

**Report for UCAPP
Graduate and Professional Education Domain Subcommittee
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Introduction

In the course of our subcommittee discussions, it became clear that each of the 7 professional colleges have unique needs, missions, and priorities. All of these, in turn, are different from the Graduate School's. The subcommittee as a whole did not feel we would do justice to the specifics of each of the professional colleges in this report. We were particularly concerned that we could not speak for the professional colleges not represented on the subcommittee (Pharmacy, Nursing, Public Health, and Health Sciences). While some issues in this report pertain to educational issues across both graduate and professional missions, our subcommittee agreed that the strategic plans for each of the professional schools would better express the unique needs within those schools. We direct readers to the educational/student section of these strategic plans for serious consideration of needs in professional education.

To prepare this report, several resources were utilized. Administrative offices provided data on TA stipends within representative academic units (Anthropology, Chemistry, Communication, Computer Science, Economics, English, History, Music, and Psychology) relative to benchmark institutions; these are summarized in [Appendix I](#). For some representative professional schools (Dentistry, Law, Medicine, Pharmacy), data were summarized comparing tuition expenses and scholarships awarded at UK to benchmarks; these are summarized in [Appendix II](#). Within these units, the subcommittee also interviewed directors of graduate studies (DGSs) or Associate Deans to obtain answers to the following questions: (1) why do students select UK? (2) Who are your 5 competitors? (3) Why do you lose recruits? (4) What is the number one issue in recruitment? (5) Do you have any success stories in recruitment? (6) What are you doing to expand diversity? (7) What should the administration do to enhance recruitment of top students? (8) Are you looking to enhance the number of entering students? (9) What would it take to increase the size of your program by 30%, assuming faculty size increases? (10) How can you increase the size of your applicant pool? Answers to these questions have been integrated into this report and a full summary is provided in [Appendix III](#).

Our recommendations below are color coded: **Red** for relatively quick, inexpensive fixes of problems and **blue** for longer term solutions.

I Recruitment

The first two charges for the subcommittee read as follows:

- (i) Conduct a review of benchmark practices concerning stipends for assistantships and fellowships, tuition waiver or scholarship practices for graduate and professional students and workload for graduate assistants. Make recommendations for adjustments to achieve programs competitive with the Top 20; and
- (ii) Assess the factors which are hindering programs from growing graduate and professional enrollment and propose answers to those hindrances.

There is little doubt that the most important single factor for enhancing program growth and strength rests in recruiting more high-quality students. Since many potential applicants are in the same pool from which our benchmark competitors draw, the subcommittee is concerned about the competitiveness of the UK graduate programs, in terms of graduate student support—teaching assistantships (TAs), research assistantships (RAs), and graduate assistantships (GAs), as well as fellowships. The subcommittee recognizes that recruiting and retaining top graduate students is critical to faculty recruitment, retention and research, as well as to the national and international profile of our programs and to the educational experience of our undergraduate students. Therefore, in terms of keeping the university on a par with its competitor universities, as well as benchmarks (see Appendix I), the subcommittee set as a desirable goal that TA stipends reach the level of the benchmark median stipend plus 20%. In addition, the subcommittee discussed the need for a greater number of fellowships, as well as RAs, given the growth plans of the university.

Across the various graduate and professional programs, the subcommittee discovered that there is not unanimity regarding the university's goal to increase the number of advanced degrees awarded. Some graduate programs are more concerned about increasing the quality, rather than the quantity, of students, especially in disciplines with limited job opportunities. However, most graduate programs invite the challenge of increasing the number of students if additional faculty lines, assistantships and infrastructural support (offices, laboratories, etc.) were available.

Similarly, there is no unanimity across professional schools with regard to the university's goal of increasing the number of advanced degrees. For example, the Law School has no immediate plan to increase class size, whereas Medicine and Pharmacy could increase the class size contingent on having more building space with laboratories and classrooms, which are in the planning and development stages. However, a common theme among the professional schools is a desire to hold tuition at or below the median of the benchmarks, and there is a sense that we are losing ground in this area. As a case in point, in the College of Medicine, UK in-state tuition relative to the benchmarks has gone from 87% in 2000-01 to 94% in 2005-06. Within this same College, the out-of-state tuition is now \$44,660, which exceeds the tuition at many prestigious private schools (e.g., Vanderbilt tuition in 2006-07 was \$34,900). A major problem with this trend is that the increase in tuition has not been offset by a comparable increase in scholarship money. Increasing scholarships is an important goal to enhance recruitment in the professional schools.

Graduate recruitment and quality of life

In our in-depth interviews with DGSs (see Appendix III), there was a need expressed to provide easy-to-use template materials for recruitment – web page templates, program sheets and other handouts. Up-to-date web pages are a clear necessity, and departments must pay for web services or do them in house. Above all, there needs to be a centralized technical and design team available to the programs for developing state-of-the-art recruitment materials, both web-based and printed.

DGSs also felt that another general problem in recruiting related to the unfamiliarity of applicants with Kentucky as a state and Lexington as an urban area. We need to stress the cultural, artistic, and social life of Lexington and the natural beauty of the Bluegrass in our materials, and we need to bring more students to Lexington so they can see for themselves. As a part of this process, programs need more money for bringing recruits to campus earlier in their undergraduate careers. Since applicants consider matters related to their quality of life, UK should strive to improve the quality of life. Some suggestions along this line include having campus buses run during university breaks, providing on-campus evening childcare at discounted rates for full-time students, providing storage lockers for semester rental in central campus areas, establishing a quiet computer lab/work area in central campus for graduate and professional students which is open evenings, and creating a film series for graduate and professional students.

TA stipends

UK's TA stipends are substantially below those of the official university benchmarks (see Appendix I). The Graduate School and the College of Arts & Sciences are carrying out an extensive survey of benchmark stipends in all programs. An interim report is currently available from the Dean of the Graduate School, and a final report will be submitted to the Provost Office in April 2007. Data gathered to date indicate that our TA stipends are below the average stipend in 15 representative departments (well below in 13 departments), and above in 4 departments. A preliminary analysis indicates that UK stipends as a whole are approximately 15-20% below benchmarks. In order to recruit effectively, we need to have competitive stipends. We also need to attract the best to teaching so that we can best serve the increased undergraduate population.

