Mentoring Graduate Students

By Jeff Johnston, Assistant Director, Vanderbilt Center for Teaching

CENTER for TEACHING
VANDERBILT UNIVERSITY
615-322-7290
cft.vanderbilt.edu

The Vanderbilt University College of Arts & Science sponsored a Faculty Development Series for faculty entitled **"Conversations on Graduate Mentoring, Advising and Teaching"** during the 2007-08 academic year. See this website for more information.

While the terms "mentor" and "mentoring" are used to fit a wide range of relationship forms and contexts, this teaching guide is designed primarily as a resource for faculty mentoring graduate students.

What is mentoring?

... while advising is a short-term process where the focus is on giving information and guidance to the learner, mentoring is a more intricate, long-term, one-on-one relationship that goes well beyond simply providing information. True mentoring is a complex process between professor and college adult learner that supports a mutual enhancement of critically reflective and independent thinking. (Galbraith, 2003)

What is mentoring?

A mentoring relationship is a close, individualized relationship that develops over time between a graduate student and a faculty member and that includes both caring and guidance. Although there is a connection between mentors and advisors, not all mentors are advisors and not all advisors are mentors. Mentors, as defined by The Council of Graduate Schools, are:

Advisors, people with career experience willing to share their knowledge: supporters, people who give emotional and moral encouragement; tutors, people who give specific feedback on one's performance; masters, in the sense of employers to whom one is apprenticed; sponsors, sources of information about and aid in obtaining opportunities; models of identity, of the kind of person one should be to be an academic (Zelditch, 1990).

It is important to note that mentoring involves a constellation of activities that goes beyond advising or guiding a student through a project. Instead it involves a variety of ways for assisting and supporting graduate students through their graduate careers and beyond. We certainly are not suggesting that you should try to fulfill all the roles described for every student you mentor. In fact, part of your responsibility as a mentor is to help students cultivate multiple mentoring relationships inside and outside the University.

- University of Michigan, 2006, p. 6

In *On Being a Mentor*, Johnson integrates and distills findings from the mentoring literature into distinctive components of mentorships. These are the "facets of mentoring that help distinguish it from other relationship forms" (pg. 21).

- Mentorships are enduring personal relationships
- Mentorships are reciprocal relationships
- Mentors demonstrate greater achievement and experience
- Mentors provide protégés with direct career assistance
- Mentors provide protégés with social and emotional support
- Mentors serve as models
- Mentoring results in an identity transformation
- Mentorships offer a safe harbor for self-exploration
- In the context of the mentorship, the mentor offers a combination of specific functions
- Mentorships are extremely beneficial, yet all too infrequent.

What does a mentor do?

In developing mentoring guides for faculty and graduate students, the Rackham Graduate School at the University of Michigan talked to faculty recognized for their mentoring and asked graduate students: "What did your mentors do for you that made the greatest difference to your graduate career?" From these discussions they identified the following tasks of a mentor:

1. Engage graduate students in ongoing conversations
2. Demystify graduate school
3. Provide constructive support and feedback
4. Provide encouragement and support
5. Help foster networks
6. Look out for the student's interests
7. Treat students with respect
8. Provide a personal touch

Details about each of these tasks is available in *How to Mentor Graduate Students: A Guide for Faculty at a Diverse University*, The Rackham Graduate School, University of Michigan, 2006. (downloads as a PDF document)

Stages of mentoring

It can be useful to think about mentorship in terms of developmental phases. For example, in chapter 7 of *On Being a Mentor*, Johnson describes the common phases of mentoring relationships, based on a model by Kram. Johnson emphasizes the fact that while mentoring relationships with students will move through a predictable developmental course, " ... rarely will two mentorships follow an identical trajectory or arrive at major phases in the same manor" (pg. 97) The phases are:

1. **Initiation** - the first several months of the mentoring relationship when both mentor and protégé are getting to know each other and settling into the relationship.
2. **Cultivation** - the steadiest and longest phase of the mentoring relationship; "the active and productive season of mentorship" (pg. 99)
3. **Separation** - This phase begins slightly before or slightly after the protégé's graduation and represents a dramatic shift in the relationship. The changes that take place during this phase can be difficult to manage but are important in setting the tone for the final stage of the mentoring relationship.
4. **Redefinition** - When the mentoring connection continues after separation, the relationship must be redefined to fit the new circumstances.

