Postdoc Mentoring Training

**Joseph Lutz**

Director of Postdoctoral Affairs



Based on the Mentoring Up for Postdoctoral Trainees curriculum developed by the
Center for Improvement of Mentored Experiences in Research

Spring 2024

# Session 1

## Introduction to Mentoring Up

### Learning objectives:

1. Learn about other postdocs in the group to begin building a learning community.
2. Define mentoring relationships and their role as a mentor/mentee.
3. Prepare to effectively reframe the relationships with their research mentors and “mentor up”.

### Introductions

Introduce yourself and explain why you selected the picture from the inspiration wall that best represents mentoring to you.

### Mentoring up activity

Take a minute to think of one important research or career goal you want to achieve this year. Then list 3 things you need from your mentor to support the accomplishment of this goal.

Submit your goal and needs on Padlet (link provided during session).

### Strategies for mentoring up & SMART goals

Throughout this curriculum you will have the opportunity to discuss Mentoring Up strategies as they relate to each module. Some strategies will be provided as well as additional space to add your own.

As you work through each module and think on your current mentoring relationships, carefully consider vital questions: what are your main goals in this mentoring relationship, and in your research and collaboration? What do you want to achieve by the end of the relationship? How will this relationship prepare you for future steps?

Throughout the mentoring relationship, it’s critical to develop **SMART goals**. Developing SMART goals will avoid the common mistake of stating vague goals that can seem significant (e.g. “improve communication skills”) but will be difficult to achieve without specific steps and resources. In contrast, developing SMART goals (e.g. “improve written communication skills toward writing proposals for funding by attending a writing bootcamp”) will help direct your path and help achieve your goals. Slight variations of the SMART acronym have been used, but the following version is provided to work with this curriculum.

**Specific** What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps.

**Measurable** How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement.

**Achievable** Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic?

**Relevant** Is this goal worth achieving? Does it reflect your priorities and align with other goals?

**Timely** When is the deadline? When does each sub-task need to be done? What is a realistic timeline?

After the completion of each module, consider developing one SMART goal related to that topic, where appropriate and applicable, to your current mentoring relationships. Reviewing the suggested action items in each chapter and using the following table below will help you set these goals. Take the relevant action items that are important for you and make them more specific and actionable by responding to the questions in each column.

### Strategies for mentoring up | General strategies

You are mentoring up when you:

|  |
| --- |
| Think and assess what you are seeking from your mentor |
| 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 |
| Learn more about recent theoretical practical and research advances to guide development of effective mentoring Skills |
| Become familiar with key resources to continue building their skills as mentees (and mentors) |
|  |
|  |
|  |

### SMART Goals | General Goal

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
| Example :I need to improve communication with my mentor by creating and sharing an online document to record our communications and list decided action items. | This goal is succeeding if I notice that fewer action items are ignored or forgotten and deadlines are being met with less rush.  | This is achievable because we both use X online document repository daily and are comfortable using this tech to communicate and record our exchanges.  | Many experiments and deadlines are not being met because of losses in communication so this is directly relevant to increasing research productivity | A day before our regular meetings, I will update status on action items and send the link to my mentor; during the meetings, we will discuss updates, and record new action items.  |
|  |  |  |  |  |

# Session 2

## Maintaining Effective Communication

Good communication is a key element of any relationship and a mentoring relationship is no exception. It is critical that you reflect upon and identify characteristics of effective communication and take time to practice communication skills in the session and with your mentors.

### Learning objectives:

1. Communicate effectively across diverse dimensions including varied backgrounds, disciplines, ethnicities, positions of power, etc.
2. Accept and use constructive feedback.
3. Identify different communication styles/ approaches.
4. Use multiple strategies for improving communication (in person, at a distance, across multiple mentors, and within proper personal boundaries).

### Case study: Giving Constructive Feedback

As he leaves the crowded conference room, Dr. Tariq tells his post-doc, Dr. Timms, that he’ll see her in a few minutes. When Dr. Timms arrives in his office, he meets her gaze and smiles and says with a heavy accent “Thanks for coming by. I wanted to make sure we could review your talk since the conference is in a week and I know you’re busy all day tomorrow—and then I’m out of town,” he says. Dr. Timms continues to stare without comment, a blank expression on her face. “Well, as you know, I think your research is really important and I’m glad that we have this opportunity to share it. I think this conference will be a great opportunity for you to meet some key colleagues in our field.” She nods slightly and shifts in her seat. “I do think there are a few things that could tighten your presentation.” She continues to stare, and Dr. Tariq keeps his focus on his notes as he continues. “For example, you had some long sentences, and even whole paragraphs on your slides. While they were well written,”—his computer chimes as a new email arrives, and he glances over to see who it’s from. Oh, not again…. “As I was saying, while they were well written—I mean, you know your writing is strong—it is really too much text for a slide. You could try to shorten some to bullet points. Then you can still make those points without just reading your slides to the audience.” He looks up and sees that she is now looking at the floor. “It would also allow you to increase the font size a bit. I think it might have been hard to read from the back of the room.” He looks up again and sees she is taking some notes. “To cut back on the time, I think you could cut the four slides on the background and just briefly summarize those.” He waits for comment, and the silence drags on a few moments. “What do you think?”

