

A Postdoc's Guide to Mentorship

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Introduction

As a postdoc, it goes without saying that mentors are critical for your continued development as a professional, as well as your movement into a position beyond training. But there is no such thing as the perfect mentor because everyone's needs and goals are highly variable. In fact, that is the first step in thinking about finding mentors – reflecting to specifically identify and assess what you hope to gain from your mentor(s); you can't go looking for something without a clear idea of your own needs and goals! Taking self-assessment tests and creating an individual development plan (IDP), and then reviewing the results with current mentors and peers is a great first step. With a deeper understanding of yourself, you will be much better positioned to seek new mentoring relationships and resolve mentoring relationship challenges.

Even with a clarified view of what you are seeking from mentors, it is critical to keep in mind that it will be less about what your mentor will 'give' to you and more about how the two of you can collaborate to meet your mutual needs. Traditionally, much focus has been on how to make mentors better at meeting the needs of those whom they are mentoring. In a utopian world with perfect mentors, this is a great ideal to strive for, but in the real world it has to be about mutual benefit and mutual responsibility for making the mentoring relationship work.

This resource has been created to help postdocs:

- Think and assess prospectively about what they are seeking from mentors
 - Shift from thinking about good and bad mentors to the core attributes of effective mentoring relationships
 - Recognize that effective mentoring is not just about mentors guiding mentees, but also about mentees guiding mentors – mentoring up
 - Learn more about recent theoretical, practical and research advances to guide their development of effective mentoring relationships
 - Become familiar with key resources to continue building their skills as mentees and mentors
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Self-Assessments: Start at the Beginning

It can be tempting, and is common, for many to jump right into trying to solve problems with their mentors. But before you consider addressing problems or even identifying potential mentors, it is critical to start by assessing yourself and your goals. You have to begin by understanding yourself, for numerous studies have shown that we often don't assess our strengths and weaknesses accurately. Thus, self-assessment is a critical first step to navigating any mentoring relationship. Self-assessment tools and professional development workshops are often available at universities, and your career center may be able to provide individual consultations.

A few examples include:

- [Myers-Briggs Type Indicators \(MBTI\)](#), The MBTI instrument assesses your preferences in four areas: how you relate to people, gather information, make decisions, and interact with the outside world.
- [StrengthsFinder](#), The Clifton StrengthsFinder 2.0 assessment identifies your strengths from among 34 themes within four domains. Purchasing the "Strengths Based Leadership" book will provide background and an access code to take the online assessment.
- [myIDP](#), For postdocs in the STEM disciplines, the myIDP website provides an excellent, complete online resource to create your own individual development plan (IDP). The website is free and helps to assess your skills, interests, and values; explore possible careers and conduct informational interviews; set and achieve SMART goals; and implement your plans. Other IDP tools are becoming available that also have self- assessment tools, such as [chemIDP.org](#) and [imaginephd.com](#).

The Mentor: A short history of recent advances in developing mentoring skills

A big step forward in work to improve mentoring relationships took place in 2005 with the release of *Entering Mentoring: A Seminar to Train a New Generation of Scientists*. The series of workshops were developed by Jo Handelsman, Christine Pfund, Sarah Miller Lauffer and Christine Maidl at the University of Wisconsin with support from Howard Hughes Medical Institute (HHMI). It was originally designed for postdocs and graduate students who were mentoring undergraduates doing summer research in the biological sciences. It quickly became the go-to standard for how to guide young scientists in training. *Entering Mentoring* was novel because it defined and provided effective workshop-based tools around what makes mentoring relationships effective – or not. Research mentoring in the sciences was broken down to its component parts. The second edition of this original curriculum was published by Christine Pfund, Janet Branchaw and Jo Handelsman in spring 2015 and is designed to be used across the STEM disciplines. [Entering Mentoring](#) (2nd edition) is available from W.H. Freeman publishers.

