

MULTIPLE AND SEQUENTIAL MENTORING: BUILDING YOUR NEST

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ABSTRACT

This chapter looks at the importance of mentoring. After defining what a mentor is, it describes key points pertaining to successful mentoring and offers suggestions for mentors or advisors on how to develop a mentoring plan. It briefly discusses some of the literature on mentoring and discusses activities that are important to both mentors and mentees. Finally, it encourages open and frank communications between the mentor and mentee.

11.1. Introduction

Success in the academy is a combination of many factors. Intelligence and hard work are essential but not sufficient by themselves. Help from mentors and advisors in learning how to navigate the complex corridors of the academy is also fundamental; it is unlikely that someone will master this process unaided. Unfortunately for the outsider, multiple studies have shown that workers in any field tend to mentor and advocate for people who are similar to themselves [e.g., *Chesler and Chesler, 2002, McGuire, 2002*]. To break this pattern, mentors and mentees, students and faculty, insiders and outsiders, chairs and administrators need to examine the importance of passing information between groups and make sure this transmission occurs.

We like to think of mentoring as a process analogous to a bird building a nest. Birds inhabit many different types of environments, just as there are different academic niches. As a result, birds build nests in different locations and with different materials. Although some aspects of nest building may be

instinctual, there is clear evidence that much of it is also a learned practice [Walsh *et al.*, 2011]. There are many aspects of succeeding in the academy that also need to be learned.

Mentoring is considered so important by the National Science Foundation that postdocs funded through its programs are required to include a mentoring component in their proposal. But what is a mentor? What is his or her function and how does that differ from an advisor? The English language fails us here because it is difficult to distinguish the difference between an advisor and a mentor. Here we consider an advisor to be an assigned position and/or someone providing a single piece of advice. Someone in an assigned position can be a mentor, but doesn't necessarily have to be.

According to the *National Research Council* [1997], "In the broad sense . . . a mentor is someone who takes a special interest in helping another person develop into a successful professional." This outstanding book describes specific steps for improving mentoring throughout an institution, and between mentors and mentees. It describes specific roles and how to mentor within those roles, as faculty advisor, career advisor, role model, and career consultant. The different roles are by no means mutually exclusive. Most important, however, it says that mentoring is so essential "that it must be embedded in institutional systems of rewards and promotions." Although this statement was published in 1997, we know of no institution where mentoring has yet reached this level of emphasis.

This may be because in what had been a predominantly white male culture, the assimilation proceeded without the need for a formal process of mentoring: it could happen in locations such as the locker room or at a social event, or through visual and verbal clues that might not be picked up by outsiders. These locations, however, might not be as open or comfortable to the new and more diverse members of the academic workforce. In addition, visual and verbal clues that are clear within a dominant culture might not be as clear to someone outside that culture [Dovidio *et al.*, 1988]. With increased diversity, both mentors and mentees may be asked to reexamine their roles in order to enable both of them to develop a relationship which will allow both to prosper, with the mentor taking an active role in enhancing the development and career of the mentee, and the mentee being receptive to advice.

By the time someone finishes graduate school and accepts an academic position, he or she will certainly have had academic advisors, quite likely as an undergraduate and certainly as a graduate student. Most science careers are begun as undergraduates, and at most academic institutions faculty become advisors to students. Usually there isn't much preparation for the role of advising students other than having once been one. Similarly, more seasoned faculty, and especially chairs, may be expected to take on the role of faculty advisor or mentor without much preparation.

11.2. Faculty Chair: Identifying Mentors and Their Roles

Mentoring is at its most basic level a relationship. It can be part of a defined relationship, such as an academic advisor or department chair, or it can grow out of other relationships. Key to the relationship is respect. Box 11.1 offers a list of ways to build respect; the list may also be viewed as containing potential stumbling points for both parties. Although Box 11.1 is presented with a faculty mentor, such as a departmental chair, in mind, it is applicable to any mentoring relationship. As you read through the list, consider how your reactions and comments as mentor or mentee might differ depending upon the gender, race, ethnicity, or economic background of the other person. This is an opportunity to be especially aware of implicit biases, stereotype threat, and imposter syndrome.