“I can look at it.” Her face remains expressionless as she glances up and briefly meets his eye.

“That might allow you to slow down a bit,” he continues. “Of course, it’s natural to get nervous and then one tends to talk faster. Perhaps you could practice it a bit at home and focus on slowing the pace and not looking at your notes as much. Have you tried practicing out loud to yourself at home? “Yes.”

The phone rings. He checks caller ID. I’ll have to call her back when this is over. “Ok then. I can send you a link to some tips on slide composition and oral presentation and hopefully that will be helpful.” There is another long moment of silence. “Well, do you have any questions for me?”

“No, not right now.”

“Ok then, well, good luck!” He forces another smile and reaches out to shake her hand as she rises to leave. She takes it and smiles feebly back. “Thanks.”

#### Guiding Questions for Discussion:

1. What are the main issues raised in this case study?

|  |
| --- |
|  |

1. How could this situation have been handled differently? What should the mentor do now?

|  |
| --- |
|  |

1. How do you interpret silence or minimal response from a mentee?

|  |
| --- |
|  |

### Communication activity

Work in pairs and discuss the following questions as they relate to the statements below:

|  |  |  |  |
| --- | --- | --- | --- |
| **Statement** | **How might this statement be heard?** | **What is the likely intent of this statement?** | **How could you respond constructively to this statement?** |
| “Be on time to our group meetings from now on.”  |  |  |  |
| “How much longer do you think it will take you to finish that manuscript?” |  |  |  |
| “You will never get anywhere in research if you don’t dig in and stick with problems until you solve them.” |  |  |  |
| “Clean up your office area.” |  |  |  |
| “I haven’t seen you around the department much. Are you taking time off?” |  |  |  |
| “I am not sure you have your priorities in order.”  |  |  |  |
| “Is research something you’re certain you want to pursue?” |  |  |  |

### Strategies for mentoring up | Effective Communication

You are mentoring up when you:

|  |
| --- |
| Determine your mentor’s preferred medium of communication (face-to-face, phone, or email) and acknowledge if it differs from your own personal preference |
| Schedule a regular time to meet or check in with your mentor |
| Keep track and share progress toward project and professional goals, both verbally and in writing |
| Identify challenges and request your mentor’s advice/intervention when appropriate |
| Prepare for meetings with your mentor by articulating specifically what you want to get out of the meeting and how you will follow up after the meeting |
| Develop a “benefit of the doubt” philosophy |
|  |
|  |
|  |

### SMART Goals | Effective Communication

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

## Aligning Expectations

One critical element of an effective mentor-mentee relationship is a shared understanding of what each person expects from the relationship. Problems between mentors and mentees often arise from misunderstandings about expectations. Importantly, expectations change over time so frequent reflection and clear communication is needed to maintain a collaborative relationship.

### Learning objectives:

1. Effectively establish mutually beneficial expectations for the mentoring relationship.
2. Clearly communicate expectations for the mentoring relationship.
3. Align mentee and mentor expectations.

### Case study: Postdoc Blues

Dr. Amy Rodgers is beginning her third year as a postdoctoral researcher at a large research university. To date she has enjoyed working on her mentor’s research project, but she is becoming anxious that she has not made much progress on her own independent research. Every time she tries to bring up her concerns with her mentor, it seems like her mentor can never find enough time to have a discussion focused on Dr. Rodgers’ research and career goals. This situation is becoming frustrating for Dr. Rodgers as she likes her mentor and she understands that the past few months have been extremely busy for her mentor due to a host of factors (economic budget constraints, preparing a grant proposal, etc.). Being a politically astute researcher, Dr. Rodgers also understands that her working on her mentor’s projects is an important component to the lab’s continued publications and funding, and she is reluctant to make a “misstep” with this well-established, senior mentor, despite needing to make progress on her own independent research goals. Dr. Rodgers is also concerned that her recent interests are too divergent from her mentor’s research program. Dr. Rodgers wants to stop feeling “stuck.”

#### Guiding Questions for Discussion:

1. What factors are contributing to this situation?

|  |
| --- |
|  |

1. What kind of conversations regarding expectations might have been helpful earlier in this relationship?

|  |
| --- |
|  |

1. What kind of conversations would be helpful at this point? Who should be involved in these conversations?

|  |
| --- |
|  |

### Identifying, Prioritizing, and Communicating Your Needs

#### Instructions:

1. Check the box next to the roles you currently need your mentor to play.
2. Circle the 3 roles that are priorities for you at this point in your career.
3. Choose one of the 3 circled roles and write down how you could ask for your mentors to play that role or play it more effectively.
4. Practice what you would say to your mentor with a partner.