The Wisconsin team also adapted the *Entering Mentoring* curriculum for several specific disciplines. Although the core characteristics of effective mentoring are relevant for many fields, the cases used to display and talk about them are best if they

fit the context of the person learning them. Currently, workshop manuals and curricula as well as evaluation tools for teaching research mentorship in many different disciplines can be downloaded from the [Center for the Improvement of Mentored Experiences in Research \(CIMER\)](#). Custom curricula may also be created on this website.

One version of the adapted *Entering Mentoring* was specifically designed for faculty who are mentoring junior faculty or senior postdocs in a clinical and translation research setting. That version was field-tested at 16 medical centers holding NIH Clinical and Translational Science Awards (CTSA) in 2012-13. The field testing was conducted as a true randomized controlled trial in which mentor and mentee pairs were randomly assigned to mentor being trained or not. The mentee did not know if their mentor had gone through the workshops or not. A whole series of publications have now documented this trial and the very promising results it produced. By several criteria, including perceptions of mentees of their mentors, the workshops had demonstrable positive benefits (c.f., Pfund et al. 2013, A research mentor training curriculum for clinical and translational researchers. *Clin. Transl. Sci.* 6, 26-33).

Formal training in mentoring skills is not necessarily required for effective mentoring relationships!

Entering Mentoring makes visible and explicit how mentoring is all about *RELATIONSHIPS* and what it takes for those relationships to be effective in order to achieve the mutual benefit of everyone involved. Even if you are unable to participate in the workshops, knowing those core attributes allows you to explicitly think about and continually improve your skills as a mentor. Knowing those attributes can help you actively guide your mentoring relationships.

The seven 'pillars' of effective mentoring relationships that are described, explained and practiced in the *Entering Mentoring* workshops are:

1. Maintaining Effective Communication
2. Aligning Expectations
3. Assessing Understanding
4. Addressing Equity and Inclusion
5. Fostering Independence
6. Promoting Professional Development
7. Ethics



The Mentee: mentoring up and developing skills for empowerment – the foundation for taking responsibility for your own mentoring

Mentoring relationships are about two (or more) people, who share the responsibility of making the relationship work. Thus, it is equally important to prepare trainees and even junior faculty to “mentor up.”

Mentoring up involves mentees taking responsibility for guiding their mentors on what they need. With this in mind, the pillars of effective mentoring relationships are the same for mentees as for mentors and training to support mentoring relationships can be done for mentees as well as mentors. Janet Branchaw, Christine Pfund and Raelyn Rediske have published a curriculum for undergraduate STEM mentees called *Entering Research*.

This curriculum parallels the *Entering Mentoring* curriculum and supports research mentees, who are engaging in research for the first time, to navigate their mentoring relationship. Along with the second edition of [*Entering Mentoring*](#), *Entering Research* is available from W.H. Freeman.

As a postdoc, you can use all of the materials cited here to consider and develop skills for guiding your mentors – mentoring up. It is especially important for postdocs to learn to mentor up, because they will soon (if they haven't already) be mentoring others. As you gain skills in mentoring up, you will also be strengthening your own skills in mentoring others.

Assessing the Current State

Assessing the current state of your various mentoring relationships as a mentee and as a mentor

If it seems like you are not getting what you were hoping for from your mentor(s), or you are not satisfied with how you are mentoring others, start by assessing those relationships.

Good questions to ask yourself in both circumstances are:

- What exactly am I looking for (expecting) from this mentoring relationship?
- What do I expect from my mentors/mentees and what do they expect from me?
- How do they know what I am expecting or looking for?
- Have we explicitly discussed these questions? If not, why not?

If your answers are vague or reflect little direct communication with your mentor/mentee, this could be a factor contributing to your dissatisfaction and a signal of where to start to make things better. Answers to these kinds of questions are often important elements of individual development plans (IDPs). If they are not in yours, add them. In addition to absence of clarity, you may identify other specific areas of concern and/or stylistic differences. If you objectively define them, this is a first important step in attempting to develop a strategy to address them.