While TA stipends at UK generally lag behind the benchmarks, more parity is evident when viewing the "fringe" benefit packages attached to the stipend. In particular, like the benchmarks, UK is able to offer health insurance and tuition remission. A comparison with the benchmarks also indicates that UK is on parity based on the workload requirement attached to the assistantship. Thus, it seems clear that our effort to enhance competitive recruitment packages to strong applicants should concentrate on the stipend level, rather than the associated fringes.

RA stipends and tuition scholarships

The subcommittee identified several ongoing problems with RAs. The first is the lack of available RA funding sources for the arts and humanities. Currently a limited number of graduate assistants are made available through the Graduate School for conference and journal support, and for a very few faculty recruitment/retention packages. We need a consistent, competitive process for awarding RAs for highly

productive faculty and programs in the arts, humanities, and in those social sciences where funding sources are not typically available.

The University must also address directly the problem of granting agencies that do not allow tuition charges for RAs. These RA positions are typically on grants from the state, and to a lesser extent from some federal agencies and private foundations. Since this problem affects certain departments and colleges more than others, we need to have a consistent plan for funding or partial funding of tuition in these instances. The ad hoc tuition scholarship award arrangements instituted under the last Provost do not address the root of the problem, which is the need for a consistent policy on tuition disbursements. This policy formation needs involvement of the Provost, the Graduate School, the deans, and the programs. The state needs to be made aware of this “unfunded mandate.”

Funding packages for top students

UK could improve recruitment if it could create or match multi-year packages for top students. Programs would like to do this, but fear the consequences if they over-offer with meager funding. The departments need guidance in how to make such packages in a fiscally responsible way, in collaboration with the college dean and the Dean of the Graduate School. The Provost Budget Office and Graduate School could give workshops or one-on-one advice about creating and maintaining these packages. The Dean wants to create an “over-offer” fund so that programs offer 10% more funding packages than they have, so they can recruit the top tier of each pool. Right now, many smaller programs offer only the exact amount of funding they have available, and they often lose out on the second tier by the time they have received refusals. An over-offer fund, to be reimbursed by a reduction in admissions in the next class, would be a cost-effective solution to this problem.

DGSs and the Graduate School want full funding of tuition and ALL fees for funded students. Right now students (or sometimes the departments) must pay \$430 in mandatory fees not covered in our payment policy, and this is confusing and a disincentive to our best recruits when they arrive. The Graduate School has put this forward as a funding request for FY 2008.

Fast track Recommendations:

- ***Identify or establish a technical design team on campus to develop integrated recruitment templates for program use.***
- ***Provost Budget Office and Funding Office in the Graduate School should give departments guidance in how to make multi-year packages in a fiscally responsible way, in collaboration with the college dean and the Dean of the Graduate School.***
- ***Create an “over-offer” back-up fund so that programs can offer 10% more funding packages than they have, so they can recruit the top tier of each pool.***

Longer Term Recommendations:

- *Bring stipend amounts for nationally-competitive programs to the average annual stipend of the benchmarks by 2010 and bring those stipends to the average plus 20% by 2012. This goal should not be an across-the-board increase, but should target top and growing programs as outlined in the next recommendation.*
- *Increase TA stipends in programs that meet at least one of the following criteria:*
 - a. *Departments with doctoral programs ranked among the top quartile among public research universities, followed by those with potential for attaining top 20 status.*
 - b. *Programs that contribute to one or more of the following goals set in the 2006-2009 strategic plan:*
 - i. *increase UK's capacity in undergraduate enrollment in the knowledge economy, particularly the STEM disciplines, civics, and global studies*
 - ii. *internationalize the university through graduate student body population or subject matter*
 - iii. *enhance the diversity of the university through their graduate student body*
 - iv. *increase the number of minority degrees.*
 - c. *Departments in which TA stipends lag far behind RA stipends and thus create a two-class system between research and teaching, devaluing the instructional mission.*
 - d. *Interdisciplinary degree programs that show promise for national visibility.*
- *Adjust TA stipends to a 2-tier system for TA stipends, with experienced TAs earning 10% more than beginners.*
- *Funding packages for all assistantships should cover all fees.*

II Diversity and Internationalization

The third charge to the subcommittee read as follows:

- (iii). Review relevant UK reports and national best practices with regard to achieving UK's diversity goals pertaining to student recruitment and retention.

Based on a survey of the benchmark institutes and the institutes immediately above UK's goal of being a top 20 university by 2020, the subcommittee notes that UK suffers from an inadequate infrastructure for minority recruitment and retention. Where infrastructure is present at UK, the student diversity message is not consistent across colleges and departments, and benchmarks and goals are not readily identifiable. A number of the 2020 benchmark institutions have longstanding graduate and undergraduate minority student programming and infrastructure as highlighted in their report subsections. What also continues to hinder progress in this arena is the inadequate diversity among members of the faculty and administration.

While UK has strived to increase African-American enrollment in undergraduate and graduate programs, it has lagged behind in increasing Hispanic and Latino students. This is an area of great opportunity and potential. Nationally, this is the fastest growing student population. Kentucky's largest counties (Jefferson and Fayette) have a substantial proportion of Hispanic or Latino students. Hispanic students will represent the largest and fastest growing minority group graduating from high schools in the Commonwealth. Promoting increased Hispanic student diversity is intimately tied to attaining UK's top 20 aspirations with respect to graduate and professional recruitment, retention and graduation goals.

One of the best ways to address diversity in graduate and professional schools is to develop and utilize the undergraduate minority pool already available. Undergraduate research training programs should be developed that train and prepare the local minority undergraduate population that have interest in pursuing graduate and professional degrees at UK or other institutions. This could be accomplished by establishing a mentoring program, as well as by organizing graduate and professional school preparatory workshops and bridge programs that facilitate the transition from undergraduate school.

With regard to graduate education, one idea is to involve minorities in research training in the last two years of undergraduate matriculation. Such training could be used as a stepping stone for guaranteeing admission into a graduate program if the student meets the graduate program requirements. Tuition reimbursement for the last year of undergraduate enrollment could be offered to students who enroll at UK for graduate or professional education. Funding for these programs can come from a mixture of institutional and extramural funds, such as grants through the NIH-national institutes of general medical sciences, institutional minority student development and NSF grants that promote increased diversity in the sciences, technology, engineering and mathematics or STEMS fields.

