A Model for Graduate Student Development

MIT Graduate Student Perspectives
New Graduate Student Orientation 2007
MIT Graduate Student Population

MIT Faculty and Students
1900 - 2007
MIT Student Body Profile
(2006-2007)

Undergraduate 4,127
Graduate 6,126
Total 10,253

Undergraduate 44% female, 56% male
Graduate 30% female, 70% male, 35%
International, 15%-40% married or partnered,
7-8 % have children
Percentage of students rating their ability in the top 10% (compared to the average entering graduate student nationwide and at MIT)

- Academic ability
- Drive to achieve
- Mathematical ability
- Self-confidence (intellectual)
- Persistence
- Openness to differences
- Competitiveness
- Self-understanding
- Emotional health
- Leadership ability
- Cooperativeness
- Computer skills
- Creativity
- Research skills
- Writing ability
- Self-confidence (social)
- Risk-taking
- Spirituality
- Public speaking ability
- Physical health or fitness
- Artistic ability

Legend:
- Average graduate student nationwide
- Average graduate student at MIT
Goals for this Presentation

• Present a brief overview of a model for graduate student development.

• Discuss how this model informs the development of career development services and programs.
Graduate Student Motivational Level

- Blissful Optimism
- Advisor lures with visions of greatness
- Realize qual are unavoidable
- Quals!
- Friend from undergrad who didn't go to grad school shows off his/her new BMW

YEAR

- Masters 1st 2nd 3rd 4th 5th 6th 7th 8th 9th

- Get used to being "average"
- Absorb cynicism of lab mates
- The "post-quals slump"
- "I've been here five years!"

- Advisor runs out of funding
- Start writing dissertation

- Realize bleakness of job outlook
- Think about how many people will actually read thesis

Jorge Cham @The Stanford Daily
Three Stage Model of Graduate Student Development*

1. Entry Stage

2. Engagement Stage

3. Exit Stage

This model illustrates some of the commonly encountered challenges facing graduate students.

Entry Stage (1st year, up to qualifying exams & thesis proposal)

Three Main Goals

1. Maintain motivation
2. Manage academic demands
3. Develop a clear sense of purpose & direction

“Is this what I really want to do & why am I doing this? Is this going to help me graduate?”
Entry Stage

Challenges (Characteristic Observations)

- Initial lack of direction. What courses to take?
- Increased isolation & decreased independence.
- Sense of inferiority & self doubt for the first time (everyone here is smarter than me).
- Intense scrutiny & competition.
- Decrease in personal autonomy due to increase in responsibilities and expectations.
- Financial dependence on advisors & feelings of being duty bound.
- What if I can’t find an advisor?
- What if I am already committed to an advisor?
Entry Stage (continued)

- Need to balance work with increased social demands
- Feeling that others came in with more real world experience and skills.
- Loss of pre-graduate school professional self-esteem.
- Failure of qualifying exams viewed as an escape pod.
- Can’t pull all-nighters like when you were an undergrad.
Additional Entry Stage Challenges for International Students

• Culture Adjustment (4 Common Adjustment Phases)
  – Euphoria
  – Culture Shock
  – Recovery
  – Autonomy
Quals

I didn't pass Quals...

So much for postponing the real world another five years...

Jorge Cham © The Stanford Daily
Engagement Stage (year 2-5)

Two Main Goals

1. Self preservation (primary focus)
2. Achievement (secondary focus)

Roles are established, responsibilities routinized, confidence restored.

“I’m in this for the long-haul.”
Engagement Stage

**Challenges** (Characteristic Observations)

- Comfort can turn into complacency.
- Procrastination may emerge as a way of dealing with fear of failure (Imposter Complex).
- Sense that you are in a holding pattern.
- After passing qualifying exams you realize that you are in it for the long haul but still don’t know why. Find peers who feel the same way.
- May discover new career goals, more options to think about.
- May become more involved in academic discipline through publishing, professional organizations, conferences, etc.
- May get more involved in extra-curriculars.
- Balancing outside life & faculty expectations.
- Faculty focus shifts to new advisees.
- No mentors.
Engagement Stage (continued)

- Need to transition into role of independent scholar/researcher. From consumer of knowledge to producer of knowledge.
- Need to manage parental/spousal expectations (when are you graduating?)
- Sense of self-preservation, managing advisor’s expectations (publishing).
- Lack of milestones familiar to those not in the academy.
- Distrust among colleagues working on similar projects.
- Sense of being in a tunnel or box but with no light apparent at the end.
- Unhealthy patterns for survival in graduate school may become guiding principles in your life (i.e. poor sleeping or eating habits, mistrust of colleagues, etc.) affecting the student and their significant others.
Exit Stage

Two Main Goals

1. Disengagement
2. Reintegration

“I’m in the home stretch . . . . . . . . . . . . . . . . . . . . . . . I think.”
I'd like to introduce you to Beth, an anthropology Ph.D. student.

Hi, how is your research going?

What's the matter with you?

Smack! Why I never...

Don't you know it's bad manners to ask a Ph.D. student that?

I-I'm sorry. Uh, so... how long before you finish your thesis?

Smack!

Geez, why don't you ask her for her weight or her age while you're at it?

Thanks to Miguel...
Exit Stage

Challenges (Characteristic Observations)

• Begin to protect your time, pull back from extra-curriculars.
• Don’t know how to respond to, “What year are you in?” (lack of control of timeline).
• Search for balance (2 career couples, families).
• Manage other’s expectations (advisor(s), parents).
• Search for all career alternatives (academic/non-academic). Goals may have changed.
• Reorientation to reality.
• Sense of Social Skill Atrophy.
Exit Stage (continued)

• Disillusionment with job market (the payoff doesn’t exist).
• Pressure to make rapid progress on thesis.
• Imposter complex (Is this all there is? Is this the best I can do? I have no skills in the real world).
• Sense of reckoning (no time for major breakthroughs in your research).
• Sense of loss of being a student. No more “random electives.”
• Sense of fear (There is no pause button anymore).
THE LIGHT AT THE END OF THE THESIS.