In many departments there is no formal mentoring. When this is the case, the chair, or whoever will be writing an annual evaluation, should advise or mentor a

Box 11.1 Keys to successful mentoring (adapted from *National Research Council, 1997*).

1. **Take the new faculty member seriously.** A question or problem that seems trivial or irrelevant to you might not be, or it might mask a more serious issue.
2. **Don't dictate answers.** Suggest paths, give the pros and cons of different options, but let the mentee make the final decision. The relationship might benefit from the mentee explaining the reasons for the decision.
3. **Be direct and frank.** This can be uncomfortable.
4. **Belonging.** When most people around you don't look like you, it is easy to assume that you don't belong. Praise is not abundant in the academy, but it can help to mediate harsh proposal reviews or unpleasant student course comments.
5. **Invite other mentors.** Many complex tasks are necessary to develop as a successful academic: writing, speaking, politics, teaching, researching, etc. How does anyone prepare for this? Enlist reinforcements. It might be that the mentee is more comfortable discussing problems with someone who will not be part of his/her promotion and tenure committee.
6. **Meet on neutral ground.** You (the mentor) are the commander of your office and lab. It might not be an ideal place to discuss your mentee's concerns. Select an inexpensive place on or off campus for coffee or a meal, or the library. This allows the mentee to suggest a neutral meeting place where the mentee can afford to offer to "pick up the tab."

new faculty member or find a mentor for this person. Mentoring is a complex job, and it is unlikely that a single person will be knowledgeable about all of the needs of a new faculty member. We discuss the need for multiple mentors in the next section. But if there is an assigned advisor in this formal relationship, he or she should establish specific times to meet and go over progress. This will allow the advisor to notice where additional help is needed and facilitate an introduction to someone who can assist the new faculty member with his or her adjustment.

11.3. New Faculty (Mentee): Examples of Multiple Mentors

As a new faculty member, it is your job to make sure you get the advice you need to succeed. Your career is at stake. Begin with listing what needs to be accomplished professionally during the time available before tenure, promotion to full professor, or whatever you'd like to accomplish after promotion to full. Think about the many facets of professional and nonprofessional life that need mentoring and especially how complicated the decisions became at the end of formal academic training when you began an academic job. What research questions to address? How to set up a lab? What skills will I need? How to make time for writing? If and when to have children? What about soul fulfilling activities? Do I belong in this profession?

Given this complexity, is there one person who can mentor you in all of these facets? Probably not. As discussed by *Sutkowski* [2011] and *Rockquemore* [2011a], different types of mentors are needed. But both of these articles assume you have already established your goals. In fact, by the time you reach this point in your career, you may well have defined professional goals: for example, finish PhD, get a job, write a paper, get tenure, and so on. The other goals, those of work-life balance and soul-fulfilling activities, also need to be considered but may not be as readily defined, will vary considerably, and are not specifically addressed in this document. However, a useful and short book that discusses this is *Minsker*, [2010].

Sutkowski [2011] emphasizes the importance of applying diverse viewpoints to goal setting and suggests the creation of an informal “Kitchen Cabinet” of mentors. His suggested cabinet (Table 11.1) is professionally focused and consists of five members: friend, role model, insider, veteran, and teacher. To his list we would add advocate, someone you can depend upon to take your side and promote you professionally. Cabinet members’ perspectives and roles may overlap, but make sure there is someone filling all of the positions that are needed.

Rockquemore takes multiple mentoring further. In a series of articles in *Inside Higher Education* (2011a, b), she takes a comprehensive and detailed view of mentoring, expanding beyond a professional focus. Her approach to mentoring requires the mentee to be proactive, to ask what is needed to succeed, and then to identify people to help to meet those needs. Identifying these people is

Table 11.1 Modified kitchen cabinet after *Sutkowski* [2011].