|  |  |
| --- | --- |
| **Check** | **Roles Mentors Can Play**  |
| ***Research Skills*** |
|  | Help me develop research skills specific to my area of focus |
|  | Help me become a better science communicator (presenting and writing) |
|  | Help me learn how to collaborate effectively |
|  | Help me write grant proposals and seek other funding |
| ***Interpersonal Skills*** |
|  | Work with me to define and align the expectations we have for our relationship |
|  | Provide me with constructive feedback |
|  | Communicate honestly and build a trusting relationship with me |
| ***Psychosocial Skills*** |
|  | Help me build my research self-efficacy |
|  | Help me build my career self-efficacy |
|  | Help motivate me |
| ***Cultural Diversity Skills*** |
|  | Help me develop a sense of belonging in my program/ department |
|  | Be open to conversations about diversity and how it impacts my training experience |
|  | Help me address issues of bias and stereotype threat |
|  | Sponsorship Skills |
| ***Foster my independence*** |
|  | Help me network (colleagues, funding sources, stakeholders) |
|  | Help me find ways to better balance my work and personal life |
|  | Help me navigate and explore career options |

### Strategies for mentoring up | Aligning Expectations

You are mentoring up when you:

|  |
| --- |
| Ask your mentor for his/her expectations regarding (a) mentees at your stage of career generally, (b) you as an individual scholar, (c) the research project |
| Share your expectations regarding (a) your career as a scholar and professional, (b) the research project |
| Ask your mentor about their primary priorities (e.g. upcoming proposal deadlines, seeking tenure and promotion, teaching, family obligations, etc.). Share about your own priorities (coursework, TA-ing, family obligations, etc.) also.  |
| Ask others in the research group, who know your mentor better, about the mentor’s explicit and implicit expectations. |
| Write down the expectations you agree to and revisit them often with your mentor. Use a mentor-mentee compact to formalize the expectations. The handouts in this chapter can help you better determine and communicate those expectations. |
|  |
|  |
|  |

### SMART Goals | Aligning Expectations

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

### Additional resources

#### Mentorship Agreement Template

The purpose of this template is to assist you in documenting mutually agreed upon goals and parameters that will serve as the foundation for your mentoring relationships. While mentors and mentees may find mentorship agreements to be useful, they are optional. This template is expected to be altered to meet individual needs.

[1] Goals (what you hope to achieve as a result of this relationship, e.g., gain perspective relative to skills necessary for success in academia, explore new career opportunities/alternatives, obtain knowledge of organizational culture, networking, leadership skill development, etc.):

|  |
| --- |
|  |

[2] Steps to achieving goals as stated above (e.g., meeting regularly, manuscripts/grants, collaborating on research projects, steps to achieving independence, etc.):

|  |
| --- |
|  |

[3] Meeting frequency (frequency, duration, and location of meetings):

|  |
| --- |
|  |

[4] Confidentiality: Any sensitive issues that we discuss will be held in the strictest of confidence. Issues that are off limits for discussion include:

|  |
| --- |
|  |

[5] Plan for evaluating relationship effectiveness (e.g., bi-annual review of mentorship meeting minutes, goals, and outcomes/accomplishments):

|  |
| --- |
|  |

[6] Relationship termination clause: In the event that either party finds the mentoring relationship unproductive and requests that it be terminated, we agree to honor that individual’s decision without question or blame.

[7] Duration: This mentorship relationship will continue as long as both parties feel comfortable with its productivity or until: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mentor’s Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Mentee’s Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_

#### Common Expectations for Mentors

1. **Role modeling of appropriate faculty member attitudes, values and behaviors, such as:**
	1. How to develop and maintain a professional network
	2. How to negotiate a difficult conversation with a colleague
	3. How to respond to a critical review of an article
2. **Direct teaching of academic competencies and norms, including:**
	1. Academic values and the role these values have in maintaining the academic enterprise
	2. Alternative perspectives
	3. Unwritten "rules of the game" in the department, discipline, school and university
	4. History, traditions, governance, and leaders of the department, discipline, school, and university
	5. Management of external funds, academic misconduct, and conflict of interest
3. **Direct teaching of research competencies, including:**
	1. Reviewing and synthesizing the literature
	2. Refining a research question
	3. Identifying funding sources for research
	4. Preparing human subjects approval requests
	5. Developing a research design
	6. Preparing a data collection strategy
	7. Managing data sets
	8. Analyzing data and interpreting results
	9. Selecting journals for results dissemination
4. **Offering the mentee a collaborative role in research by:**
	1. Analyzing data
	2. Recruiting subjects
	3. Co-authoring articles and grants
	4. Identifying supplemental projects
5. **Providing advice for:**
	1. Strategies for handling difficult work situations
	2. The merits of serving on committees or review panels
	3. Where to send study data
	4. Finding and securing resources
	5. The pros and cons of different academic appointments
	6. Pacing work towards promotion
	7. Suggestions for balancing "work and life"
6. **Reviewing work and career progress by:**
	1. Critiquing drafts of grant proposals and research papers and presentations for national meetings
	2. Reviewing goals, plans and annual performance review and promotion packets
7. **Advocating for the mentee's success by:**
	1. Protecting research time
	2. Giving exposure and visibility by providing the junior faculty member with assignments that increase visibility to organizational decision makers and exposure to future opportunities
	3. Reducing unnecessary risks that might threaten the mentee’s reputation
	4. Showcasing mentee’s work/accomplishments
	5. Recognizing talents
	6. Providing opportunities for participation in professional activities
	7. Providing access to key people and resources
8. **Offering encouragement by:**
	1. Demonstrating enthusiasm and confidence in the mentee's successful future
	2. Conveying positive regard
	3. Serving as a sounding board
	4. Providing a forum in which the mentee is encouraged to talk openly about anxieties and fears
	5. Providing moral and emotional support
	6. Giving positive feedback

