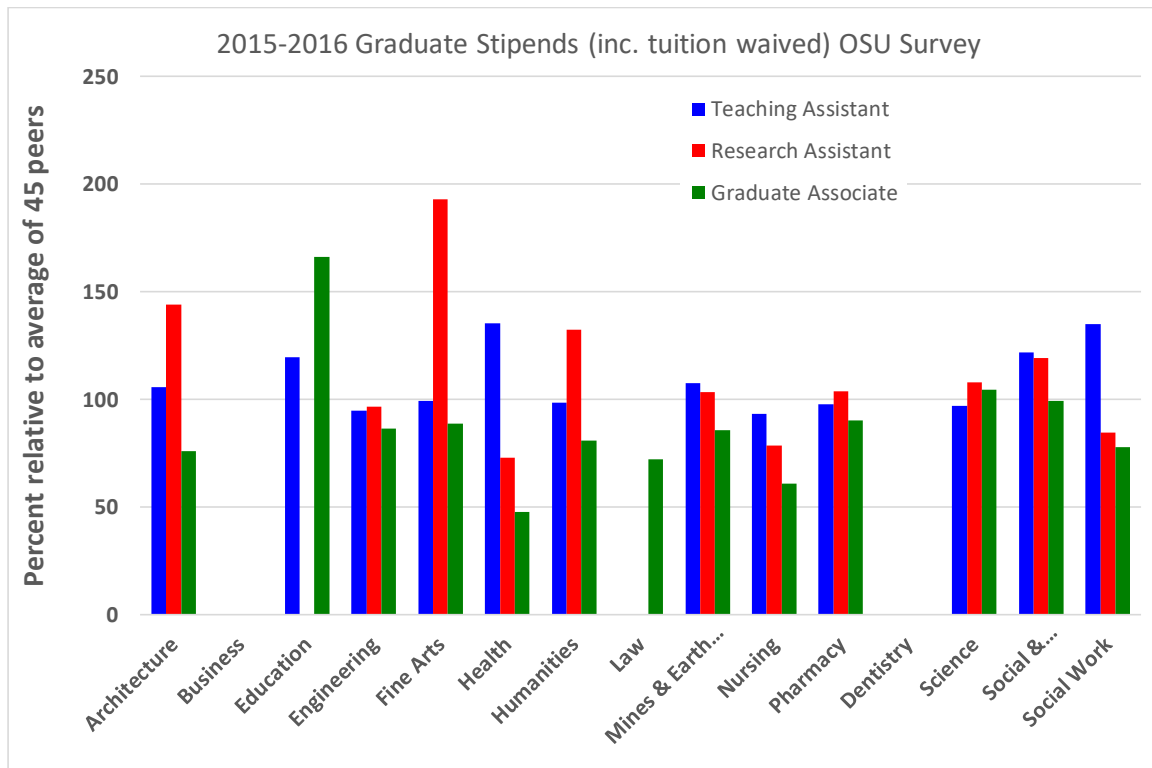
Figure 9. UU graduate stipends relative to 45 institutions (top) and amount (bottom). From Oklahoma State University Graduate Stipend Survey 2015.

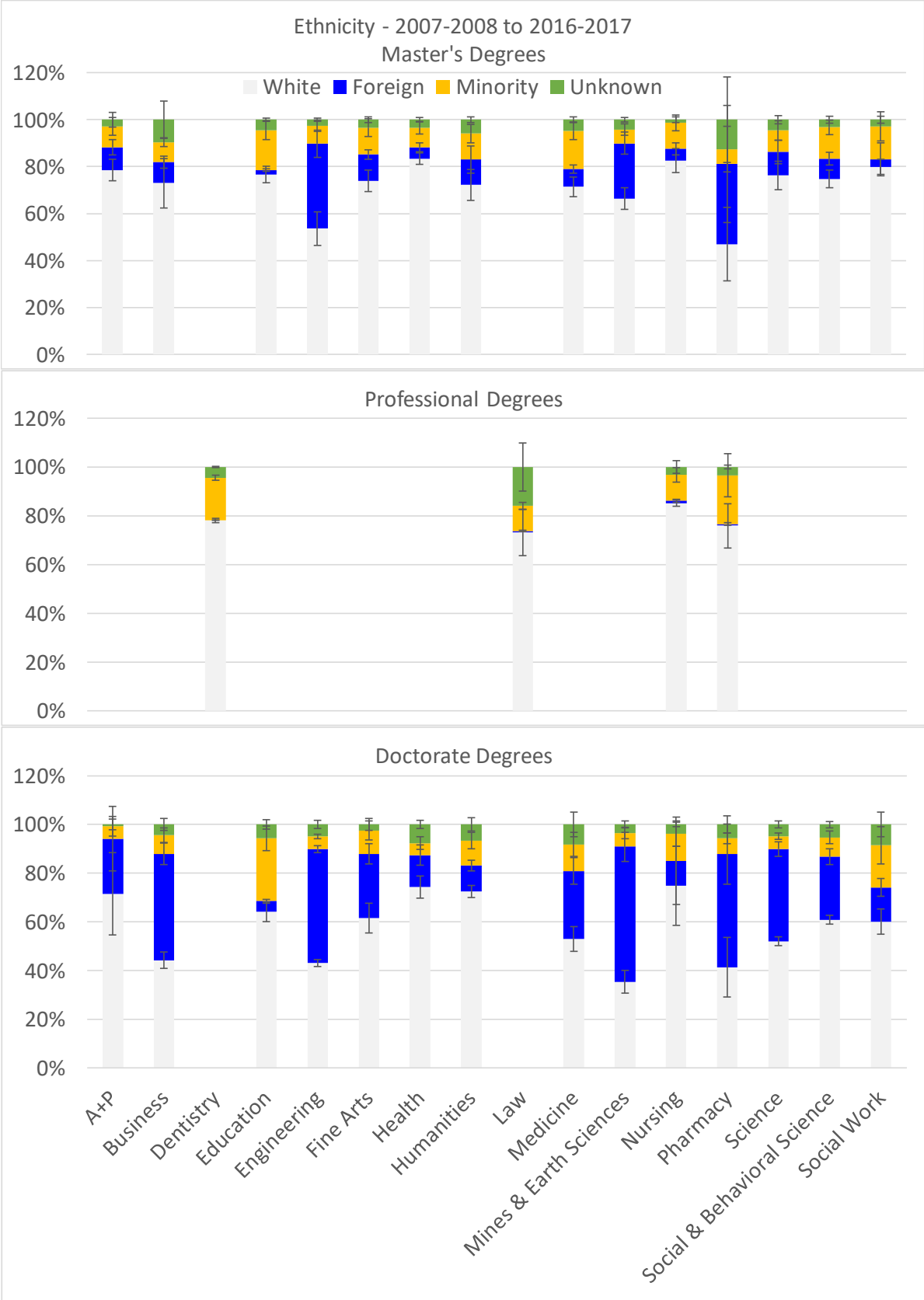**Figure 10**. UU gender demographics. Data from OBIA.

