

Surviving Graduate School and Beyond

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Doctoral Education

- KU among the top 50 universities in the granting of doctorates, conferring over 300 research doctorates each year for the last 3 years.
- Nationwide – 55,962 doctorates awarded in 2007 - 2008.
- 488,133 master's degrees in 2007-2008.
- But how are we doing at doctoral education?

Challenges in Graduate Education

- Mean number of years to completion of a research doctoral degree in the United States is 7 years.
- Same as the national average for mathematics PhD degrees.
- Mathematics at KU average time to degree ranges from 5.9 to 6.9 years.

Completion & Time to Degree

- CGS Completion Project
 - » Among students who started doctoral programs during 1992-95, fewer than 57% received a degree within 10 years.
 - » About 31% of those students had dropped out within 10 years, most of them after just 5 years.
 - » ...leaving a large number still enrolled after 10 years.

Completion & Time to Degree

- Completion & attrition are bigger problems in the humanities than in engineering
 - » Engineering students finish doctorates at nearly twice the rate of students in the humanities & social sciences.
- “Training” model in the humanities & some social sciences:
 - » “Give the student 300 books to read and tell them to return when they’ve found a problem to solve.”
- Model in the sciences:
 - » student works with a professor for a couple of years on a few well-defined projects. The thesis or dissertation draws on those projects.

Graduate Training Models

- What is the model in Mathematics?
 - » Apprenticeship



Graduate Research in the Sciences

- In the sciences, students are joined at the hip to their major professor.
 - » You are a member of the “Sue Lunte Lab,” an affiliation that’s often stronger than being in the Department of Chemistry.
 - » You are handed a research topic, and you then work closely with a professor and other graduate students.

Graduate Training Models

- Or solitary?



Mentoring: A Key to Graduate Training

- Outside of the science model,
- Graduate students can wander for years in the academic wilderness if no one mentors them effectively.

Graduate Education: Sink or Swim?



Graduate Student Superstars

- Bloom and Bell (1979: 231) on the most successful psychology graduate students.
 - » "These are the few who proceed through the program with the minimum amount of difficulty and a maximum amount of quality performance. They are respected by the faculty, they receive the best financial assistance, they receive accolades, and as a group, they end up with the best employment."
- The graduate school “superstars”

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Nobody Likes a Superstar



...unless they are one

Graduate Student Superstars

- *Visibility*
 - » The best students were physically present in the department—a lot.
- *Willingness to Work Hard*
 - » The best students were perceived as hard-working because faculty saw them working hard.
- *Reflection of Program Values*
 - » The best students recognized the value of having contact with broad areas of their discipline.
- *Development of Relationship with a Mentor*
 - » The best graduate students had **close working relationships with faculty.**

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Graduate Student Superstars

- Aside from hard work the best thing for your graduate career is to get the **mentoring** you need.

What is a Mentor?

- **Advisor**
 - » people with career experience willing to share their knowledge
- **Supporter**
 - » people who give emotional and moral encouragement
- **Teacher/Tutor**
 - » people who give specific feedback on one's performance
- **Master**
 - » to whom one is apprenticed
- **Source**
 - » of information, aid in obtaining opportunities
- **Role model**
 - » of what it means to be an academic

Mentoring

- **Develop a mentoring team**
 - » A group of people you can get advice from
 - » Not necessarily that they will work together, but you'll get different sorts of help for different sorts of people.
 - » Not just your advisor
 - » Many different people can be your mentors

Mentoring

- Identify potential mentors
 - » Familiarize yourself with professors' work
 - » Immerse yourself in departmental academic and social activities
 - » Enroll in classes taught by faculty who interest you the most. Attend their public presentations
 - » Ask advanced graduate students about their advisors and mentors

Why is the mentor important?