CAN YOU SEE IT?
ONE RING
TO RULE THEM ALL

THE TRILOGY BEGINS DECEMBER 2001
Graduate Student Development

Conclusions:

• This model suggests that there are inherent challenges associated with graduate study.

• These challenges coupled with cultural adjustment can be particularly daunting.

• It is helpful for students to realize they are not alone in dealing with these issues.

• This model may inform services and programs offered by offices who serve graduate students.
Advice From Current Students

• Know *why* you are in graduate school. If you don't know that you really want to finish it, then it's hard to push through the tough times.

• Perhaps, do summer internships or take a leave to go to industry in order to see how important the degree is in the field that the student is pursuing his/her PhD. This may also give a chance to "recharge" after going through undergraduate studies and the beginning of the PhD program (which is very similar in lifestyle to undergraduate...but without as much social support network that makes undergraduate easier to bear in some ways).

• Develop a support network within and outside of the department. There will always be hard times. It's helpful to have somebody who you know is there for you at those times and to know you're not alone.

• Don't put too much pressure on yourself. Success in the PhD isn't about being a genius ... it's about learning how to identify interesting questions, coming up with ways to address them, and then communicating the question and the results to other researchers.

• Work together.
MIT PhD Immediate Post-graduation Plans 1982-2002 (%) *

*Based upon the Survey of Earned Doctorates
Graduate Student Career Developmental Process

CAREER

Self Assessment
Who am I? What are my interests? What kinds of skills do I have? What are my work-related values? What is my work style?

Exploration
What’s out there? What options do I have? What jobs fit my skills? What careers and industries can use them? (Networking)

Focusing
Which organizations are a good fit? What do I need to be competitive? Who can connect me to these organizations? (Networking)

Job Search/Action Plan
Resumes, interviews, researching options (Networking)

Entry
Engagement
Exit

Adapted from Peter Fiske: To Boldly Go: Practical Career Advice for Scientists, Workshop at MIT, April 1998. Modified from Stanford University Career Development Office.
PhD Student Utilization of Institutional Career Related Services & Programs at 3 Developmental Stages

Institutional Points of Contact

Department

Grad Dean/ Student Orgs.

Career Office

Teaching/ Writing Ctr.

Typical Academic & Non-academic Career Planning Timeline

Ideal Non-academic Career Planning Timeline

Ideal Academic Career Planning Timeline

Entry

Engagement

Exit
| MIT Careers Office, 12-170, 617-253-4733 | **Self Assessment:** Attend career workshops. **Exploration:** Get familiar with Careers Office resources, programs and services. | **ACADEMIC CAREER:** Develop your CV. Attend a CV workshop. **OTHER CAREER OPTIONS:** Exploration: • Seek internships in industry. • Attend panels on career opportunities outside the lab. • Read about career options. • Take additional coursework in areas to expand your marketability and skills (finance, entrepreneurship, management). | **Exploration:** Attend career workshops on the job search process (resumes, interviews, negotiating offers). **Networking:** Use alumni/ae networking to research career fields. **Career Counseling:** Meet with a Careers Office Advisor to discuss your career plans. | **Interviews:** • Arrange a mock interview to polish your interview skills. • Use the InterviewTrak system to arrange on campus interviews. |
| Your Department | **Mentoring:** Plan your course of study with your advisor. **Exploration:** Attend department orientations, training sessions. | **ACADEMIC CAREER:** Exploration/Networking: Attend conferences in your field (GSC provides travel funds). **Exploration:** • Gain experience as a teaching assistant. • Seek experience overseeing undergraduate research. **OTHER CAREER OPTIONS:** Networking: If you are doing research that has industry applications, build industry contacts. Gain experience presenting your work to people in industry. **Exploration:** Attend career presentations sponsored by your department. Learn about careers alumni/ae have pursued. | **ACADEMIC CAREER:** Exploration: • Begin researching postdoctoral options. Once accepted by a lab, consider funding sources (apply 6-10 mo. in advance). • Participate in the hiring process for any new candidates for faculty positions in your department. Attend their job talks. **Mentoring:** Ask your advisor for advice about pursuing an academic career. Discuss your career plans with your advisor. **Writing:** Develop your publications. | **ACADEMIC CAREER:** Mentoring: Seek faculty advice and support (recommendations). **Interviews:** Actively pursue first interviews for faculty positions at academic conferences (fall-winter of final year). **OTHER CAREER OPTIONS:** Exploration/Networking: Attend industry seminars sponsored by your department. **Interviews:** Participate in any department recruiting activities (with industry employers). |
| Teaching and Learning Center |  | **ACADEMIC CAREER:** Teaching: Develop your teaching portfolio. |  | **Interviews:** Polish your job talk skills. |
| MIT Writing Center |  |  | **Writing:** Seek advice on publications. | **Writing:** Ask for critique of cover letters for job search (academic or industry). |
| Student Groups (Graduate Student Council, Science & Engineering Business Club, Tech Link, etc.) | **Exploration:** Attend talks on various fields. **Networking:** Meet peers from many departments. | **ACADEMIC CAREER:** Exploration: Attend GSC presentations on academic careers. **OTHER CAREER OPTIONS:** Exploration: Attend events on many career topics. | **Networking:** • Develop your network of employer contacts by attending various events. • Network with students who have done internships and/or interviewed in various fields (e.g. learn about case interviews). | **Exploration/Networking:** Attend career fairs (sponsored by several student organizations). |
Thank you for your thoughts, reactions, & suggestions