*Adapted from: Bland, C.J., Taylor, A.L., Shollen, S. L., Weber-Main, AM, Mulcahy, P.A. (2009). Faculty Success Though Mentoring: A guide for mentors, mentees, and leaders. New York: Rowman & Littlefield Publishers. pp. 81-84.*

#### Questionnaire for Aligning Expectations in Research Mentoring Relationships

For each pair of statements, determine your preference. For example with statement pair #1, if you believe the ideal mentoring relationship focuses on common research interests, select 1, 2, or 3. Or if you think the ideal relationship focuses on similar working and communication styles, select 4, 5, or 6.

|  |
| --- |
| **Early Stages of the Mentoring Relationship and Choosing Mentors/Mentees** |
| In an ideal mentoring relationship, the mentor and mentee should have similar research interests | 1 2 3 4 5 6 | In an ideal mentoring relationship, both should have similar working and communication styles |
| In an ideal mentoring relationship, mentors should provide close supervision and guidance | 1 2 3 4 5 6 | In an ideal mentoring relationship, mentors should provide much freedom and independence for the mentees to explore and learn themselves |
| Mentors should only accept mentees when they have specific & deep knowledge of the mentee’s research topic | 1 2 3 4 5 6 | Mentors can provide overall guidance, and so should feel free to accept mentees from a broad range of disciplines |
| A personal and friendly relationship between mentor and mentee is important for a successful relationship | 1 2 3 4 5 6 | A professional relationship is advisable to maintain objectivity for mentee and mentor during their work  |
| The mentor is responsible for providing emotional support & encouragement to the mentee | 1 2 3 4 5 6 | Personal counselling and support are not the responsibility of the mentor |
| It’s important for the mentor and mentee to challenge each other, and so disagreements will be common and acceptable | 1 2 3 4 5 6 | It’s important for the mentor and mentee to have consensus, and so both should seek to maintain harmony in their relationship |
| The mentor should play a significant role in deciding on the research focus for the mentee | 1 2 3 4 5 6 | The research focus should be selected by the mentee  |
| When choosing research topics, I prefer to work on projects with potential for high payoffs, even if it involves high risk | 1 2 3 4 5 6 | When choosing research topics, I prefer to work on projects that have a strong & safe chance of success, even if the payoff is low |
| The mentor should decide how frequently to meet with the mentee | 1 2 3 4 5 6 | The mentee should decide when she/he wants to meet with the mentor |
| The mentor should provide the rules and guidelines for the program or dept to the mentee | 1 2 3 4 5 6 | It is the mentee’s responsibility to gather and learn the rules and guidelines of the program or dept |
| The mentor is responsible for finding funding until the mentee graduates or completes the program | 1 2 3 4 5 6 | Mentees are responsible for finding their own sources of funding |
| **Middle Stages of the Mentoring Relationship** |
| The mentor should be the primary guide for the mentee in their academic and professional goals | 1 2 3 4 5 6 | The mentee should gather multiple mentors as they work toward their academic and professional goals |
| The mentor should be the first place to turn when the mentee has problems with the research project  | 1 2 3 4 5 6 | Mentees should try to resolve problems on their own, including seeking input from others, before bringing a research problem to the mentor |
| The mentor should check regularly that the mentee is working consistently and finishing tasks | 1 2 3 4 5 6 | The mentee should work independently and productively, and ask for help when needed |
| The mentor should develop an appropriate plan and timetable of research and study for the mentee | 1 2 3 4 5 6 | The mentee should develop their own plan and timetable of research and study, and seek input from the mentor only as needed |
| **Advanced Stages of the Mentoring Relationship** |
| The mentor should initiate the preparation of presentations, papers, and reports | 1 2 3 4 5 6 | Presentations, papers, and reports should be started with a first draft by the mentee |
| The mentor should insist on seeing all drafts of work (presentations, thesis, papers, etc) to ensure that the mentee is on the right track | 1 2 3 4 5 6 | Mentees should submit drafts of work (presentations, thesis, papers, etc) only when they want constructive criticism from the mentor |
| It’s the mentor’s responsibility to first explain about co-authorship early in the process | 1 2 3 4 5 6 | It’s the mentee’s responsibility to make sure there is mutual understanding about co-authorship |
| The mentor is responsible for providing career advice and professional connections to the mentee | 1 2 3 4 5 6 | Because professional options these days are numerous, mentees should seek career advice and connections from other sources |

#### Mentor Map

Adapted from the National Center for Faculty Development & Diversity ([www.FacultyDiversity.org](http://www.FacultyDiversity.org))