- Undergraduate goal: to **obtain** knowledge
- Graduate goal: to **contribute** to a field of knowledge.
- Making that shift isn't always obvious or easy. Needs to be modeled; preferably by a mentor.
- Students who have appropriate mentoring relationships have
 - » higher productivity levels
 - » higher level of involvement with departments
 - » greater satisfaction with their programs

Mentoring

- Preliminary results of CGS Ph.D. Completion Project
- Improvements in mentoring outnumber any other area of activity and innovation in increasing completion rates
 - » Quality of mentoring
 - » Frequency of mentoring
 - » Uniformity of mentoring
- Appropriate mentoring may increase Ph.D. completion

Preparing Future Faculty

- How are we preparing our Ph.D. students for faculty positions?
- “At Cross Purposes: What the experiences of today’s doctoral students reveal about doctoral education”
 - » Chris M. Golde & Timothy M. Dore
 - » A Survey Initiated by the Pew Charitable Trusts

Survey of Doctoral Education

- The survey was designed to answer the following questions:
 - » Why are doctoral students pursuing the Ph.D.?
 - » How well do doctoral programs prepare students to be faculty members?
 - » Do students understand what doctoral study entails before they enroll and once they begin their studies?
 - » Do students understand what is expected of them during their programs and how to meet those expectations?
 - » Are the day-to-day processes of doctoral programs sufficiently clear so that students can concentrate on developing knowledge and skills?

Preparing Future Faculty

Major Findings:

- The training doctoral students receive is not always what they want.
 - » It does not always prepare them for the jobs they take.
- Many students do not clearly understand what doctoral study entails, how the process works and how to navigate it effectively.

Preparing Future Faculty

- 63% of students entering Ph.D. program want a career as faculty member.
- WHY?
 - » 83.2% because they enjoy teaching
 - » 79.9% because they enjoy research
- And what do the other 37% want?
 - » We are training you for non-academic professions, too

Where do Faculty Work?

- In 2001 there are nearly one million faculty members working in U.S. colleges and universities.
- The number of faculty, combining full- and part-time faculty, is steadily growing.
- Among all faculty, 57% are full-time and 43% are part-time.

Where do Faculty Work?

- Among all faculty, 31% work in two-year colleges.
- Of full-time faculty, 20% are in non-tenure-track appointments.
- Part-time faculty usually work at community colleges (44%); the remainder are evenly spread across other institutional types.
- Full-time faculty are employed across the range of institutional types:
 - » 27% at research universities
 - » 15% at doctoral granting universities
 - » 25% at comprehensive universities
 - » 7% at liberal arts colleges
 - » 20% at community colleges

What do Faculty Do?

- Teaching occupies most of a faculty member's time.
 - » Faculty members spend an average of 29 hours a week in teaching activities:
 - 5-12 hours a week teaching in the classroom,
 - 10-20 hours a week on preparation and grading, and 1-4 hours a week advising students.

What do Faculty Do?

- Service, administration, and governance also take time.
 - » Faculty members give an average of 11 hours a week to service and administration.
 - » Most faculty members spend these hours on committee work and meetings, community or public service, and other administrative tasks.

What do Faculty Do?

- Research absorbs very little faculty time.
 - » Faculty members spend an average of 9 hours a week in research and scholarly activities.
 - » 33% report spending 1-4 hours per week on research and scholarly writing,
 - » 25% report spending no time at all.

Preparing Future Faculty

- Most students (65%) felt that their programs adequately trained them to do research.
 - » Only 27% felt prepared to collaborate in interdisciplinary research
 - » Students reported varied levels of understanding of responsible conduct of research/scholarship

Preparing Future Faculty

- Some students felt that their programs adequately trained them to teach.
 - » 51.2% had specific training on teaching in their fields
 - » 36.1% reported that they were prepared to teach a lecture course
- Few students reported being prepared for advising.

Preparing Future Faculty

- Very few students felt prepared for university or community service.
 - » 19.1% prepared to serve the profession (review papers, etc.)
 - » 12.7% prepared to serve on department and university committees
 - » 13.8% prepared for community service

Conclusion

- Take control of your own education:
 - » Get the mentoring that you need
 - » Think about why you are here
 - » Think about what you want to do when you finish
 - » Prepare an IDP to help you get from where you are now to where you want to be

Be a Graduate School Superstar!



If you need us:

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