Keep in mind that it is very valuable to have different mentors who assist you in different ways rather than expect one mentor to be the right person for everything. For example, you will need different mentors to address your research interests outside your primary research; career advancement if you're considering a different path than a research mentor; personal/professional integration; needs that reflect different aspects of your identity (e.g. gender, racial, ethnic, sexual identity, socioeconomic status, etc.).

Assessing the Current State

Assessing the “styles” of your various mentors, their openness to a shared responsibility and your “style” as a mentee

Often, difficulties in mentoring relationships come down to stylistic preferences or natural tendencies. Start by remembering that people typically tend to mentor in a manner that they would like to be mentored. Given this, it can be very valuable to find out about your own preferred styles and practices of mentoring BEFORE you sign up to be mentored. Don't be afraid to ask directly about things that are important to you and allow you to do your best work, such as: “I have found from the past that I like to meet regularly, every week or two, with research mentors to make sure we are on the same page. Does that work for you?”

“Moving into this next step in my career I need to have a chance to come up with new ideas and would like to be able to run them by you to get feedback even if I don't intend to follow them all. Would this be ok with you?”

“I have realized that I am really not a morning person and work much better afternoons and into the night. Would this work ok with your typical schedule such that we have enough overlap time to converse as needed?”

Sometimes the best information on mentoring styles comes from open-ended and direct questions to others in a research team. This is not to say that it is impossible to work effectively with approaches that are not naturally aligned: just be sure you realize it ahead of time so you both can acknowledge it is something you will have to consciously address. If you like to check in frequently (like daily) and a potential mentor does not, think of it as something you both can adapt to as a compromise. If it is very important to you to write full drafts of papers by yourself, and your potential mentor is typically more involved in early writing stages, this is again something to discuss and adapt. Furthermore, be aware that it may not be easy for a senior mentor to define their style, or they may think they have one style but others perceive it as quite different. This is one area where asking others in the research group about mentoring style can be very revealing.

Working to Improve Mentoring Skills

WORKING TO IMPROVE MENTORING SKILLS (UP AND DOWN) WITHIN A POSTDOC COMMUNITY – AT INSTITUTIONS, NPA MEETINGS, INDUSTRY, ORGANIZATIONS, ETC.

More and more institutions and organizations are recognizing the importance of helping mentors and mentees develop effective mentoring skills and relationships. As noted above, many of the newly developed mentoring skills materials can be quite useful for self-guided personal development. However, interactive workshops are generally more effective and more fun. Keep an eye out for wherever you may find them, and when you do, seriously consider participating. Yes, there is always pressure to do one more experiment, but really, will a few hours make any difference in the long run in the lab versus developing a skill that can literally transform your relationships with mentors?

Some of the links above will guide you to resources to invite experts to come to your campus to lead workshops and/or train individuals from your campus to lead them. There also are many groups that present mentoring skills and approaches on campuses and at meetings. All can be useful, but the bias of those of us behind this web content feel workshop models in which you get to identify how you tend to communicate, consider your current mentoring relationship, practice new approaches, etc. are more valuable than simply hearing others talk about mentoring.

Finding and choosing mentors – including primary research mentors and other mentors

The starting point for this one is very easy – you must figure out what you are looking for before you can try to find it! This is true for all facets of the mentoring relationships, including:

- Field of research, including how ‘hot’ the field is and the type and intensity of competition
- Size of research group and degree of collaboration vs. independent work
- Hands on vs. hands off style of mentor(s)
- Mentoring relationships that encompass personal and professional domains vs. those strictly focused on the professional
- Professional reputation of mentor(s) and the degree to which they can/do assist others with establishing professional networks
- Location – don’t underplay the importance of enjoying where you live to high quality work
- Utilizing mentors who are not at your home institution through intermittent phone and email contacts, or at meetings you both attend

If you already have one or more primary research mentors and feel you would like something more, you must still start with explicitly identifying what it is you are looking for. That should quickly refine your search from amorphous goals to more concrete goals. With those concrete goals, you are then armed to approach others with specific, manageable requests.