1. **Substantive Feedback**
	1. Department Colleagues
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Professional Editors
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Readers
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Access to Opportunities**
	1. Internal Mentors
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Peer Mentors
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. External mentors
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. **Professional Development**
	1. Internal
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. External
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. **Emotional Support**
	1. Friends
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	2. Family
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	3. Other
		1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. **Community**
	* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. **Role models**
	* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
7. **Accountability for what REALLY matters**
	* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Session 3

## Addressing Equity and Inclusion

Diversity, along a range of dimensions (cultural, racial/ethnic, sexuality, gender, neurotype, disability, etc…) offers both challenges and opportunities to any relationship. Learning to identify, reflect upon, learn from, and engage with diverse perspectives is critical to forming and maintaining both an effective mentoring relationship as well as a vibrant learning environment.

### Learning objectives:

1. Improve and expand understanding of equity and inclusion, and how diversity influences mentor-mentee interactions.
2. Recognize the impact that conscious and unconscious assumptions, preconceptions, biases, and prejudices bring to the mentor-mentee relationship and how to manage them.

### Impact of assumptions

On Padlet (link shared in session), write an assumption (conscious or unconscious) you believe one of your primary mentors has about you – you can submit as many posts as you like. Then select 1-3 posts that do not belong to you and write them down.

### In the eye of the beholder

#### Science faculty’s subtle gender biases favor male students (Moss-Racusin et al. PNAS, 2012)

Despite efforts to recruit and retain more women, a stark gender disparity persists within academic science. Abundant research has demonstrated gender bias in many demographic groups but has yet to experimentally investigate whether science faculty exhibit a bias against female students that could contribute to the gender disparity in academic science. In a randomized double-blind study (n = 127), science faculty from research-intensive universities rated the application materials of a student—who was randomly assigned either a male or female name—for a laboratory manager position. Faculty participants rated the male applicant as significantly more competent and hirable than the (identical) female applicant. These participants also selected a higher starting salary and offered more career mentoring to the male applicant. The gender of the faculty participants did not affect responses, such that female and male faculty were equally likely to exhibit bias against the female student. Mediation analyses indicated that the female student was less likely to be hired because she was viewed as less competent. We also assessed faculty participants’ preexisting subtle bias against women using a standard instrument and found that preexisting subtle bias against women played a moderating role, such that subtle bias against women was associated with less support for the female student, but was unrelated to reactions to the male student. These results suggest that interventions addressing faculty gender bias might advance the goal of increasing the participation of women in science.

#### Quality of Evidence Revealing Subtle Gender Biases in Science (Handley et al, PNAS 2015)

Scientists are trained to evaluate and interpret evidence without bias or subjectivity. Thus, growing evidence revealing a gender bias against women—or favoring men—within science, technology, engineering, and mathematics (STEM) settings is provocative and raises questions about the extent to which gender bias may contribute to women’s underrepresentation within STEM fields. To the extent that research illustrating gender bias in STEM is viewed as convincing, the culture of science can begin to address the bias. However, are men and women equally receptive to this type of experimental evidence? This question was tested with three randomized, double-blind experiments—two involving samples from the general public (n = 205 and 303, respectively) and one involving a sample of university STEM and non-STEM faculty (n = 205). In all experiments, participants read an actual journal abstract reporting gender bias in a STEM context (or an altered abstract reporting no gender bias in experiment 3) and evaluated the overall quality of the research. Results across experiments showed that men evaluate the gender-bias research less favorably than women, and, of concern, this gender difference was especially prominent among STEM faculty (experiment 2). These results suggest a relative reluctance among men, especially faculty men within STEM, to accept evidence of gender biases in STEM. This finding is problematic because broadening the participation of underrepresented people in STEM, including women, necessarily requires a widespread willingness (particularly by those in the majority) to acknowledge that bias exists before transformation is possible.

### Case study: Is it okay to ask?

Last year I worked with a fantastic scholar who has since left to work at another institution. I think that she had a positive experience working with our research team, but a few questions still linger in my mind. This particular scholar was a young African-American woman. I wondered how she felt about being the only African-American woman in our research group. In fact, she was the only African-American in the entire department. I wanted to ask her how she felt, but I worried it might be insensitive or politically incorrect to do so. I never asked. I still wonder how she felt and how those feelings may have affected her experience, but I could never figure out how to broach the subject.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?

|  |
| --- |
|  |

1. What might the mentor’s intent have been in asking the question, and what might have been the impact on the mentee?

|  |
| --- |
|  |

1. How might you react differently to this case if the mentees’ difference was one of have sexual orientation? How do you engage in such conversations based on interest without sounding judgmental about differences? How do you ask without raising issues of tokenism?