Within the professional schools specifically, diversity continues to be a consideration for recruitment. The Law school is planning to work with the two other law schools in the state and the Kentucky Bar Association to increase the minority applicant pool by initiatives directed at high school and college students. The Law School also recognizes its responsibility to prepare students to practice in the global economy and it has increased its international trade and international law offerings. There is also a plan to establish student and faculty exchange programs with law schools in other countries. The professional schools in the biomedical fields (Medicine, Dentistry, Pharmacy, Nursing, Public Health and Health Sciences) have also had some success in promoting diversity, but a major obstacle has been the availability of scholarship money to compete with other schools to attract the best and brightest of the minority pool. An adequate

scholarship fund is essential to enroll well qualified minority applicants into the professional schools.

Across the entire university, it is critical that faculty, administration and the current minority students on campus be actively involved in the process of increasing diversity in the graduate and professional programs. To that end, both faculty and administration should be rewarded for innovation to reach this goal. This could be facilitated by the creation of diversity mini-grants to fund innovative ideas, including travel support for students interested in increasing diversity. Faculty should be rewarded for applying for training grants to help increase graduate diversity, as well as for traveling to and presenting at historically minority institutions and meetings. Finally, while the most apparent need is on expanding racial and ethnic diversity, it should be noted that the goal of increased student diversity should include indices related to geographical and economic diversity, as well as disabilities, independent of race and ethnicity.

Fast track Recommendations:

- ***Establish a centralized web-based information portal for minority students.***
- ***Establish a standing committee of current minority students for the specific purpose of developing and disseminating ideas that could increase diversity at UK.***
- ***Fund minority students to give research presentations at their undergraduate institutions.***
- ***Review and update personal connections with undergraduate minority program coordinators and undergraduate advisors at HBCU's and Hispanic student serving institutions.***

Longer Term Recommendations:

- ***Establish a mini-grant program with the goal of spawning innovative ideas toward increasing student diversity.***
- ***Stage an annual showcase research conference for minority students at UK.***
- ***Increase the amount of diversity fellowships with an emphasis on first and second year support; the LTJ fellowships should be at least equivalent in support with other university wide fellowships.***
- ***Organize a summer research program for minority students after the sophomore year in order to groom them for entering a graduate or professional school at UK.***
- ***Increase the diversity among faculty and administration.***

III Research Productivity and Scholarship

As a PhD-granting Research I university, it is imperative that UK students in good standing receive adequate research support toward timely completion of their dissertation. The subcommittee recognizes that there is a wide variance in the amount of research support needed by students across disciplines. For students in the physical and life sciences, research productivity is often tethered to grant or contract awards to their primary faculty mentor. In other disciplines, however, such as in the arts and humanities, students must find creative ways to fund their research or scholarship. This is especially true for doctoral students who need to make research trips to archives or to conduct field work. Since this travel is initiated typically before the dissertation proposal is prepared, the university needs to consider a competitive research travel fund for such students before the qualifying examination. This is particularly important for projects that require international travel; such trips can lead to external funding possibilities for the dissertation year.

At the current time, electronic submission of dissertations with the Graduate School is voluntary. However, there is no doubt that electronic media will be the future for research dissemination for our students. Indeed, many benchmarks are moving to required electronic submission of dissertations to showcase their students work worldwide. Given that the archive of dissertations submitted to the Graduate School embodies the research productivity of UK students, it seems imperative that UK move toward this goal. Instituting a mandatory electronic submission of dissertations will require electronic support services on evenings and weekends, usually located in the university library or writing center, and will require a position for technical support and help, plus training for the team. It will also require a secure server for the storage of the dissertation.

The subcommittee noted that the Graduate School is already providing some support for graduate student research. In particular, the student support grants for conference or research-related travel expenses are used widely and are appreciated by graduate students; these grants should be enhanced if possible. The Graduate School should also continue the semi-annual “boot camps” to jumpstart stalled dissertations. As a new initiative, the university should consider a voluntary summer roundtable for dissertating students within different disciplines, with expert resources at their disposal.

Fast track Recommendation:

- ***Establish a competitive research travel fund for students before the qualifying examination.***

Longer Term Recommendations:

- ***UK should position itself to require electronic dissertations by 2010.***
- ***To showcase the research success of students, competitive awards should be designated for best dissertation in 4 areas: (1) biomedical sciences; (2) physical, mathematical and engineering sciences; (3) social sciences; and (4) arts and humanities.***

IV Opportunities for Growth

Growth in selected graduate and professional programs will be necessary to meet the UK Business Plan and Strategic Plan goals for increased graduate-level enrollments and increased numbers of doctoral degrees. Multiple tactics will be required to accomplish growth in graduate and professional programs, including ideas presented in other sections of this report. It is the case that not every graduate and professional program should or could expand, and decisions about which specific departments and programs are best-positioned for growth are beyond the charge of this subcommittee. However, identifying specific opportunities for growth should take into consideration present status of programs, societal needs and trends, and opportunities for programs to attain or maintain Top 20 stature.

Within this context, it should be noted that the fourth charge to the subcommittee read as follows:

- (iv). Make proposals to enhance the quality of the interdisciplinary graduate and professional educational experience.

Although identification of specific substantive areas for growth are beyond the scope of the subcommittee charge, the subcommittee was in general agreement that there should be a clear emphasis on targeting cross-cutting interdisciplinary initiatives for growth in graduate and professional training. Such a strategy is consistent with the current climate at funding agencies such as NIH, which has highlighted the need for interdisciplinary and translational research in its “roadmap” initiative. The success of such interdisciplinary training initiatives will hinge closely to the ability to bring together the appropriate mix of faculty experts, combined with leaders who are comfortable with talking across disciplines and overcoming boundaries that can separate disciplines. In addition, in cases where laboratory-based skills form an important part of training, it may be especially important to have mentors from different disciplines working in close proximity. The current set up in the Biological and Biomedical Sciences Research Building (BBSRB) may serve as model for creating such an interactive training environment.