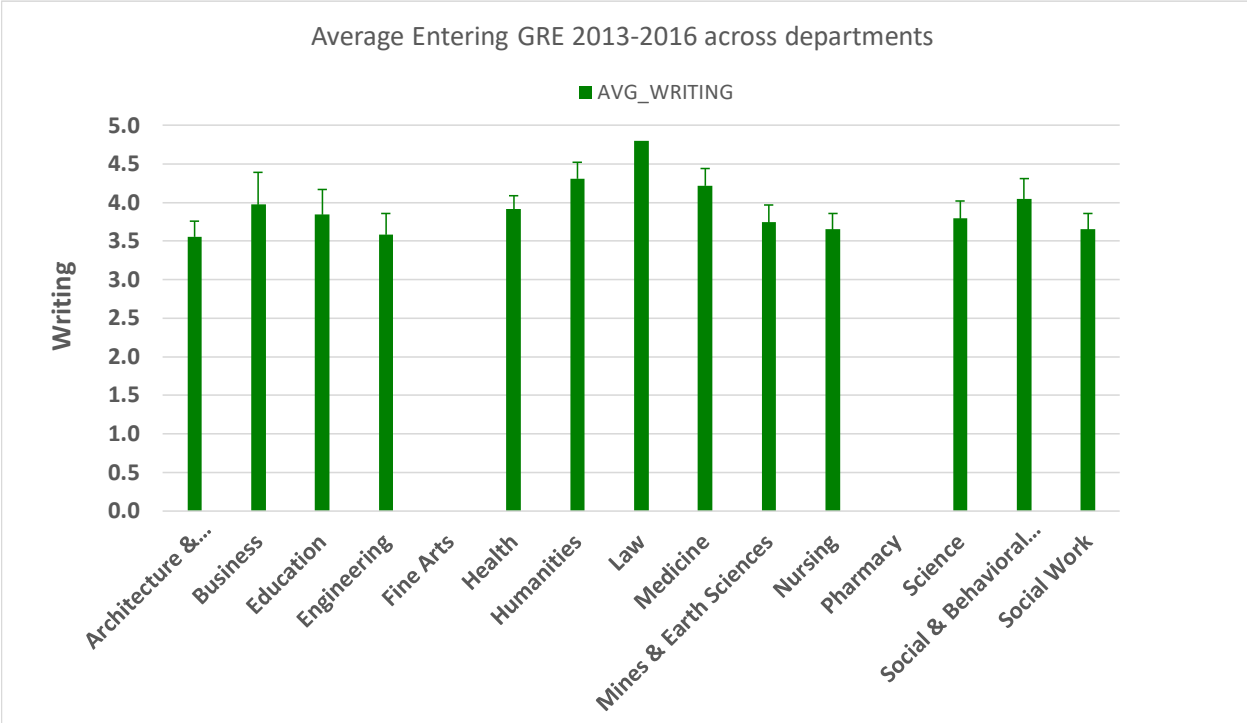**Figure 11**. UU race/ethnicity demographics. Data from OBIA.
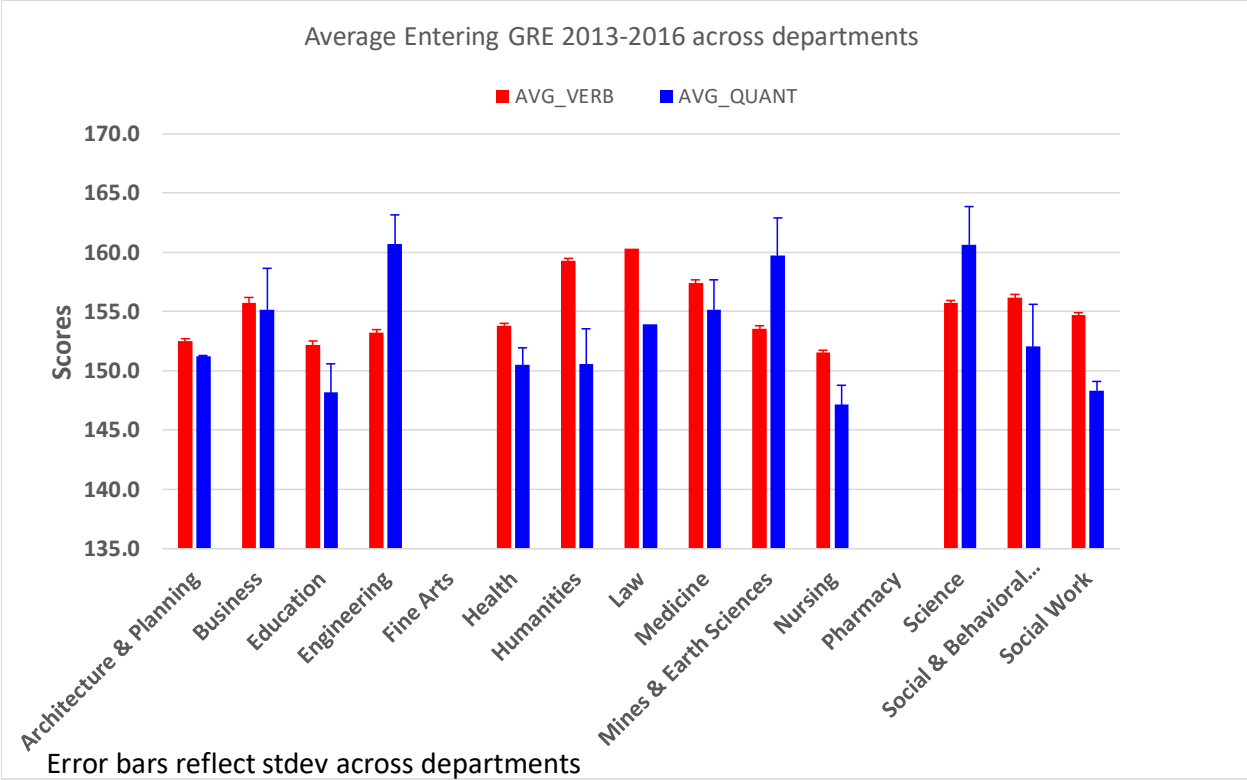
Figure 12. Average GRE scores by college for entering graduate students. Verbal and quantitative (top), writing (bottom), with error bars denoting standard deviation across departments within a given college. Data from OBIA.