|  |
| --- |
|  |

### Case study: You can’t do that

Dr. Roust is a Professor of Epidemiology with a long and successful history of research funding. He is known as an expert in diabetes research. He has recently taken on a very promising new post-doctoral fellow in Epidemiology, a young Romanian of Indian dissent, Dr. Biswas, with an interest in the underlying sociocultural factors affecting the prevalence and treatment of Type 2 diabetes. It was agreed that he will be using an unanalyzed data set of Dr. Roust’s to explore demographic patterns of a particular poor rural subgroup. So far things have been going quite well and Dr. Roust is excited about how this new mentee will help fill a gap in his own research. However, after several weeks of working on the secondary data analysis, Dr. Biswas comes to his office very excited about a new direction he would like to take. He has met an historian he would like to add to his mentoring committee, Dr. Mandova. She has research expertise related to cultural understandings of food and dietary patterns in poor rural populations and is participating in an oral history project in their target population. She offered to introduce Dr. Biswas to some of her contacts and would allow him to sit in on interviews with community members. Dr. Biswas believes Dr. Mandova’s research will be a perfect complement to Dr. Roust’s macro-level analysis. Dr. Roust dismisses the feasibility of the idea almost immediately. He doesn’t see how any anecdotal historical data could be used in a convincing way, is concerned by how it will impact the current project effort, and fears that it will be far too time-consuming for Dr. Biswas to stay on track with his fellowship. He also doubts that the NIH would be supportive of the endeavor. He lets Dr. Biswas know his feelings and tells Dr. Biswas not to take such risks so early in his career, especially in a tight funding environment. Dr. Roust also privately wonders how well Dr. Biswas will be received by community members and how well-equipped he is for this kind of research, especially given his own limited cultural knowledge and language barrier.

#### Guiding Questions for Discussion:

* 1. What are the main themes raised in this case study?

|  |
| --- |
|  |

* 1. Discuss the assumptions Dr. Roust is making about the research and about Dr. Biswas’ competency based on his ethnicity and background. How valid are his concerns? Should Dr. Roust also raise his private concerns with Dr. Biswas or Dr. Mandova, and if so, how?

|  |
| --- |
|  |

* 1. How do our own assumptions about what is acceptable and fundable in research limit creativity and understanding? Is there a middle ground in this case?

|  |
| --- |
|  |

### Strategies for mentoring up | Addressing Equity and Inclusion

You are mentoring up when you:

|  |
| --- |
| Seek training and professional development activities to understand the multiple aspects of your own identity and improve your working with diverse communities to build inclusive climates |
| Be open to seeking out and valuing different perspectives |
| Engage in honest conversation about individual differences with your mentor and co-workers |
| Contribute positively to shared understandings and solutions to problems |
| Talk to peers and mentors when you feel conflicted about the ways in which your personal identityintersects with your academic identity |
|  |
|  |
|  |

### SMART Goals | Addressing Equity and Inclusion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

### Additional resources

#### Scientific American article

Diversity in STEM: What It Is and Why It Matters:

<https://blogs.scientificamerican.com/voices/diversity-in-stem-what-it-is-and-why-it-matters/>

#### ASBMBTODAY article

Imposter syndrome and diversity students:

<https://www.asbmb.org/asbmb-today/opinions/020117/imposter-syndrome-and-diversity-students>

#### Center for the Improvement of Mentored Experiences in Research article

Benefits and Challenges of Diversity:

<https://www.uky.edu/postdoc/sites/default/files/Benefits%20and%20Challenges%20of%20Diversity.pdf>

## Cultivating Ethical Behavior

Mentors play an important role in both teaching and modeling ethical behavior. There are ethical issues centering on the science itself—how to conduct, report, and write scientific studies—as well as relationships between mentors and their mentees. Most relationships in science establish a power dynamic, and it is a mentor’s responsibility to learn how to manage their power. Reflecting upon and discussing ethical behavior is an important part of becoming an effective mentor.

### Learning objectives:

1. Clarify the mentor’s role as teacher and role model in educating mentees about ethics
2. Manage the power dynamic inherent in the mentoring relationship

### Case study: Tweaking the data

John is mentoring an undergraduate in his lab and has assigned her to collect data for one of the experiments for his project. When the dataset is complete, he sits down to analyze it and finds his predictions completely disconfirmed. Dismayed, he calls her into his office and asks her to describe, in great detail, what she did when collecting the data. He wants to make sure that these anomalous results can’t be more easily explained by mistakes in the lab. Their conversation lasts quite a while, but at the end he is still frustrated and puzzled by the data, and he sends her home so he can think about it some more.

Later, John is eating lunch in the cafeteria when he overhears his mentee talking to a friend of hers. Sounding very upset, she tells her friend, “I think John is mad at me,” and describes their recent meeting. John is surprised to realize that his mentee took his questioning very personally. When John’s mentee finishes venting, her friend replies, “If he’s so mad, you probably did make a mistake somewhere. After all, he’s the expert. Maybe you should tweak the data a little next time to keep him happy.”