Title	Characteristics
Friend/ confidant	This friend is one with whom you can share and discuss your professional and personal goals. He/she is probably not in your field, and can give you a broader perspective on your career and life goals.
Role model	This person has the skill set and position you would like to achieve and is someone who can help you acquire that skill set.
Insider	An insider has probably been working at your institution longer than you, understands its inner dynamics, and can help you to become aware of your performance within its larger context. Be careful, however, that this is not a polarizing person or someone whose experience has created bitterness. More than one insider might be useful.
Veteran	This is a more traditional mentor, someone with broad experience in your field who may or may not be at your institution. Establish set times to consult with this person about your progress.
Teacher	Find a person to help you learn the skills you need to progress.
Advocate	Advocates go out of their way to promote and support you professionally, making you aware of opportunities and nominating you for important professional positions and awards, as well as introducing you to key people at your institution and/or in your field.

especially crucial at transitional career stages, such as from graduate school to tenure track, and tenured to full professor.

She suggests creating a chart listing specific needs (Figure 11.1). The mentee is at the center and around her are categories, such as those in the “Kitchen Cabinet” (Table 11.1). Figure 11.1 is an excellent place to start, since there are probably needs that a mentee is not aware of, but there may also be positions listed that you do not need. Underneath the categories are spaces for names. This requires that you put actual names in each of the positions. Even reading and imagining the chart can be intimidating. For example, her ideal intellectual community requires several people who will read the very beginning drafts (0%–25% written) of a paper or proposal. We are not sure how you find such people when time is so scarce for everyone.

We also suggest including a simpler table in your mentor/mentee portfolio, maybe constructed with an advisor and focused on specific tasks. Using both Table 11.1 and Figure 11.1, make a table like Table 11.2, of what type of tasks you are likely to need this year, and possibly a different one looking ahead five years. Then put the name of potential people to fulfill that role. This is best done with someone knowledgeable about your institution. Include in this table how you are going to identify and contact someone to fulfill that role. You do not need someone’s permission to assign him or her a role; the person may not even know that

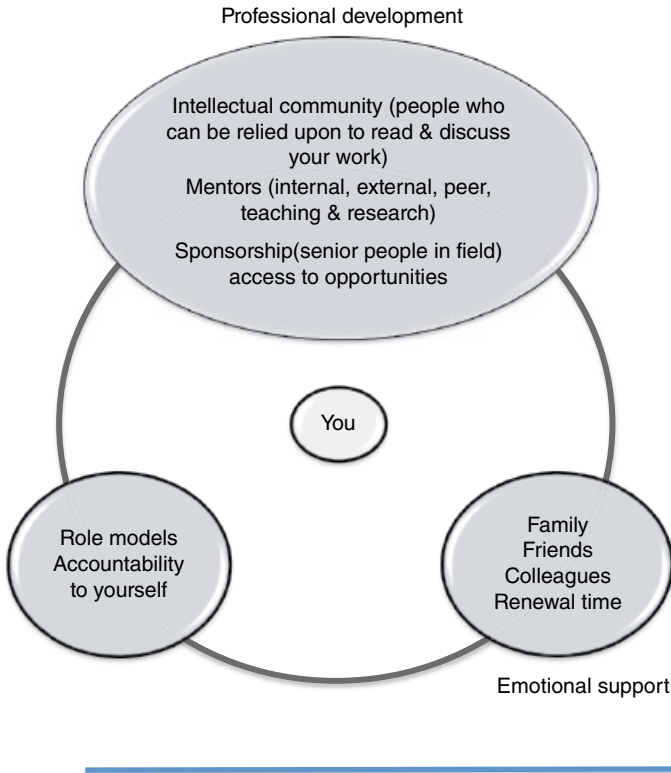


Figure 11.1 Mentoring chart. These positions are not set in stone and a position could be filled by an organization. There may be other people whom you need, if so, add them. There may be people in this chart whom you don't need. Eliminate them. Modified from Rockquemore workshop (www.facultydiversity.org/).

their name appears on your chart or in your table. Similarly, they do not need to be told they are being removed.

Advantages of creating different types of mentoring tables or charts include these:

1. **Continuity.** All of the positions are unlikely to turn over at the same time.
2. **Concreteness.** You need to think concretely about how you are being mentored.
3. **Clarity.** Names on paper make it easier to discuss which needs are being met and which are not, so that you can then find people to complete the chart.