Cognitive apprenticeship is another developmental model often applied to mentorship. Johnson and Pratt describe a cognitive apprenticeship model consisting of 5 phases:

1. Modeling
2. Approximating
3. Fading
4. Self-directed learning
5. Generalizing

Nyquist and Wulff discuss yet another model for the phases of graduate student professional development, involving the stages of:

1. Senior Learner
2. Collegue-in-Training
3. Junior Colleague/Colleague

The University of Washington's How to Mentor Graduate Students has a very helpful chart applying this model to many aspects of the mentoring relationship.

Being aware of these developmental models and the phases that mentoring relationships pass through can help the mentor and the protégé be more intentional about the relationship.

> *Mentoring is a relationship. At the same time, it is a journey mentors and mentees embark on together. Throughout this journey, two or more individuals help each other arrive at a destination called professional excellence. Naturally, the journey can be challenging, with occasional muddy trails and blind spots but with many more panoramic lookouts and high points. Good mentoring is simply 'the best way to get there.'* - University of Washington, 2005, pg. 5

Mentoring Contexts

Mentoring takes place in many contexts. This section looks at mentoring graduate students from the perspective of teaching, research, and professional and personal development. Many graduate students will join the academy as junior faculty. Thus, the mentoring of graduate students can be thought of in terms of mentoring the teaching, the research, and the service components of these graduate students. More information about mentoring in each of these three contexts is available in the additional mentoring resources section below.

Teaching

In a post entitled "Using mentoring as a form of professional learning," the Tomorrow's Professor listserv looks at the positive role of mentoring in faculty development.

> *Educational institutions have for a long time been thought of as the place where students learn. It is only more recently however, that educational institutions have begun to be thought of as places where teachers' professional learning can also take place. Teaching is one of the loneliest professions, with teachers rarely having the opportunity to work with a colleague in a collaborative way so that they can learn more about the teaching-learning process. Mentoring in one form or another is a means by which teachers can break down their isolation and support professional learning in ways that focus on the daily work of teachers and teaching learning situations.* (Nicholls, 2002)

Professional and Personal Development

In addition to working with a student to develop teaching and research skills, the mentoring relationship is likely to involve helping the protégé develop the skills necessary to succeed professionally. Traditionally, a large percentage of graduate students have chosen to pursue careers in academia (although this is changing), so the professional mentoring of graduate students has most often been conceptualized as helping protégés develop as junior colleagues.

Chapter 3 from *Advisor, Teacher, Role Model, Friend* (NAP, 1997) discusses the role of the mentor as a career advisor in science and engineering disciplines.

The Vanderbilt Graduate Development Network(GDN) Collaborative provides a variety of resources related to supporting the professional and personal development of graduate students.

Frequently Asked Questions

On February 2, 2010, the Center for Teaching held a conversation on teaching titled "Mentoring Graduate Students in the Sciences and Engineering" featuring three faculty panelists. After the session, one of the panelists, Isabel Gauthier, professor of psychology, wrote a one-page description of her "vision of graduate mentoring," which she allowed the CFT to share on this Web site.

Additionally at the start of the session, participants were asked to share questions they had about mentoring graduate students. Each question fell into one of five broad categories, listed below. Also listed below are answers to these questions suggested by panelists and participants.

These answers are not meant to be prescriptive. They are instead perspectives shared during the session that you might consider as you think about your role as a mentor. Also, they may not translate completely to mentoring contexts in the humanities and social sciences.

How can I negotiate differences between the student's expectations for mentoring and the mentor's expectations?