#### Guiding Questions for Discussion:

* 1. Who are the stakeholders in this case (individuals, institutions, public)?

|  |
| --- |
|  |

* 1. What are the facts? What assumptions are you making about the situation?

|  |
| --- |
|  |

* 1. What courses of action are possible? Which ones are preferable and why?

|  |
| --- |
|  |

* 1. What, if anything, could have been done to prevent the situation?

|  |
| --- |
|  |

### Case study: A drive in the country

A female undergraduate student and her male advisor were planning to attend the national meeting of the Society for Chicano and Native American in Science (SACNAS) in a city an 8-hour drive from their university. A few weeks before the meeting, the professor went into the lab and suggested to the student that they drive to the meeting together. He said they could stay over in a hotel to break up the driving into two days, and it would still cost less than flying. He commented on how it was a very scenic drive, they might be able to collect some research samples along the way, and it would give them unbroken time to talk about research and her plans for graduate school. As the student hesitated, she saw all of her lab mates stealing curious glances at her while the professor waited for an answer.

#### Guiding Questions for Discussion:

1. What is the power dynamic in the mentoring relationship and what factors create it?

|  |
| --- |
|  |

1. How might power issues have affected the graduate student’s choices? For example, if another graduate student had offered to travel together, would her response have differed? Why?

|  |
| --- |
|  |

1. Even assuming that the professor and student have a strong, trusting relationship, why might the student be uncomfortable in this situation?

|  |
| --- |
|  |

1. How might the mentor have handled the situation differently?

|  |
| --- |
|  |

1. Is it acceptable for mentors to travel with mentees of the opposite sex (or of the same sex in the case of a mentor who is known by the community to be gay or lesbian)? To professional meetings? For fieldwork? If not, does this, on average, disadvantage women students? Why?

|  |
| --- |
|  |

### Strategies for mentoring up | Ethical Behavior

You are mentoring up when you:

|  |
| --- |
| Seek opportunities and training activities to learn about ethical behavior in your field of study (e.g. Responsible Conduct of Research) |
| Engage in honest conversation about ethical behavior in your field of study with your mentor and co-workers |
| Talk to peers and mentors when you feel conflicted about power dynamics affecting your work and/or workplace |
| Recognize that you also hold power over undergraduate and graduate trainees and manage your own power |
|  |
|  |
|  |
|  |

### SMART Goals | Ethical Behavior

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

# Session 4

## Self-Efficacy

Self-efficacy is the perceived confidence people have in their ability to perform a given task or skill. Self-efficacy has a tremendous impact on behavior; people who lack self-efficacy in relation to a certain skill set are less likely to perform tasks relating to that skill set. Increasing your research self-efficacy can increase the likelihood that you will successfully perform research tasks, pursue a research career, and make important contributions to your research team. There are four factors that build self-efficacy beliefs: mastery experience, vicarious experience, social persuasion, and emotional/physiological states. Knowing how these four sources influence you will help you have a better understanding of what makes you feel more confident.

### Learning objectives:

1. Identify signs of self-efficacy that resonate when conducting research related tasks
2. Define self-efficacy and its four sources
3. Articulate their role in building their own research self-efficacy
4. Assess the influence of others on their research self-efficacy
5. Devise strategies to support others’ research self-efficacy

### “Magical Research Moment”

Think of one “magical research moment” in your career thus far, a time when had an outstanding experience or achievement in research that made you feel more confident in your ability to do research. Write it down below:

|  |
| --- |
|  |

In groups, share your “magical research moment” and discuss using the guiding questions below.

#### Guiding Questions for Discussion:

* 1. How did that magical moment happen? What were the events, people, and experiences that contributed to the success?

|  |
| --- |
|  |

* 1. What made you feel more confident? What factors contributed to your sense of efficacy?

|  |
| --- |
|  |

### Sources of self-efficacy

Self-efficacy is the belief in one’s ability to achieve a specific goal or task. Self-efficacy is situation-specific self-confidence. Simply put, “Can I do this?”. Strong self-efficacy beliefs create interest, persistence, actual college degree completion, and career pursuits in science and research fields. Self-efficacy is informed by four sources:

Looking back at your “magical research moment”, does it align with a particular source of self-efficacy? If so, which one(s)? Write down how each source may or may not have contributed to the success of your “magical research moment”.

|  |
| --- |
|  |

### Stair steps

Write down below something on your current research to-do list which you do not feel confident about completing (challenging task). Now break it down into at least 2-3 steps.

|  |  |
| --- | --- |
|  | Challenging task:  |
|  | Step 5 (optional):  |
|  | Step 4 (optional):  |
|  | Step 3:  |
|  | Step 2:  |
| Step 1:  |

* What sources of self-efficacy could help get you to the first step?
* What about helping you get from the first step to the second?
* How can you help build your own self-efficacy along the way?