Fast track Recommendation:

- ***Establish a workgroup with the express purpose of identifying specific target areas for growth in the number of graduate and professional degrees.***

Longer Term Recommendations:

- ***Issue a request for proposals based on earmarked funds to encourage programs and interdisciplinary groups with a specific plan to increase degree output.***
- ***Designate new faculty lines as ‘cluster hires’ focused on societal needs or trends that require interdisciplinary collaborations and have the potential to grow student enrollments and degree output.***

- *Institute a direct incentive to faculty who submit a training grant application, with a special emphasis on applications that cross multiple academic units; enhance the incentive if the grant is funded.*
- *Develop innovative summer programs that attract undergraduate students to UK programs targeted for growth. Use these programs to recruit students to apply to UK's graduate and professional programs.*

V Space, Equipment and Infrastructure

The ability to recruit and service graduate and professional students is intimately related to the amount of space available for laboratories, classrooms and offices. In addition, the recruiting of top students is impacted not only by the quantity of space and equipment, but also by the quality. Infrastructure runs the gamut from advising and support staff to the adequacy of computer facilities and connectivity.

While infrastructure needs may vary significantly across disciplines, UK must provide a level of infrastructure that is equivalent to our peers and competitors if we are to attract the sort of student we wish to enroll. In addition, the time-to-completion of the degree may be significantly impacted by infrastructure and UK must be competitive on this dimension. When the representative DGSs and Associate Deans were interviewed regarding reasons UK loses recruits or what it would take to increase doctoral programs by 30% (see Appendix III), most interviewees identified office space, facility space, classroom and laboratory space, and general infrastructure as an issue. Nine out of 13 DGSs and Associate Deans indicated that space and/or infrastructure was a limiting factor in expanding doctoral programs. Thus, space and infrastructure clearly represent limiting factors for growth in programs and degree productivity within the graduate and professional schools.

Fast track Recommendations:

- *Solicit input from representative DGSs and/or Associate Deans regarding deficiencies in space, equipment, and infrastructure to determine an inventory of needs across departments and colleges.*
- *Compile a listing of minimum needs (from each college) regarding space, equipment, and infrastructure for increasing doctoral and graduate student enrollments by 10%, 20% and 30%.*

Longer Term Recommendations:

- *Identify a set of five aspirant peer universities and conduct a benchmarking study of space, equipment and infrastructure resources.*
- *Compile a list of deferred maintenance regarding space, equipment, and infrastructure (in coordination with physical plant operations) associated with the delivery of graduate and professional education across campus.*

- *From the above information, prepare a prioritized activity plan to address deficiencies coordinated with major milestones of projected enrollment growth.*
- *Determine the current costs of the major milestone achievements at the minimal level and the most competitive level.*

VI Retention, Time-to-Degree and Placement of Graduates

Recruitment of top-quality graduate students must be matched by careful stewardship of our retention rates, time-to-degree, and eventual placement of graduates into appropriate career paths. Within the professional schools, this problem is minimal because selection criteria are high, students typically make a considerable financial investment in their training, and students showing problems are allowed remedial training opportunities. However, the problem of attrition is more common among graduate programs. When a student leaves his or her program without a PhD degree, it is a costly event. Based on a report in 2005 from the Council of Graduate Schools (http://www.cgsnet.org/portals/0/pdf/comm_2005_11.pdf), surveys indicate that attrition is greatest among the first 3 years of graduate training. This fact alone indicates that any efforts to improve retention, and ultimately time-to-degree and job placement, should concentrate on the early phases of training.

Across graduate programs, there is a wide range of average time-to-degree graduation rates. Based on national norms provided in the 2005 Council of Graduate Schools report cited above, the fastest graduate rates occur in engineering and the life sciences (median of ~6.5 years) and slowest rates occur in the social sciences and humanities (median of ~9.5 years). Thus, any evaluation of time-to-degree across different disciplines must be standardized to national norms. At UK, the Graduate School has begun a full evaluation of median time-to-degree data for all doctoral programs across campus. Based on preliminary information on those students who finished their degree, median time-to-degree is 4.70 years for UK as a whole; however, this statistic represents only the years from first enrollment as a doctoral student and therefore it does not include time as a master's student. A preliminary analysis of the data available thus far indicates that UK stacks up fairly well against rough discipline-specific national norms. In fact, most humanities programs at UK are finishing students at a more rapid pace than the national norms.

Special attention to retention and time-to-degree needs to occur in the case of minority recruits. On this issue, the subcommittee suggests that the office of minority graduate student affairs should be strengthened, but this is a difficult task because the Graduate School has dissimilar departments spread across the campus. There are a number of national organizations for minority graduate students, and local chapter affiliations and national memberships should be encouraged across departments. Minority graduate students should also take advantage of external funding opportunities including NIH (NRSA F32 mechanism), NSF, and other funding organizations, as well as through application to training grants already in place. There should be encouragement to develop minority graduate student organizations such as a Hispanic student association and an Asian-Pacific student association, which can complement existing organizations such as the Black Student Union. In addition, there should be a mechanism that bridges these and existing student groups to consolidate and collaborate with the Graduate School. Also, there should be mechanisms in place that

encourage interaction and awareness between the minority graduate student population and the university as a whole.

Fast track Recommendations:

- *Examine individual programs to ensure that support mechanisms are in place throughout the graduate student's academic cycle (e.g. sufficient years of TA or RA support).*
- *Determine if academic units have a policy for removing support to students who do not meet clearly articulated standards for annual progress.*

Longer Term Recommendations:

- *Reward faculty for active and effective mentorship of graduate students.*
- *Encourage every program to conduct "job search workshops" specific to their discipline – review of cover letters, vitae, etc.*
- *Track the placement records of individual programs.*
- *Encourage departments to keep potential employers apprised of new hires, new programmatic developments or areas of specialization.*
- *Use selectivity, retention, and time-to-degree criteria (based on discipline norms) as a basis for program evaluation.*
- *Establish support for Graduate Student Minority Affairs in the Graduate School so that, in addition to recruitment, it is integrated more fully into the monitoring and support of progress for minority graduate students. Some of the following suggestions could be implemented:*
 - *create "cultural competence" workshops for faculty and/or for graduate students*
 - *encourage minority students to apply for external and internal funding (research grants, travel grants, training grants)*
 - *organize professional development workshops and mentoring workshops geared particularly toward minority students*
 - *establish a central student group to bridge existing minority graduate student organizations that would transcend departmental or disciplinary boundaries*
 - *monitor progress and time-to-degree of minority students, and contact student and/or DGS as necessary; track progress and placement of minority graduate students to ensure correlation with non-minority students*

- *promote the role of minority graduate student associations, both local and national, within relevant disciplines*
- *invite minority faculty to UK for guest lectures.*

VII Postdoctoral Training

The fifth charge to the subcommittee read as follows:

- (v). Assess the role, training, administrative oversight, and academic preparation of postdoctoral students and make recommendations for change if advisable.