6th year Doctoral graduation rate (2005-2006 through 2009-2010)
Proportion of students graduated within six years of entering graduate program

Error bars reflect standard deviation across five years

Figure 13. Six-year completion rates (percent of candidates completing within six years of initial date of entry) by college for the period from academic year 2005-2010 to academic year 2009-2010. Error Bars denote standard deviation across the five-year period. Data from OBIA.

Figure 14. Online survey quantitative average response from each college as series. Error bars denote standard deviations for each college.
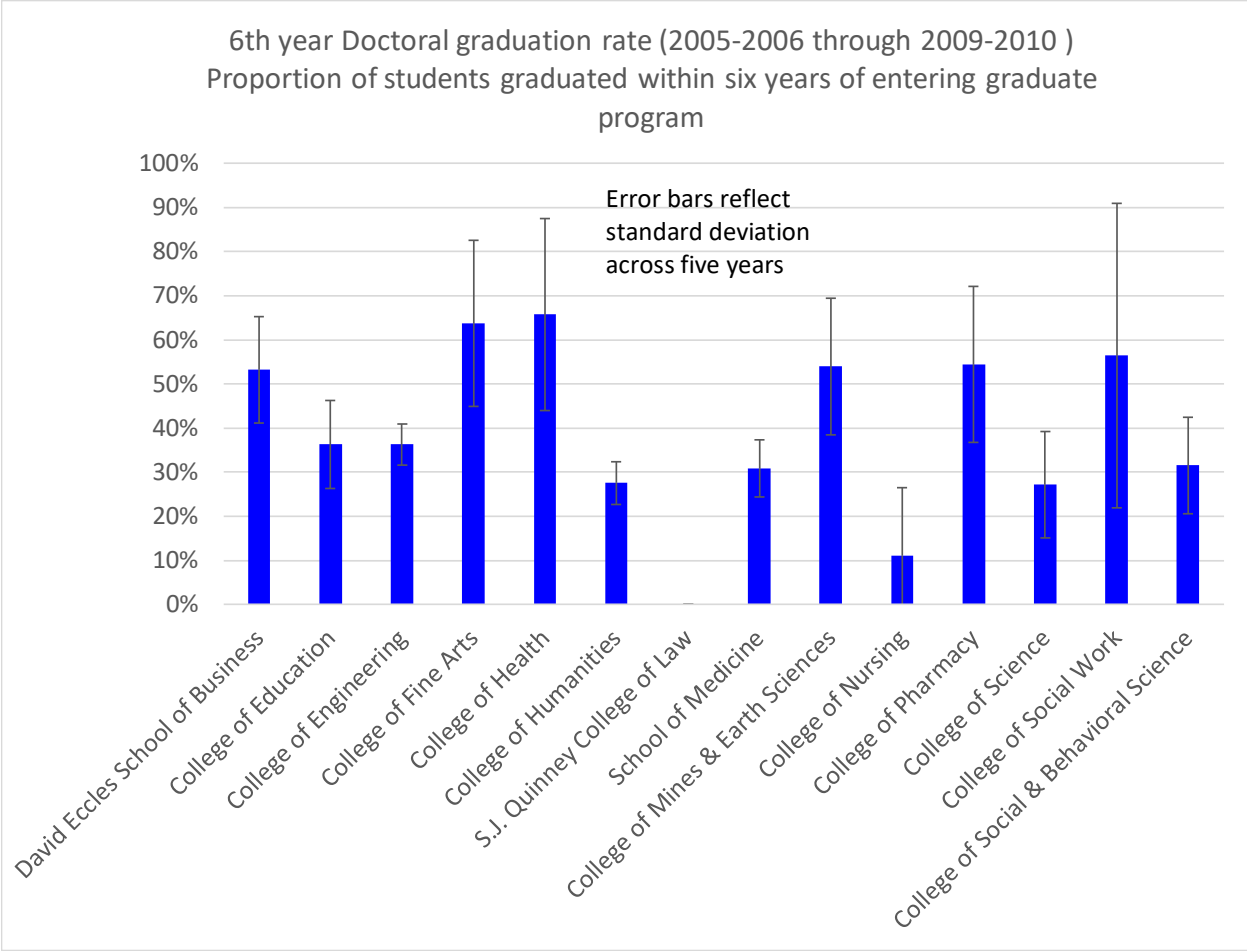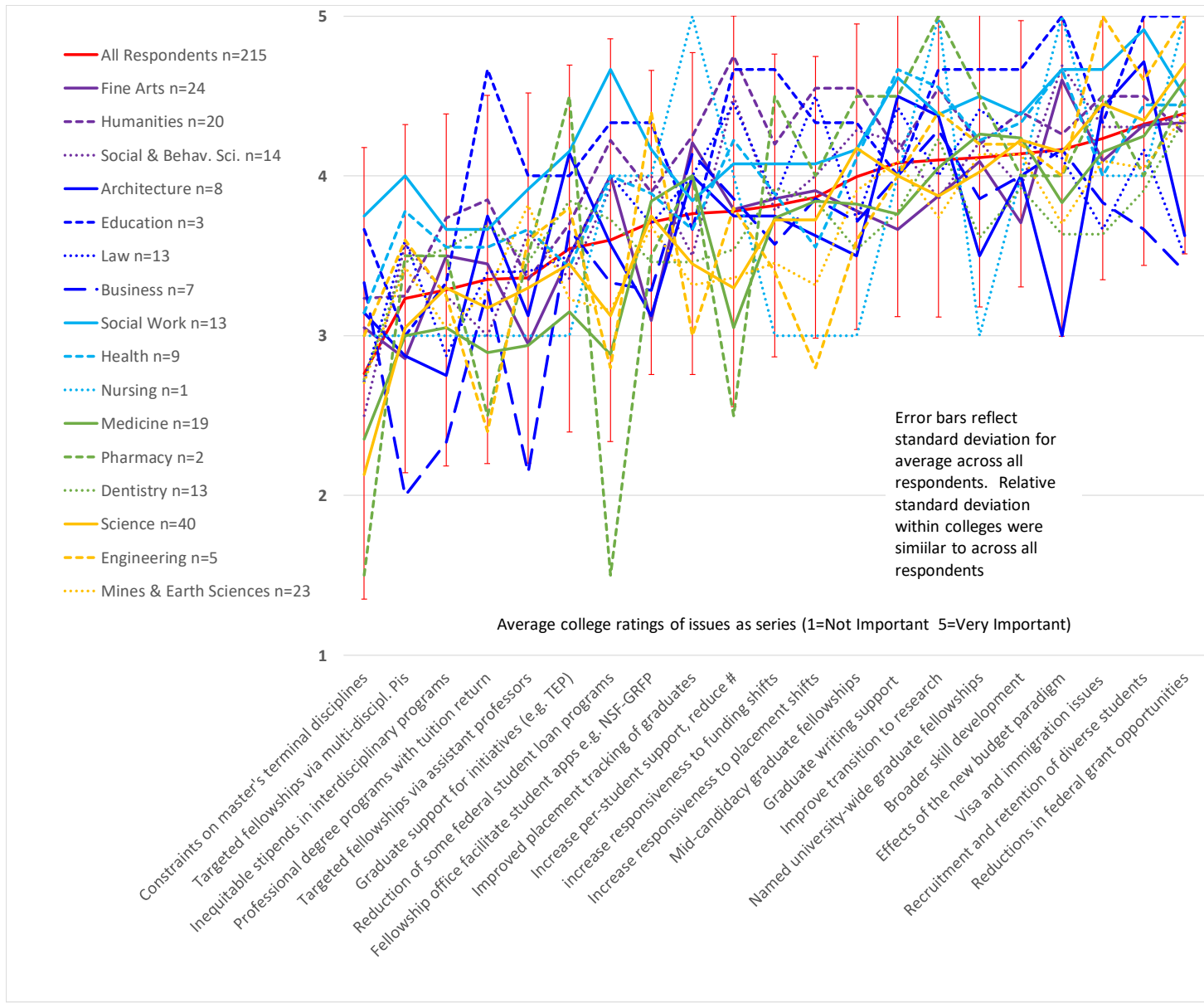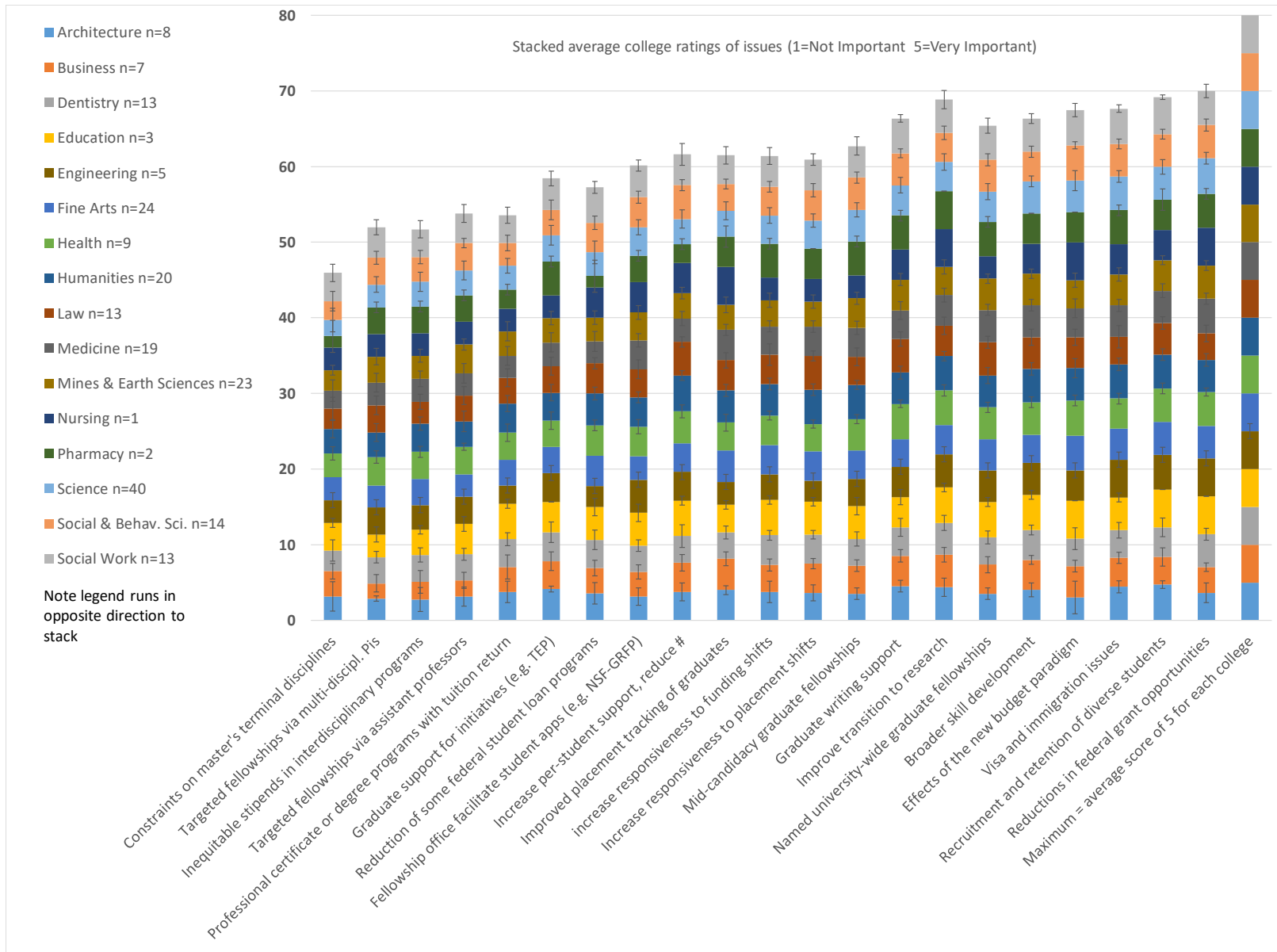
The chart legend contains the following series:
- All Respondents n=215
- Fine Arts n=24
- Humanities n=20
- Social & Behav. Sci. n=14
- Architecture n=8
- Education n=3
- Law n=13
- Business n=7
- Social Work n=13
- Health n=9
- Nursing n=1
- Medicine n=19
- Pharmacy n=2
- Dentistry n=13
- Science n=40
- Engineering n=5
- Mines & Earth Sciences n=23