- Just as a teacher has the authority to set the terms for a course, a mentor has the authority to set the terms for a mentoring relationship. That means that you can be clear with students what forms of mentoring you will provide (e.g. constructive feedback, networking assistance) and what forms you will not provide (e.g. friendship).
- No single mentor can provide all forms of mentoring a student requires. Encourage your students to have multiple mentors that play different roles in their professional development.
- Bear in mind that each student is different, so the kind of mentoring you offer a particular student might be different to the kind you offer to another student. Seek feedback from your student about your mentoring so you can tailor your work with that student over time.

How can I balance the student's need for structure with his/her need for independence?

- Here is one way to view this balance: If you have a student work on something that is too difficult, the student will be overwhelmed and need too much hand-holding. If you have a student work on something that is too easy, they won't benefit from the experience. Instead, have a student work on something not too difficult and not too easy so that the student is in the "learning zone."
- Instead of thinking of a master plan for your student, draft a plan for "right now." Then modify that plan over time to give the student increasing amounts of independence, keeping them in the "learning zone" as much as possible. This cuts both ways—sometimes you will have a "star" student who is still underperforming, given his or her potential.
- If you have calibrated your assignments so that the student should be in the "learning zone" but the student is not making any progress over time, then perhaps the student needs to consider leaving the program.

How can I manage teams of students working on common projects?

- When assigning tasks to students on a team, consider their career plans. A student heading into academia might need a lot of publications, so have that student work on tasks that more readily yield publications. Another student might be heading into industry where publications are not as valued, so that student could be assigned other kinds of tasks.
- Have students work on multiple projects at once so that if they hit a wall with one project or stop functioning well on a particular team, the risk to the student's career in minimized.
- Consider encouraging "near peer" mentoring within teams. If a particular student is more advanced with a particular kind of task, partner that student with another who is less advanced so that the more advanced student can mentor the other student. When tackling a different task, these roles might be reversed so that both students benefit.

How can I help students continue to make progress over time?

- It can be important to assess a student's work and discipline early in their career. This helps to provide difficult situations (e.g. underperforming students) later.
- When talking with an underperforming student, ask the student what s/he hopes to get out of the program. Reframe the situation by helping the student see the ways s/he is not meeting his or her own goals.
- Help the student understand the amount of time required on a weekly basis to make adequate progress. If the norm is that students in your program work 50 to 60 hours a week, for instance, communicate that to your student.

How can I balance my interest in helping students with the need to act as a gatekeeper?

- To clarify this question, consider this tension: On the one hand, you might want each student to learn and grow as much as they can while in your program. You're interested in the "delta," the change in their development over time. On the other hand, you only have so many positions available in your program, so you don't want to keep an underperforming student around too long, since that denies a position to another student who might be more successful.
- Remind your students that when they go on the job market, you will be writing a letter of recommendation for them that will greatly affect their job prospects. You are their evaluator, not (just) their friend. This encourages students to take more responsibility for their own progress.
- It is important that there is a good fit between student and mentor. If a student fails out of a graduate program, it is more of a failure of the program than a failure of the mentor. That student should have been matched with a different mentor, one with a better fit for that student, before failing out.

Additional mentoring resources:

Vanderbilt Resources:

BRET Graduate and Postdoctoral Scholar Mentoring Program - Information about mentoring in the Biomedical Research, Education and Training (BRET) program in the Vanderbilt University School of Medicine, including a summary of recommendations from a mentoring committee, guidelines for faculty mentors and additional mentoring resources.

Graduate Development Network (GDN) - This network of faculty, administrators, and students at Vanderbilt seeks to facilitate the awareness and use of the many programs at Vanderbilt that can help graduate students become productive and well-rounded scholars. The GDN web site lists services and resources offered by the members of the collaborative as well as events and conferences and funding opportunities.

The Resources for Graduate Education teaching guide from the Center for Teaching provides resources for department chairs, directors of graduate studies, graduate faculty, graduate deans, and others interested in the quality of graduate education.