The components, both positions and names, of a mentoring table should be reviewed at least annually, especially as your professional and personal paths progress. Ideally, an institution will have established mentoring mechanisms in

Table 11.2 Example of mentoring task table.

Task	Likely Mentor	How to Contact/ Get Introduced	Comment/ Reminders	Important Dates
Publish XYZ paper this year	Prof. Smith	Advisor will introduce	If 2 weeks go by without any writing progress, see Prof. Smith immediately	Intermediate due dates leading to paper completion
Getting known in field	Prof. Coyne	Send her your C.V. and ask to meet	– Find funds to attend small international meeting – How to connect with NSF program manager?	
Write a final exam	Mr. Jones	He's in teaching and learning center	See at beginning of semester	This week

place. But if it does not, you as the mentee have the most at stake and must take the lead. We believe that awareness and action in this process may contribute towards a healthier departmental culture with benefits for everyone.

11.4. Mentor and Mentee Collaboration

Although everyone is responsible for his or her own professional and personal development, it is possible and even likely that someone new to an academic position, be it graduate student, postdoc, new professor, newly tenured professor, or new chair, may not know how to access mentors or create a mentoring table or chart.

We suggest that the more experienced person, an advisor to a graduate student, department chair to a new professor, or provost to a new chair, take the lead in organizing an advising session that includes mentoring. Show examples of mentoring tables or charts and discuss what needs to be done to succeed in the available time. Considering the investment of time and money involved in recruiting a new faculty member, especially one who has extensive start-up costs, everyone should be behind helping to make this person successful. This mentoring is especially critical for outsiders such as women in science and minorities in any academic field. Imagine how much smoother transitions would be if every new graduate student and new faculty hire were presented with the information about how to get the mentoring needed to succeed and help to plan the next career stage.

At whatever stage, mentors should be aware of common pitfalls, make the mentee aware of them, and provide guidance about how to avoid them.

11.4.1. Three Steps for an Advisor or Mentor

1. **Initiate a meeting.** Before the meeting, both mentor and mentee should review the mentoring information and charts. What are the likely stumbling blocks? For example, a new assistant professor needs to set up a lab, learn to write, and learn to organize and teach a class. At the meeting use Table 11.1 and Figure 11.1 to fill out your own table and a task table (Table 11.2) to determine what advice someone in your position needs to succeed, and to identify specific people who can fill the roles and how those people will be contacted. Include questions such as these: What do I need to accomplish to get tenure? How important are external reviews to the process? If external review is important, are there funds to invite some of these people to campus?
2. **Establish a plan and regular check-in times** to see how the mentee is proceeding, say midsemester, end/beginning of the semester, and midsummer. It might not be possible to proceed on all of the tasks at the same time. Which ones are most important will depend upon the institution. Get help where it is needed: a teaching or writing coach, perhaps, or someone to help with work-life balance.
3. **Emotional support** can come from multiple sources including friends, partners, parents, and siblings. But do not be hesitant to use or suggest professional therapy, religious support, and less common experiences or practices such as meditation, exercise, and nonacademic social groups.

11.4.2. What's Really Important (Mentor and Mentee)?

The importance of the tasks listed below varies considerably by institutional type and even within different departments at the same university. Identify what needs to be done at your school and department by looking at the accomplishments of recently tenured and promoted faculty.

11.4.2.1. Setting up a research lab. Make sure the new hire has the tools needed in start-up funds to succeed. This needs to be negotiated before a new person accepts a position and should be discussed at the time of the job offer. Several papers about negotiating start-up funds are included in the resources section.

11.4.2.2. Publishing. Publishing is the currency of the academy. *Boice* [1990] says, and we agree, that learning to write should be the top priority of a new faculty member. It is the foundation of the nest. This is how someone builds a reputation. Figure out (mentee)/show (mentor) how to make this happen, how to inform the new faculty member about the essential components of a writing

practice. Writing is not something to be done at the end of the day, after everything else is done. It must be a priority. Lack of publications is the most common cause of failure to attain tenure. If someone has a strong publication record and does not get tenure, he or she will be in a much better position to find another academic position.