Your chances of getting a positive response skyrocket when you can clearly articulate concrete, realistic requests. A list of possible topics could be very long, but some might include:

- Research design if you are getting into areas outside the expertise of you and your mentors
- Statistical expertise
- Career strategies, especially if they are again outside what your mentors’ personal experience
- Management of life issues, such as balance of family/relationship issues
- Balancing/integrating/maintaining multiple identities related to gender, race, ethnicity, religion, sexual identities, and others within the scientific community
- Networking
- Psychosocial support

Additional resources are available at the [National Research Mentoring Network](#). And the National Academies of Science, Engineering, and Medicine’s Report on [The Science of Effective Mentorship in STEMM](#).

Case Studies: Challenging Situations and Difficult Conversations

**-INCLUDING UNIQUE CHALLENGES FOR INTERNATIONAL POSTDOC,
WOMEN, MINORITIES, ANYONE WHO IS 'DIFFERENT' FROM THE MAJORITY
OF THE COMMUNITY.**

As you consider how to apply the assessments and resources provided above into your specific situations, the following case studies are provided to help you evaluate your own understanding and to practice applying your skills in realistic situations. These case studies are based upon real situations (with altered names and details to maintain confidentiality) for personal reflection and/or for group discussion. We encourage you to consider how you might respond to these situations, avoid similar problems, and move forward to resolve conflicts – in order to help you improve your skills in mentoring up.



Case Study #1: Lack of independence

Jennifer recently finished her doctoral degree and began working in her new lab as a postdoc with high hopes. She had initial great meetings with her research mentor, who seemed friendly and willing to listen to her ideas and plans for her work. She also heard from the grad students in the group that they were very happy with his mentorship style. He has mostly grad students and undergrads in his research group, and Jen is his first postdoc in a while.

However, as she began working under her research mentor, she began to notice that he would brush off her ideas, and insist that she work on his ideas and plans. She brought up her ideas for what she had hoped to focus on multiple times, but he kept insisting that she first work on his initial project. But Jennifer's initial project has started to grow and take longer than they both first anticipated, and he has started talking about it becoming her main project.

Jen also began to notice that the grad students basically did what they were told to do, and were not given much independence in their research projects. She had been accustomed to having much more freedom from her graduate research mentor, so she is finding it difficult to follow her new research mentor.

Questions for personal reflection or group discussion:

1. What would you do in this situation? *(If you were in this situation, it may help to assess the situation. For example, if you are funded by your mentor, you will generally have less independence. But if you bring your own funding, you will of course can be more independent. Thus you might consider seeking your own funding to become more independent. Furthermore, you may also wish to assess your communication styles. You may think that you're expressing your preferences on what projects to pursue, but your mentor might not be understanding the extent of your preferences.)*
2. What are some different options for Jen to consider? *(As mentioned above, Jen might consider seeking her own funding, and/or working on more clearly expressing her preferences. Jen can also consider working on an individual development plan (IDP) to help her and her mentor come up with a timeline of how long to work on possible projects.)*
3. How could Jen have avoided some of the difficulties? *(Jen might have observed earlier that the research mentor has recently been working with mostly grad students, and hasn't worked with a postdoc in a while. Thus she could have asked more specific questions during her interviewing with the research mentor about how he would distinguish between mentoring a grad student vs a postdoc. Also, when she talked with the grad students, she might have asked deeper questions to notice how they generally did what the mentor told them to do without much input from the grad students. Additionally, before she agreed to work for the research mentor, she could have outlined a more specific plan and timeline on what projects to pursue.)*

Case Study #2: Co-Mentors

Tom is thinking of collaborating with two professors for his postdoc. Both faculty members are leaders in their fields, so he's excited about the possibility of expanding his research expertise by these two leaders. One works primarily at the medical campus of the university, while the other works primarily at the main campus, which is about an hour's drive away.