The Teaching Fellows Workshop - A 12-hour mentor training workshop developed by the CFT as part of the HHMI - Community of Scholars program at Vanderbilt, offered to teaching fellows (advanced undergraduates, graduate students, and post-docs) who serve as mentors to undergraduate research interns (rising freshmen and sophomores) working in biological science laboratories. The two major topics addressed in the workshop are strategies for effective mentoring (based on *How People Learn*) and project design.

Resources from the CFT Library:

Johnson, W. Brad. (2007). On Being a Mentor: A Guide for Higher Education Faculty, Lawrence Erlbaum Associates.

Wunsch, Marie A. (editor). (1994). Mentoring Revisited: Making an Impact on Individuals and Institutions, *New Directions For Teaching and Learning,* Number 57, Spring 1994.

Zachary, Lois J. (2000). The Mentor's Guide: Facilitating Learning Relationships, Jossey-Bass. (Available online to Vanderbilt users)

Resources from outside Vanderbilt:

Advisee Management Tip: Ask for a Memo: In this post to the Tomorrow's Professor listserv, Dr. Mary McKinney recommends asking your graduate students to write a memo. "It's polite, professional, proactive, and will protect you both from misunderstandings."

Why are memos needed? Because doctoral students forget that their dissertation is more important to them than to you." "The core of the memo is the 'what,' 'why,' and 'when' of the submitted material. Benefits of the memo: (1) It will take you less time to review the draft. (2) Students gain the skills of mature, professional and proactive academics. (3) It is easier to provide useful, focused critiques.

Adviser, teacher, role model, friend: On being a mentor to students in science and engineering. National Academy of Sciences, National Academy of Engineering, & Institute of Medicine, Washington: National Academy Press (1997).

This guide -- intended for faculty members, teachers, administrators, and others who advise and mentor students of science and engineering -- attempts to summarize features that are common to successful mentoring relationships. Its goal is to encourage mentoring habits that are in the best interests of both parties to the relationship. While this guide is meant for mentoring students in science and engineering the majority of it is widely applicable to mentoring in any field. (from the Preface)

Doctoral Dissertation: Looking Back, Looking Forward - In this post to the Tomorrow's Professor listserv, a doctoral candidate describes his own experiences as a graduate student, the faculty role, the importance of mentoring, and some thoughts on developing a new doctoral supervisory model.

Entering Mentoring: A Seminar to Train a New Generation of Scientists - This guide developed by HHMI Professor, Jo Handelsman, and her colleagues and co-founders of the Wisconsin Program for Scientific Teaching at the University of Wisconsin, Madison, raises questions about teaching expectations, mentoring as a function of training new teachers, and dealing with diverse learning styles, personal styles, ethnicity, experience, gender and nationality.

MentorNet: MentorNet is a nonprofit e-mentoring network that positively affects the retention and success of those in engineering, science and mathematics, particularly but not exclusively women and others underrepresented in these fields. The MentorNet website offers a variety of information for mentors and protégés, primarily in the STEM (science, technology, engineering and mathematics) disciplines.

Resources from other universities:

The Rackham Graduate School at the **University of Michigan** provides a variety of useful resources on mentoring, including:

- *How to Mentor Graduate Students: A Guide for **Faculty** at a Diverse University*, and
- *How to Get the Mentoring You Want: A Guide for **Graduate Students** at a Diverse University*.

The Graduate School at the **University of Washington** provides a page of mentoring resources for graduate students and faculty. Particularly useful are the following two guides (clicking on the links below will open the documents as PDF files):

- *Mentoring: How to Obtain the Mentoring You Need* - A Graduate Student Guide
- *Mentoring: How to Mentor Graduate Students* - A Faculty Guide. This publication contains a wide variety of helpful recommendations and resources, including a series of worksheets that can be used to help define the mentoring relationship (see pages 40-44).

References

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