Error bars reflect standard deviation for average across all respondents. Relative standard deviation within colleges were similiar to across all respondents

Average college ratings of issues as series (1=Not Important 5=Very Important)

X-axis categories:
- Constraints on master's terminal disciplines
- Targeted fellowships via multi-discipl. Pis
- Inequitable stipends in interdisciplinary programs
- Professional degree programs with tuition return
- Targeted fellowships via assistant professors
- Graduate support for initiatives (e.g. TEP)
- Reduction of some federal student loan programs
- Fellowship office facilitate student apps e.g. NSF-GRFP
- Improved placement tracking of graduates
- Increase per-student support, reduce #
- increase responsiveness to funding shifts
- Increase responsiveness to placement shifts
- Mid-candidacy graduate fellowships
- Graduate writing support
- Improve transition to research
- Named university-wide graduate fellowships
- Broader skill development
- Effects of the new budget paradigm
- Visa and immigration issues
- Recruitment and retention of diverse students
- Reductions in federal grant opportunities

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Figure 15. Online survey quantitative average response from each college as stacked bars. Error bars denote standard deviations per college.

Appendix I. Synthesized "raw" notes from town hall meetings

1. **Stipend support is low** (noncompetitive regionally and nationally – for example, in CSBS, Fine Arts, Molecular Biology), **but making programs smaller will make them nonviable** – there is a minimum number of graduate students needed to support, for example, a theater company and production crew, or regularly offered graduate seminars within a doctoral program.
- Some programs have already made these adjustments and further adjustments would be problematic.
    - For some programs, the low stipend hurts recruitment and retention efforts due to the high workload and low compensation. This delays time to degree.
    - In other cases, programs that have been mandated to increase stipends have had trouble doing so without support from the Graduate School to handle the increases – critical mass is threatened. This seems particularly to be the case in the College of Fine Arts, but also has been reported by other units that need to maintain critical mass to offer a rotation of advanced graduate seminars.
    - Summer support and fifth-year support would be very helpful.
    - Ability to guarantee four years of support is very important in recruiting PhD students.
    - **In addition to thinking about the amount of stipend, it is important to think about what students have to do to earn it (research versus teaching), with implications for equity, time to degree, and attrition.** These issues also affect the quality of undergraduate education as there are fewer TAs if graduate students are enlisted to serve as GIs for increasingly large courses.
    - Support for University-wide graduate fellowship if fellowships were distributed equitably across units
        - Some units were fine with the idea that people might be compensated differently, whereas others (e.g., business) thought this would harm morale
        - Faculty pointed out that stipends already differ by workload needed to earn them
        - Strong resistance from some to setting aside fellowships to support TEP/cluster hires, enthusiastic support from others
        - Faculty in interdisciplinary master's degree programs said those programs do not necessarily get an equal shot at supporting their students
    - Some programs suggest greater support for 1st- and 2nd-year graduate students (see comment #2)
    - Suggest that support for graduate students be integrated into faculty startup packages, rather than earmarking fellowships to attract graduate students to work with junior faculty
    - Several process-oriented suggestions regarding graduate support and budgets
        - Greater transparency in budget distribution for TAs – how is it related to graduate enrollment?
        - Greater need for consistent and stable funding for graduate students
        - Integration of stipend considerations for core and interdisciplinary programs into the annual process for budget and steering/executive committees in each department to consider earlier in the year
    - For some units, a differentiation between MS and PhD stipends might be considered, whereas in other programs, these are the same students.

- Tension in need to compete externally for best students but not to create inequitable stipends among students in the same interdisciplinary program
  - One town hall participant noted, "High achieving programs such as the Neuroscience Program must compete externally for the best students. Stipends are typically set by these considerations, not by the ability of internal competitors to support students."

2. **Greater centralized support from the Graduate School for tracking graduate placement outcomes**, maintaining communication with graduates, potential fundraising.
   - Suggestion: Allow students to keep their University of Utah email addresses.
   - Would support the creation of training grants to have access to these data
   - Helps make the argument to legislators, donors, foundations, and prospective students that doctoral education is valuable
   - Link questions on a university-wide exit survey to strategic planning goals of the Graduate School with respect to inclusion, climate, student outcomes.
   - If there were a way to collaborate with alumni association, this seems very helpful.
   - It was brought up that UCSF has a strong grad school alumni association
     - Need to think of how the alumni association serves grad students to incentivize joining and responding to surveys, etc.

3. **Greater support for recruitment and retention of diverse graduate students.**
   - Recruitment
     - Travel support for underrepresented students to visit campus
     - Fellowship support for underrepresented students – competitive packages require multiple years of support, including one or two years of fellowship support without teaching expectation. Availability of dissertation-year support also a major factor in recruitment success.
     - Graduate School could assist with recruitment at historically black colleges and universities
     - Greater support for Summer Research Opportunity Programs
     - Graduate School needs to facilitate diversity recruiting
     - Requiring separate diversity funding application by the student is a barrier
     - That the diversity stipend serves as replacement rather than incentive funding limits its value
     - Need more than a single minority fellowship
     - If attracting minority students is a priority then more resources are needed to attract them
     - Consider enhanced graduate student housing? Possible donor interest
     - More underrepresented ethnic minority faculty are needed to improve recruitment of underrepresented minority graduate students
     - Take an even broader approach to outreach to underrepresented ethnic minorities and economically disadvantaged prospective graduate students by reducing financial barriers to application and participation in graduate programs
   - Retention
     - Graduate School could host monthly lunches or dinners for underrepresented students and faculty to promote a sense of community and to foster mentorship.

- This would be especially helpful for students and faculty in departments where they are extremely underrepresented.
- Provide childcare for evening events or make sure these important mentorship and networking events occur during the workday.
  - Support funding for TAs for faculty in Ethnic Studies and Gender Studies – they do not have their own graduate program, but they play a key role in mentorship of underrepresented students.
  - Offer professional development training in how to navigate academia – for example, how to interact with a professor when serving as a TA.
  - Conduct exit survey (even better, ongoing surveys) of inclusion and climate in conjunction with graduate placement tracking.
  - Expand support for active Graduate Student Associations to provide social support and networking opportunities for underrepresented students and for international students
  - Greater coordination and communication between main campus and Health Sciences on diversity recruitment and retention would be helpful.