Questions for personal reflection or group discussion:

1. What are some benefits of working with two mentors? What can he do to make sure to take advantage of these benefits? *(Tom will need to assess his communication skills, and determine how he'll communicate with his faculty mentors. For example, he can propose a plan of how often they'll all communicate together, and how they'll communicate (in-person, phone, video-conference, etc). He should also reflect on any past experiences that he's had in working with multiple mentors, or in observing his peers manage multiple mentors.)*
2. What are some potential pitfalls of working with two mentors? What are some things he should do to avoid these pitfalls? *(Tom will need to be aware that his two potential mentors are leaders in their field, and so may not be accustomed to working collaboratively in a team. He should assess if these faculty have worked in teams before, and if the teamwork has been productive. He can check if they have published papers with joint projects, or if they have generally published papers within their own research groups. Also, because these two faculty are located at different campuses, he'll need to assess how he'll commute between the two campuses, possible places for him to live so that he can travel to both campuses conveniently, possible options for communicating with both faculty (e.g. phone, video conferencing, etc, and so on.)*

Case Study #3: Different Communication Styles & Aligning Expectations

Joseph has been having trouble understanding his research professor's expectations and goals for his research. This is particularly frustrating for Joseph, because he's very friendly and gets along with most people. He has weekly meetings with his professor, where he tells her all about his ups and downs from his research progress, along with complications and successes. Joseph is aware that he's communicative and talkative, so he believes that he's doing a good job with informing his professor about his research progress. But occasionally his professor will ask him a particular question that surprises him, because Joseph didn't realize that she had wanted something else. Joseph just wishes that she would explain more clearly what she wants and expects, so that they can work better together. But she doesn't seem to say much during their meetings and seems withdrawn from Joseph's perspective.

Questions for personal reflection or group discussion:

1. What do you think is occurring between Joseph and his research professor, in terms of miscommunication or misalignment of expectations? (*Joseph is apparently having trouble understanding his professor's expectations for his research. It may be that Joseph is not listening carefully, or his professor isn't communicating clearly, or most likely, some combination of both. It may be helpful to reflect on similar situations that you have personally encountered.*)
2. Do you think that a possible source of difference is that Joseph is an extrovert, and his PI is an introvert? Refer to the Myers-Briggs Type Indicators (MBTI) for deeper explanations of the differences between introverts and extroverts. (*From the description above, it's apparent that Joseph is an*

extrovert, because he's talkative, sharing all about his ups and down from his research progress. His professor is likely more introverted, and only extrovert, because he's talkative, sharing all about his ups and down from his research progress. a few things. Additional resources that help to understand and work with introverts and extroverts may be helpful here, e.g. David Keirsey's "Please Understand Me II." Joseph may also want to learn how to develop and use SMART goals in their plans.)

3. How might Joseph adapt, to work better with his professor? How can he improve his understanding of her expectations for his research? (*As an extrovert, Joseph may have trouble managing his own talkative personality. Be aware that introverts may feel overwhelmed when they're in a meeting with extroverts, and so may withdraw. Joseph may need to learn to bite his tongue, slow down, allow his mentor to have longer pauses to speak up, and learn how to actively listen. Also, to help him understand her expectations, he can follow up with their weekly meetings by e-mailing her a draft of a summary of their discussion and proposed action items, which she can edit and change if needed. Having a recorded summary of their discussion and action items can greatly enhance their shared understanding of the work and proposed plans. He can also propose to send her a draft of their agenda in advance of their weekly meetings, since introverts generally like to be alerted of topics for discussion so that they can reflect on the topics beforehand.*)
4. Have you or a friend experienced similar situations, where you had different communication styles with another member of a research group? How did the different communication preferences impact the relationship? How did you deal with the differences? (*This is an open-ended question that should hopefully lead to further discussion of different situations that you may wish to discuss.*)



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