Set an established time to write every week that is as inviolable as teaching a class. Some research suggests that 90-minute segments are ideal, but find out what works for you. Employ an editor to review your material before it gets sent to a journal. If creating figures is a time sink, see if technical illustrators are available to hire. It's possible that students in a technical illustration program are available to hire for not much money.

An important aspect of creating your plan is length of time to publication. Some journals take over a year to accept or reject an article. This means one less year on your tenure or promotion timescale.

If you are having trouble, there are many self-help books on the topic of writing (see Resources), and there are online coaching programs that you can join. Some of these resources are listed in the resource section. Participation in some of these programs can be included in start-up packages.

11.4.2.3. Teaching. At some institutions, the teaching load is light and not very important for career success. At others, good teaching is essential. If you are at an institution that requires good teaching, find out how teaching is evaluated and who does teaching well, then seek their assistance. Teaching can be both a duty and delight, but it is certainly more fulfilling when it is done well.

As with writing, there are many self-help books to learn better teaching techniques. Some of these are also listed in the resources section. In the geosciences, SERC, the Science Education Research Center at Carleton College (<http://serc.carleton.edu/>), is a tremendous resource for ways to think about teaching, providing class modules, exercises, and syllabi. If you don't find information about a topic that you're looking for, you can probably find other people in the SERC community who are also interested and develop a workshop to cover the topic.

11.5. A Last Word of Caution: Don't Ignore Difficult Topics

As faculty and students become more diverse, the opportunities to interact with and mentor someone who is not like you increase. There are important differences, such as race, gender, sexual orientation, disabilities, and economic background. Both mentor and mentee need to be able to openly and frankly discuss uncomfortable topics. Maybe in preparation both parties should read books such as *Can We Talk About Race?* [Tatum and Perry, 2007] and *Why So Slow?* [Valian, 1998].

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RESOURCES

Mentoring: Articles and Books

- Association for Women in Science (1993), *Mentoring Means Future Scientists*, Association for Women in Science, Washington, DC.
- Council of Graduate Schools (1990), *Research Student and Supervisor: An Approach to Good Supervisory Practice*, Council of Graduate Schools, Washington, DC.
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Mentoring: Online Resources

- Institute for Broadening Participation, Pathways to Science, Mentoring Manual (<http://www.pathwaystoscience.org/manual.asp?sort=Overview%20and%20Home>)
- Mentor Net is an international, nonprofit organization focused on connecting mentors and mentees (www.mentornet.net).

New Faculty (Any Faculty)

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Teaching

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- Bean, J. C. (2011), *Engaging Ideas: The Professor's Guide to Integrative Writing, Critical Thinking, and Active Learning in the Classroom*, Jossey-Bass, San Francisco.
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- Filene, P. (2005), *The Joy of Teaching, a practical guide for new college instructors*, University of North Carolina Press, Chapel Hill.
- Science Education Resources Center, <http://serc.carleton.edu/index.html>.
- Stanford Center for Teaching and Learning, <http://ctl.stanford.edu/Tomprof/index.shtml>.

Writing: Articles and Books

- Clark, R. P. (2008), *Writing Tools: 50 Essential Strategies for Every Writer*, Little, Brown and Company, New York.
- Silva, P. J. (2007), *How to Write a Lot: A Practical Guide to Productive Academic Writing*, APA, Washington, DC.

Strunk, W. Jr., and White, E. B. (1918, first, 1999 fourth), *The Elements of Style*, numerous publishers (Allyn and Bacon). Online and searchable version: <http://www.bartleby.com/141/>

Zinsser, W. (1976), *On Writing Well: The Classic Guide to Writing Nonfiction*, HarperCollins (also pdf at <http://hnguyen.files.wordpress.com/2011/03/on-writing-well.pdf>, and available as an audio book).

Writing: Online Coaching and Support

Academic Ladder, originally a writing club, <http://www.academicladder.com/>.

National Center for Faculty Development and Diversity, <http://www.facultydiversity.org/>.