4. Far and away, **greater support for writing** was most frequently suggested improvement, including making these and other professional development services available to distance students.
- Continued expansion of briefer formats like workshops and boot camps that do not require a semester-long commitment.
- Continue summer writing courses for graduate students, with good compensation to instructors. Incentivize faculty in these programs to support writing programs – the demand is greater than simply service.
  - Consider supporting a Faculty Writing Fellowship to provide discipline-specific writing support to graduate students in a particular department.
  - Encourage and support departments in creating their own writing workshops.
  - [*References a proposal submitted for comprehensive campus-wide writing support – might be worth our finding this and reviving it*.]
- Consider year-long interdisciplinary research clusters and writing groups (limited to 8-10 students and faculty, with modest financial support – i.e. $2K – for the purchase of books and refreshments, hosting invited speakers, etc.). Successful program at UC Santa Cruz noted. A topic such as displacement that cuts across multiple fields would maximize learning opportunities and foster the development of skills in communicating to people from multiple disciplines.
- Professional development training on the presentation of research ideas to a diverse audience.
- Encourage doctoral programs to integrate writing and professional speaking into their activities and requirements.
- Professional development training in the preparation of job application materials (research and teaching statements, cover letters) over the summer to prepare students for job application season.
- Encourage greater integration between writing support and the expectations of the Thesis Office.
- Commission faculty in English, Rhetoric, and related disciplines to create a concise guide of the top ten strategies for more effective writing and make this information available to all graduate students and their advisors.

5. **Changes to the timing of distribution of graduate school travel funds** were strongly encouraged. Have three funding cycles so that people in fields whose major conferences do not issue acceptances until later in the year are able to fairly apply for funding.
- The $400, even with matching, does not cover full cost of travel.
- Consider sliding scale to reflect differences in departmental resources to provide the match, disciplinary differences in the costs of registration fees.
- Taxability of travel funds creating problems for students.

6. Help colleges create **efficiencies in graduate training** for courses like stats and methods, so that each unit does not have to staff its own very small course.

7. There seem to be potential staffing shortage in the T**hesis Office**, and some sense that there is "mission creep," with wordsmithing and other seemingly unnecessary changes.
- Thesis Office should be evaluated critically in terms of cost-benefit related to time to completion.
- Time to defense vs. time to degree can be drastically different, sometimes because of thesis requirements.
- Deadlines are misleading – if this degree of oversight is required and delays cannot be improved, require earlier submission to prevent delays that impede employment and awarding of degrees.
- Faculty wondered how thesis standards might have evolved with trend toward electronic publication now that microfiche is not an issue.
- These concerns arose from faculty across campus and seem to be strongly held.

8. **Differential tuition poses a barrier to students who wish to take classes across campus and impedes the interdisciplinary training** focus of many programs. It is also proving to be a barrier to the development of new programs.

9. **Support for graduate placement and career development training**
- Some units seem to have placement staff to assist graduates – could this be merged with support for internships?
  - Provide meaningful, non-stigmatized support for students pursuing public or applied work or any other opportunities outside of the academy. (Faculty are not suited to this task as few work outside of the academy.)
  - Consider special job-placement needs of international students.
- **Centralized support for internship programs and the infrastructure to support them**
  - Fellowships to allow students to broaden experience or expertise.
  - Administrative TAships (grant writing, events, development, outreach) etc.
    - Students given real responsibility, experience while progressing towards degree
- Request for Career Development Programming
- Resources for training grants T32

10. Some units considering **fee-based master's degree programs** – business, psychology, Fine Arts
- Development of professional training programs- for example, those involving science training (i.e. bioethics, but would also be issue as Digital Humanities grows, possibly Environmental Humanities)- have **structural barriers** since credits need to be taken in other programs.

- **These programs are not only potential sources of revenue but also provide important training to serve community needs and serve industry demand– for example, Master of Software Development and Master of Fine Arts in Teaching programs**
- Provide greater summer support for faculty to teach in these programs or consider these credits as counting toward yearly workload
- Provide course releases or summer support to faculty who are developing new training and degree programs
- Some new programs have 10% return on tuition back to program – not enough to grow.
- Other units do not have enough space or current faculty to pursue these certificates or degrees.

11. With respect to **support for fellowship applications** (e.g., NSF), do not hire another administrator; instead, pull faculty from each unit to advise. Create resource of best practices for applying for NRSA, NSF.

12. Develop **Graduate School strategic plan for lobbying legislature for greater funds for graduate training**, while at the same time providing greater support to those who are trying to generate revenue through fee-based master's degree programs, grant activity, or industry partnerships
- Graduate School needs to take the lead in **outreach, marketing the PhD outside academy**— articulating what skills and values it can bring to non-academic positions (like humanities campaign). Students also need to be trained to do this.
- Central role in marketing graduate programs: The overall sense was that the Graduate School could help by playing a central marketing role for the University. The Graduate School could coordinate all of the graduate program information so that prospective students recognize the U as an attractive venue for graduate study. Regardless of discipline, this is the place for graduate study; that should be the consistent message coming from the Graduate School.
- Greater support for marketing and promotional materials, website profiles for graduate programs.