The subcommittee views the number and quality of postdoctoral scholars on campus to be an important indicator of academic and research strength. Most postdoctoral scholars spend the bulk of their time conducting research and scholarship, typically with minimal distractions from teaching and course work. The training of postdoctoral scholars is of vital importance in boosting our national recognition because postdoctoral training affords individuals to be more competitive in applying for faculty positions in Research I ranked universities. In addition, there is direct benefit in augmenting the research and scholarship output of faculty who support postdoctoral scholars. Moreover, a less tangible benefit rests with the issue of “vertical training”, which may be especially important in laboratory-based life and physical sciences. Vertical training refers to the flow of personnel management, moving from the faculty mentor to research associates and postdoctoral scholars, to graduate students, and finally down to technical staff, undergraduates and high school students. Having postdoctoral scholars inserted into such a framework promotes training in personnel management and enhances research productivity.

Based on a recent institutional report of headcount enrollments from 1996-2006 (<http://www.uky.edu/IR/dsi/enroll/deglevel/enroll.deglev.f9706.uk.shtml>), it was noted that the number of UK postdoctoral scholars increased sharply from 1996 to 2000, growing from 147 to 256 (74% increase) during this 4-year period. Since then, however, there has been essentially no growth in the number of postdoctoral scholars on campus, with an average of 259 from the years 2000 to 2006. Since 2000, most colleges have held steady in the number postdoctoral scholars, although Agriculture has shown a 115% increase (from 34 to 73), whereas Arts & Sciences has shown a 45% decrease (from 62 to 34). The lack of growth across the most recent 6-year period contrasts with the steady increase in the enrollment of doctoral students during the same period; in 2000, graduate student enrollment was 1876 and, in 2006, graduate student enrollment was 2251, which represents a 20% increase. Concomitantly, enrollment of bachelor’s students has increased by 14% from 16,899 to 19,328. The subcommittee concludes that a concerted effort should be directed toward identifying mechanisms by which the number of postdoctoral scholars can be increased.

Fast track Recommendation:

- ***Provide direct incentive to faculty who submit a training grant that includes postdoctoral lines, with special emphasis on those that cut across multiple academic units or that represent targeted opportunities for growth.***

Longer Term Recommendations:

- ***Expand and integrate the training of postdoctoral scholars across campus, using the model active in the College of Medicine.***
- ***Locate an existing administrative unit or create a new unit that can centralize postdoctoral training.***
- ***Set as a university goal an increase of 20% in the number of postdoctoral scholars on campus by 2010.***

APPENDIX I

Representative units offering doctoral degrees: Stipend Comparisons (Preliminary Data)

Unit	UK TA stipends for 2005-06	Benchmark Stipends (Tier I for 2005-06)	UK Stipend (percent of benchmark)	Benchmarks responding
Anthropology	\$10,643	\$17,907	59%	Ariz, Penn St, Purdue
Chemistry	\$14,000	\$18,351	76%	Ariz, UCLA, Florida, Georgia, Mich, Mich St, UNC, Ohio St
Communication	\$12,000	\$15,413	78%	Iowa, Mich, Ohio St
Computer Science	\$12,500	\$15,450	81%	Ariz, UCLA, NC State
Economics	\$11,852	\$12,132	98%	Ariz, Florida, Georgia, Iowa, Maryland, UNC, NC State, Ohio St, Penn St
English	\$10,892	\$12,250	89%	UCLA, Florida, Georgia, Illinois, Iowa, Maryland, NC State, Purdue
History	\$11,240	\$13,665	82%	UCLA, Mich St
Mathematics	\$13,050	\$14,513	90%	UCLA, Florida, Maryland, Minn, NC State, Texas A&M
Music	\$10,546	\$10,979	96%	Florida, Illinois, Maryland, Mich St, Penn St
Psychology	\$11,300	\$12,645	89%	Ariz, NC State, Ohio St

APPENDIX II

Representative units offering advanced professional degrees: Tuition Comparisons

Unit	UK Tuition (05-06)	Benchmark Tuition (05-06)	UK tuition (percent of Benchmark)	Benchmarks used
Dentistry	\$19,534 Resident	\$17,498 Resident	112% Resident	Ohio St, UCLA, Iowa, Minnesota, Florida, North Carolina, Univ Washington
Law	\$11,540 Resident \$21,462 Non-res	\$12,978 Resident \$26,378 Non-res	89% Resident 81% Non-res	Cincinnati, Georgia, Illinois, Indiana, Missouri, North Carolina, Ohio St, Tennessee, West Virg
Medicine	\$19,080 Resident	\$20,221 Resident	94% Resident	Penn St, Iowa, Virginia, Ohio St, Univ Washington, Michigan, North Carolina, UCLA, Wisconsin, Illinois, Florida, Minn
Pharmacy	\$14,650 Resident	\$11,834 Resident	119% Resident	Iowa, Arizona, North Carolina, Minnesota, Wisconsin, Florida, Ohio St, Univ Washington, Purdue, Georgia, Michigan

Representative units offering advanced professional degrees: Scholarship Comparisons

Unit	UK enrolled (% on scholarship)	Benchmark enrolled (% on scholarship)	UK Scholarships		Benchmark Scholarships		UK Scholarships (% of benchmark)		Benchmarks used
			Total	Amt per Student	Total	Amt per Student	Total	Amt per Student	
Dentistry	217 (45%)	386 (44%)	\$0.32 million	\$3,237	\$0.69 million	\$4,376	46%	74%	Ohio St, UCLA, Iowa, Minnesota, Florida, North Carolina, Univ Washington, Louisville
Law	453 (48%)	578 (56%)	\$1.21 million	\$5,576	\$1.34 million	\$4,135	90%	135%	Cincinnati, Georgia, Illinois, Indiana, Missouri, North Carolina, Ohio St, Tennessee, West Virg

APPENDIX III

Interviews with representative Directors of Graduate Studies and Associate Deans**Why do students select UK?**

Unit	Answer
Anthropology	Area of specialization is biggest reason. Regionalism of department. Two types: (1) Many are regional (from state). (2) International/national applicants who do homework and want to work with specific faculty. They name 2 or 3 faculty to work with.
Chemistry	The strength and diversity of our research programs and the tenacity with which our faculty recruit students
Communication	ranked by nat'l assoc. as 6 th in the country, in their field (health science comm..) – students select because of this or because of graduate climate (collaborative instead of competitive) and faculty accessibility
Computer Sci	Strength of some research areas. Majority of Indian students come from the same area and, apparently, give us strong recommendation to their friends and family members in India. Perhaps the same is with students from China, though their population here is smaller.
Economics	Regional location. Alumni links. Strengths in particular fields of study and research. Program is relatively small and personal.
English	superior faculty in specialty areas (film, American culture, modern lit) – also successful recruitment efforts, and location
History	reputation of faculty
Music	The comprehensiveness of the music programs and quality of faculty in all program areas.
Psychology	Best offer in terms in prestige, mentor match and amount of support.
Medicine	<ol style="list-style-type: none"> 1. Class size relatively small (103). 2. Good sense that they will be known by the faculty in both basic sciences and clinical sciences. 3. They like the block style curriculum. 4. Good to be on an undergraduate campus for medical school. 5. Lexington is a great selling point. 6. There has been a recent marked increase in out of state applicants.
Pharmacy	We have the only in-state College of Pharmacy in the Commonwealth of Kentucky and for students that want to pay in-state tuition they do not have a choice. We also have a high level of prestige which helps in the recruitment of the 600 – 700 non-resident applications we get each year.
Dentistry	Small class size; collegiality.
Ed Counsel	<ol style="list-style-type: none"> 1. Programs in EDP require professional experiences, so many students are from the area and are personally connected to Kentucky and Lexington. 2. National reputation of the programs and faculty is a factor for out-of-state applicants.

Who are your 5 competitors?

Unit	Answer
Anthropology	Arizona, Florida, Michigan State, Georgia, Tennessee
Chemistry	Ohio State, Indiana, Purdue, Vandy, Cincinnati
Communication	Penn State, Illinois, Georgia, Penn, Michigan State, Ohio State, Purdue, Rutgers, Texas A&M
Computer Sci	Florida, Georgia (for MS students only), Ohio State, Indiana, North Carolina State, Michigan State
Economics	Indiana, Vandy, Ohio St, Mich St, Georgia
English	MSU, Missouri, South Carolina, GA, TN
History	Duke, Cornell, UNC, Chicago, Johns Hopkins, Minn, Northwestern, Illinois, Indiana, Florida
Music	Master's: competition is local. Doctoral: Indiana, Cincinnati
Psychology	Not sure. Varies across programs, but the hit rate is pretty high, especially in clinical program. Students are looking for areas of specialization that match their interest. Some experimental programs are less successful. Now giving a \$2000 extra "signing bonus" in experimental area to top applicant. Most clinical students get Reedy award (need 90% on one GRE component, plus a high GPA), \$3000/yr for 3 years.
Medicine	Louisville (competition for in-state students), Vanderbilt, Cincinnati, Washington Univ, Saint Louis
Pharmacy	Mercer, Sanford, Alabama, UT Memphis, Cincinnati, Saint Louis. Location seems to be a major influence in the reasons students go to the top 5 competitors. None of the institutions except UT Memphis has a reputation even close within the pharmacy community comparable to UK's.
Dentistry	UL, OSU, IU, UNC, UNLV
Ed Counsel	Ohio State, Purdue, University of Georgia, University of Florida

Why do you lose recruits? Is it due to workload? Stipend/scholarship? Tuition cost? Geographical location? Dept reputation? Research specialization?

Unit	Answer
Anthropology	First year funding. Most first year do not get funding. Students go off campus for at least one year and write diss (NSF, Fulbright, etc.); these get highest priority in TA stipends.
Chemistry	Stipend/Scholarship, Antiquated Chemistry Building. Students generally like to join Chemistry Departments that are being invested in by their university. We have 40 year old chemistry building and stipend offers that are at least \$3000 lower than competitors.
Communication	low stipends – we are at 12K, but many competitors are at 15K-16K for doctoral – our MA students make only 8.5K, and mean for MA students is 11K – also we need more senior faculty in order to recruit and retain more students
Computer Sci	Lack of adequate funding. International MS students cannot be supported by the department. Not enough special topic courses due to relatively small number of faculty. Lack of sufficient space and its distribution (our faculty and students are in 4 different buildings including KU downtown).
Economics	Stipend/scholarship Geographical location Dept reputation
English	heavy teaching load (2/2 in addition to grading, writing revision, etc.), low stipends
History	low stipends (competitors pay 3K-5K more than we do – we are at about 11K, need to be at 14K-16K – also we can only fund about 20% of our grad students, and also we don't have enough fellowships
Music	The DGS feels that some individuals do not apply or accept offers because of the perception that graduate work at UK may not provide them a network among music professionals. The DGS stated that this is an incorrect perception but one they often must address.
Psychology	Package elsewhere (prestige, mentor, and financial support) is better.
Medicine	The recent increase in tuition has reached a point that tuition for out-of-state students is no different than at the top private schools such as Vanderbilt. The scholarship dollars that have not increased to the degree that tuition has increased. However, we lose very few in-state students to other schools outside of the state of Kentucky. We lost only 12 this last year.
Pharmacy	Geographic location is a major reason we lose recruits. He also noted there is not enough space. We could take an extra 200 qualified applicants if we had physical space. Also we do not have money to provide financial support, especially for minorities.
Dentistry	Tuition (exacerbated since increase) and lack of scholarship funds
Ed Counsel	Funding is an issue, but it's not the only one. Top programs in this field are guaranteeing 4 years of support to entering students; support packages from top programs include travel to professional conferences. Other issues include the physical plant, and availability of office space for graduate students. EDP is having increasing difficulty filling TA positions because they are relatively underpaid compared to RA/GA positions available on grants.

What is the number one issue in recruitment?