13. **Communication and coordination – Graduate School could serve as a hub for resources on best practices (workshops, web resources)**.
- Make greater use of the RATS training
- Best practices for recruitment and retention of underrepresented minority graduate students
- Provide easily accessible **central calendar for training and professional development activities** across campus (improving access for Health Sciences and distance students)

14. **Revise or remove limits on tuition benefits for students entering with a master's degree program** make our PhD programs much less attractive to students who hold a master's degree. There is no way for them to finish in the years of support provided, and the completion of a master's degree in several fields does not speed acquisition of the PhD. This also poses a barrier to underrepresented students who may be more likely to acquire a master's degree before applying to doctoral programs. It was noted as a problem by multiple programs in CSBS, the School of Medicine, Neurobiology and Anatomy, biosciences, Oncological Sciences, Physics and Astronomy, Chemistry, and Pharmacy.
- Tuition benefit limits also impede the pursuit of highly marketable dual degrees, for example, Master of Public Policy with a master's degree or a PhD in another field, or MBA plus PhD in another field.

15. **Adverse impact of new funding model** for productivity funds on graduate training

- Drastic reductions in funding received, despite success in SCH, majors, and graduates
- Master's-only programs especially affected, as they do not have majors, and because they draw on the faculty for multiple home departments, do not retain SCH-based funding for graduate courses. These interdisciplinary master's degree programs, such as MPP, MPA, MIAGE, Bioinformatics, or Gerontology, are highly successful, but this success is threatened by the new budget model.

16. **Survey graduate students with respect to their training and placement needs (and health insurance needs).**

Other Concerns
- **Stipends**
  - Attention to equity issues in interdisciplinary programs – for example, graduate stipends differ widely among students in Neuroscience. There may also be equity issues between main campus and the Health Sciences.
  - Suggestions for an automatic increase in cost of living rather than large jobs every few years.
- **Time to Degree**
  - Getting students completed in five years is a major concern for NIH training grants. Will see whether changing preliminary exam schedule pays off on completion times. Difficult to balance benefit of the "big" paper against speed of publication in second-tier journals.
  - Ask for help in terms of Graduate School requirements to shorten time for students to complete their preliminary exams and thus facilitate the transition from coursework to research.
- **Space**
  - In Fine Arts, this request related to extra space and funding for showcases and recitals.
- **Professional Development**
  - Idea for professional development programs on work-life balance in academia and outside
- **Graduate School Policies and Services**
  - Concern regarding cap on the number of credits that graduate students can take per semester vis-à-vis accreditation requirements for particular programs like clinical psychology PhD program.
    - Clinical students have so many courses they are required to take. Clinical courses are listed as one or two credits so that students can fit under the limit, but these classes should actually be listed as three credits. This creates problems with different state licensing boards for practicing clinical psychologists, as students then cannot show on their transcript that they actually completed a three-unit course.
  - Need greater flexibility in GPA cutoff for international students who have strong test scores
    - Concern regarding nonrecognition of three-year undergraduate degrees and 13th year in particular education systems, like Norway's.
  - Slow processing of student visas potentially due to high turnover
  - Lack of stipends and fellowships to support training for international students who are not eligible for NSF for NIH training funds
  - Greater administrative oversight regarding thesis/project requirements for doctoral programs in the Health Sciences and policies regarding committees, etc. – there seem to be some differences of concern to faculty.

- **Advisors**
  - Some programs suggested that a Graduate Faculty status designation might help impose quality control undergraduate advising.
  - Greater training offered to graduate program advisors regarding Graduate School requirements.
    - Offer online materials for one-stop shopping
    - Identify places where the graduate tracking system does not map on well to the degree progress metrics used in a particular program – it seems to be based on a natural science or engineering training model that doesn't necessarily fit other fields well
- **Apply Yourself**
  - Students can't upload portfolios
  - A self-reported GRE may still yield a warning that a score is missing or that the application is incomplete
  - Utilize Apply Yourself data to show trends in the University
- **Graduate Student Resources**
  - A few respondents emphasized greater availability of information about graduate student mental health resources and social opportunities.
- **Graduate Student Benefits**
  - Cost of postdoc health benefits are an issue if there are dependents
  - The suggestion was to do this as a benefit pool, so that there is a uniform rate per postdoc. This would mean lower admin effort and more equity.
  - Several open-ended responses to the survey mentioned health insurance concerns but without specifics.
- **Tuition Benefit Program**
  - When students go off of TBP, they disappear from the system. This should be addressed.
  - What about students who can provide their own stipends? This may be an issue for international students.
  - Suggestion: TBP flexibility to allow partial use of a student's TBP funds (rather than all or nothing) when they receive external tuition support. The current process is time-consuming and at risk for human error. A software update to allow a student to only use, say 50% TB would reduce potential human error (e.g. put student on TBP and then remember to reimburse the system from grant later)
  - Explore ways to allow for registration for half semester in cases where students have exhausted their waiver, but defend early in a semester.
- **Other**
  - Coordination of event calendars, particularly seminars. This could be done centrally, i.e. by the Graduate School. This came up repeatedly from our faculty; they feel that information about campus-wide events relevant to them (seminars) is not readily available.