Unit	Answer
Anthropology	Funding and getting top students to apply to Kentucky, given the reputation of the state/univ.
Chemistry	Both of the above issues are inseparable. However, an immediate increase in stipend support (of at least \$4000 per student) would stem the bleeding for a little while.
Communication	faculty accessibility, stipends, national ranking
Computer Sci	Inadequate funding
Economics	Financial Aid. We are constrained in the number of offers we can make, and once the top students decide not to come here, it is too late for us to go after others.
English	fields of specialization, faculty, stipends
History	funding
Music	Inadequate resources to advertise and bring recruits to campus is a barrier. The DGS would like to advertise in journals, etc.
Psychology	Increase stipend amount. There is mismatch between time when students are given offers and when we know number of TAs available. Clinical program gets strongest students in college; in 2005, had 200 applicants, made 5 offers and all accepted, 1 got Multi-Year award, 1 got Allocated, 1 got RA and 2 got LTJs, none got TA.
Medicine	We need more physicians interviewing. We use retired faculty because we have difficulty getting both basic science and clinical faculty to interview. Louisville keeps banging the gong about the number of clinical facilities they have, they sell their simulation center as a plus and they give PDA's to incoming students.
Pharmacy	financial support
Dentistry	Tuition costs
Ed Counsel	Getting applicants, especially from out-of-state and internationally. There's no obvious pipeline for where EDP graduate students come from, so they are unsure how to target recruitment efforts. The DGS feels that many people do not consider applying to UK because of preconceived ideas about what UK offers.

Do you have any success stories to share in recruitment?

Unit	Answer
Anthropology	Have some excellent faculty who have the track record to overcome all barriers to recruitment.
Chemistry	We manage to attract and train excellent students despite dismal support from the university.
Communication	we let recruits know about graduate student climate here
Computer Sci	A domestic graduate from Transy has chosen our PhD program even though she had NSF research fellowship and could go to any place. It was result of our Dept. and College recruitment efforts.
Economics	Student placements at Harvard and Georgia State.
English	each spring our grad student org. hosts a grad student conference – very successful recruitment tool – we bring all of our potential grad students to campus that weekend
History	no
Music	Members of the music faculty have had success recruiting from contacts at conferences and find that personal contacts make a positive difference. The DGS feels they are very good about following up on inquiries about their programs. They do get quality students.
Psychology	Placing people in good academic positions, even in clinical. Recruiting faculty who have grant support has been very good.
Medicine	The GPA's and MCAT's are always higher of our incoming students than the students at U of L. We get the top students who stay in state compared to the University of Louisville.
Pharmacy	This year we were able to recruit 19 minorities in large part because of additional money to help defray their expenses. Money for scholarship and financial aid is a major issue. We had a young lady from Florida who had been in the work force 3 – 4 years and academically she was very strong. She initially accepted and at first we did not have any money to offer financial aid. She withdrew her acceptance to go elsewhere and then some additional monies were found and she is in this year's pharmacy class. The College of Pharmacy has money for minority scholarships or enhancement funds that used to be in the Chancellor's Office. Also, the Dean did get some extra funds from the Provost. In addition, the College of Pharmacy has had some fund raising events this year that raised \$40,000 from five class reunions and a golfing event.
Dentistry	Minority students have had good experiences at UKCD
Ed Counsel	The program holds on-campus interview days for their top tier of applicants. These days are both selection and recruitment. They include social events the evening before, sessions with current students, and interviews with teams of faculty members. The DGS feels that these events help applicants feel positive about Lexington and UK. Before these events, some applicants had not considered that the cost of living in Lexington actually makes our stipends better than those from some competitors.

What are you doing to expand diversity?

Unit	Answer
Anthropology	Doing good job, have international students (African, Asian, Latin American) and number of African-American students. Had 3 on LTJs.
Chemistry	We are continually working with faculty at HBCU's and at universities with large Hispanic student populations to identify and recruit African-American and Hispanic students. We also work UK's Minority affairs office to identify and recruit students.
Communication	we have the best rate of any UK College in matriculating and graduating African American students – but if they don't apply we can't get them, and they often have lower GRE scores - LTJ fellowships are not equivalent to the other university-wide fellowships
Computer Sci	We are good in recruiting international students. We need to get more domestic students from underrepresented areas.
Economics	Fellowships. Visitation day. Poverty Center draws students.
English	we have sent a faculty member to HBCUs of the southeast and Midwest to discuss graduate education in English there
History	loss of our 2 native American specialists cost us that diverse pool – but now we do have more minority faculty doing more outreach; we also work to retain minority undergrads from our own program
Music	The DGS does not feel they are doing enough. Some faculty members do more than others, and personal networking is helpful. The DGS does not feel they are reaching out to individuals who are members of minority groups, who are disabled, or who are from other countries.
Psychology	Not enough. Clinical program has been successful, as department has 2 African-American faculty. There is already critical mass of African-American students. Not doing as well with Hispanic recruits.
Medicine	Have asked Dr. Elam to spearhead recruitment of minority students because Minority Affairs Office has not been able to meet this need. There have been several initiatives including: (1) identification of Kentucky and OOS feeder schools; joint recruiting activities and materials; (2) College Board Recommended Initiatives; review of mission statements, development of 'value of diversity' questionnaire and research on 'critical mass'; (3) develop scholarship application form; (4) create pipeline to UK students; create data resource regarding UK minority students/majors; improve interaction with UK MAPS program (prehealth students); enhance tutoring services in key prehealth courses; consider development of UK 101 sections that focus on health careers; consider development of Peer Mentoring Program; consider development of Examination Preparation Program.
Pharmacy	Increasing the amount of scholarship money. College of Pharmacy recruiter goes to all the in-state schools and specifically recruits minority students as well as trips to the traditionally African-American colleges such as Meharry in Nashville and Morehouse in Atlanta.
Dentistry	Involve our minority students in recruitment efforts; develop relationships with historically black colleges and universities; identify scholarship opportunities.
Ed Counsel	The most effective approach has been personal contacts and networking, particularly by faculty members who are members of minority groups.

What should the university administration do to enhance recruitment of top students?

Unit	Answer
Anthropology	PR campaign at national level to dispel stereotype of Kentucky. Increase funding. Out-of-state tuition waivers for national students.
Chemistry	Administration needs to make the construction of new facilities its highest priority. Anyone who has had the dubious pleasure of visiting the Chemistry/Physics Building will recognize that there's only so much polish you can put on the wreck that it is.
Communication	more senior faculty; more fellowships; higher stipends
Computer Sci	More competitive fellowships for new-coming students. Better working conditions (see answer to Q3). Better public relation campaigns at the national level informing about our research successes.
Economics	Financial aid.
English	more funding; streamline ma/phd program to decrease time to degree
History	more senior faculty, more funding, convert PTI funds to TA funds
Music	We are not promoting ourselves enough in terms of awards to our own faculty, and spotlighting programs. UK needs exposure on the internet and needs a more "welcoming stance". Should be a university-wide, professionally developed template for recruitment brochures and program websites. This could save time and increase the quality of our materials available to potential students. Larger summer and DL programs would be helpful to individuals who are working.
Psychology	More fellowships, especially Multi-Year. Build on units of strength.
Medicine	(1) The ones we want are smart and wonderful people and many of these students inquire about service opportunities and international experiences. (2) Last year when there were increased scholarships for minority students all of the additional money stayed with main campus and none of this scholarship money went to the recruitment of students in the medical center. Being able to recruit minority students in the College of Medicine is a concern and having availability to such funds that are provided to the entire campus would be beneficial. Increasing scholarship money is a must.
Pharmacy	The pool of applicants is very strong. We do not need any help recruiting top students. We have 1000 applicants per year. One particular issue the University could help us out with is keeping enough sections of courses so that students who are trying to fulfill their pre-pharmacy requirements can start in a timely fashion. Recently multiple sections of classes that are used for pre-pharmacy prerequisites have been dropped and have prevented students from being able to finish their pre-pharmacy courses in a timely fashion.
Dentistry	Identify potential candidates earlier (e.g., middle school – I know, it sounds unlikely, but that was the response)
Ed Counsel	1. Greater emphasis from the university for recruitment of graduate students. 2. First-year fellowships with no work obligations, then over to RA/TA/GA lines. This would be particularly helpful for recruiting international students because of visa requirements and hesitation of faculty to offer a TA before meeting the individual. 3. Improved services from UK Minority Affairs Office.

Are you looking to increase the number of incoming doctoral students?

Unit	Answer
Anthropology	Yes, but only if they are good. Increasing numbers alone is not goal.
Chemistry	Yes. We are currently conducting searches to hire three new faculty members and currently bring in about 1 student per research-active faculty per year. That ratio needs to be at minimum two students per research-active faculty per year.
Communication	we have too many now for the size of our faculty – we need more senior faculty
Computer Sci	Yes, but only PhD student if they are strong and if we have better resources: space and faculty size.
Economics	No. The issue of quality comes up.
English	only with more funding
History	only if we had more funding and more senior hires
Music	Yes, depending on the specific program area. It is a decision to be made carefully because each program area depends on the others for courses and faculty members for doctoral committees.
Psychology	Yes, dept is currently at a low baseline. Dept needs to recruit 8 in clinical and 8 in experimental.
Medicine	Yes. We recently increased the class size from 95 students to 103. Before we can increase any further we will have to have a change in our facilities.
Pharmacy	The answer is yes. With the Pharmacy building the plans would be to increase the class size up to possibly 200.
Dentistry	No
Ed Counsel	Programs may be able to accommodate modest increases in a few cases. Faculty would like to see more full-time students and improved quality of applicants.

What would it take to increase the size of your doctoral program by 30%, assuming faculty size increases?

Unit	Answer
Anthropology	Number of TAs would have to increase. Currently have 12 TA lines, would need 18.lines. Would require hiring faculty at the senior level.
Chemistry	1. Increased investment in student support by increasing the number of Teaching Assistantships (TA) available and increasing the average Chemistry TA stipend by at least \$4000 per year. 2. Commission the building of a modern chemistry building, this is something every school we compete against has done.
Communication	see above
Computer Sci	Modern space in a new facility, more and better paying TAs/Fellowships
Economics	Financial aid. Lack of office space and other infrastructure.
English	see above
History	see above
Music	More help from the university in publicity and marketing UK as a desirable place to do graduate work. Increases in office support and budget for supplies.
Psychology	Don't see a problem with this, especially since there are more TA lines available than the number of students who need them. More TA and fellowship support would be nice.
Medicine	Building. We need an increase in size of classrooms, more small group rooms, more locker space, more laboratory space. We cannot put another cadaver in the gross anatomy lab.
Pharmacy	Space is the major limiting step. Classroom size, locker rooms, student lounge space, etc.
Dentistry	Significant increase in physical plant size.
Ed Counsel	Additional space for graduate students. Additional support resources (e.g., staff, stipends, travel support)

How can you increase the size of your applicant pool?

Unit	Answer
Anthropology	Anthropology is most African-focused unit on campus; 5 out of 15 faculty. No recognized interdisciplinary African studies program on campus. There is road map for that with Florida, Arizona, Michigan State and Indiana Univ. Need interdisciplinary program to enhance recruitment. Anthropology getting positioned well in medical and cultural anthropology to connect to Medical Center. For example, HIV in Africa.
Chemistry	There needs to be the sense created that UK is looking to build first class scientific programs and not just tossing around buzz-words like "top-twenty". I challenge anyone in the UK administration to point out a top 40 university that does not have strong science and engineering programs. Chemistry, as the central science, is key to all of the other sciences and the engineering programs. If applicant pools are to be expanded then the university needs to invest in building a first-class chemistry program, and that means building and infrastructure, student and faculty support, etc.
Communication	see above
Computer Sci	With the exception of minority domestic students, our applicant pool is large enough. We do not have adequate resources to accept more students due to insufficient space/location, funding, and faculty size.
Economics	Through alumni and faculty reputation.
English	see above
History	see above
Music	see above
Psychology	Not really a problem in clinical. In experimental, networking is the key.
Medicine	The applicant pool for medical school goes through up and down cycles regardless of what we do. What has been very beneficial in the past are programs funded through HRSA such as HCOP program, which has served as a feeder program down the road. Such programs have helped in the recruitment of rural applicants, African-Americans and women.
Pharmacy	There is no need at this point to increase the applicant pool. We do need to maintain the current interest in pharmacy as a profession as well as maintain the high level of interest in the College of Pharmacy at UK for those seeking such a career.
Dentistry	It is already increasing; see above re: tuition costs
Ed Counsel	EDP faculty have had discussions surrounding this question and have tried to accomplish increases in applications. They are not sure of what else to do.