### The power of social persuasion

Imagine that you have written the first draft of a manuscript for which your mentor is a co-author. You spent a lot of time working on the manuscript and are really pleased with the progress that you have made on this paper. You send the manuscript to them for feedback. Now, imagine that you have received an email from your mentor with this feedback:

*I have included some edits for grammar and clarity in the document. The manuscript needs substantial work before I see it again. You have cited a lot of prior research in the introduction and literature review, but it is disorganized and difficult to follow. The method and results are okay, but the manuscript will not be ready to submit to the editor until the discussion is further developed. Once you have made these changes, let me know and I will take another look. I do not want to waste any more of my time on this until this manuscript has been drastically improved.*

1. How do you feel right now? Write down some of the emotions and/or physical responses you are feeling.

|  |
| --- |
|  |

1. What are the assumptions that you find yourself making about the person giving you this feedback?

|  |
| --- |
|  |

1. How does this feedback influence your confidence in your ability to continue to prepare this manuscript for publication?

|  |
| --- |
|  |

1. How does it influence your confidence in your ability to write future successful manuscripts?

|  |
| --- |
|  |

1. How might you go about looking to other sources (i.e., individuals, messages, or experiences) that could increase your self-efficacy to revise this manuscript?

|  |
| --- |
|  |

Now, consider the same feedback framed in a different way:

*This is a good first draft of the manuscript. I have included some edits for grammar and clarity in the document. I can tell that you have put in a lot of time and effort into reviewing the literature. The method and results are clearly articulated and are explained in a way that should be accessible to a broad audience, which should please the journal editor when we submit it. The discussion section needs some work, particularly where you are trying to make the case for how our study extends on what is currently known. I think you could also spend a little more time in the introduction setting up the study and doing a little foreshadowing for the reader. I would like to review the manuscript again once you have addressed these comments, but I have every confidence that you can get this manuscript to where it needs to be.*

How do you feel after receiving this feedback?

|  |
| --- |
|  |

### Strategies for mentoring up | Self-Efficacy

You are mentoring up when you:

|  |
| --- |
| Recognize the sources of self-efficacy that work well for you and share them with your mentor. |
| Seek out opportunities in your research experience to build your skills to boost your research self-efficacy. |
| Do you know of others who have done similar research and have been successful? Talk to those researchers and use their actions as a model for your own. Consider your role models and what research skills (and attitudes) are being modeled by them.  |
| Be aware of how you cope with research challenges and setbacks; do they make you feel confident about the work that you do? Ask your mentor and others to share strategies for what they do when they hit a wall and how they cope with challenges/setbacks in research. |
| Consider how feedback, both positive and critical, affects your beliefs in your capabilities as a researcher. Ask for specific, constructive feedback from your mentor. |
|  |
|  |
|  |

### SMART Goals | Self-Efficacy

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

### Additional resources

#### The Self-Efficacy Tool Box – What Can You Do to be a More Confident Researcher?

Remember: Self-efficacy: belief in one’s ability to achieve a specific goal or task. Self-efficacy is situation-specific self-confidence. Simply put, “Can I do this?”. Strong self-efficacy beliefs create interest, persistence, actual college degree completion, and career pursuits in science and research fields. Here are some efficacy-building strategies to try:

*Mastery experience*

* Think about your past successes (e.g., a personal “significant research moment”). What contributed to that success? How can that be applied to your future research endeavors? Think about your past success during the research experience in particular or academics in general [“If you did it before you can do it now”].
* Apply strategies and habits that have contributed to your past success in research to the task at hand.
* Recall the things you are doing right; devise strategies to improve your skill in areas that are challenging to you.

*Vicarious experience*

* Do you know of others who have done similar research and have been successful? Talk to those researchers and use their actions as a model for your own. Consider your role models and what research skills (and attitudes) are being modeled by them.
* Be aware of what skills and behavior you are observing about coping with research challenges and setbacks; do they make you feel more or less confident about the work that you do? Ask others to share strategies for what they do when they hit a wall and how they cope with challenges/setbacks in research.
* Think of examples of others who struggled but made it (i.e., successful in research)

*Social persuasion*

* Seek out individuals that provide encouragement and support to you in your research. Social persuasions relating to a specific effort or ability can be particularly influential.
* Ask for specific, constructive feedback from your mentors.

*Emotional/Physiological state*

* Be aware of positive (enjoyment) or negative moods (anxiety) that you have related to research/the lab
* Attend to negative, anxiety-related feelings (e.g., negative self-talk that you are not as smart as other researchers)
* Acknowledge and normalize when things are difficult; “It’s supposed to be hard, new things usually are.”

## Achieving Independence

A goal in any mentoring relationship is for the mentee to achieve independence. Defining what independence looks like in a particular field and at various career stages is essential. Dialogue between mentor and mentee about what an independent mentee knows and can do are important conversations to have throughout the mentoring relationship.

### Learning objectives:

1. Define independence, its core elements, and how those elements change over the course of a mentoring relationship
2. Identify the benefits and challenges of fostering independence, including the sometimes-conflicting goals of fostering independence and achieving grant-funded research objectives.

### Indicators of achieving independence

What does independence look like across career stages? On Padlet (link shared in session), write down elements of independence for each career stage.

### Case study: Independent research?

Dr. Klein is very excited about the grant proposal she is writing to NIH. The proposal builds upon research she has been conducting as a post-doc in the laboratory of Dr. Janco. She feels strongly that the proposal clearly describes the logical next steps in the project as well as relates the research to her previous research. When Dr. Klein meets with Dr. Janco to discuss the grant proposal, she is surprised to discover that Dr. Janco is less than enthusiastic about the proposal. Dr. Janco informs her that the proposal is too closely aligned with Dr. Janco’s current work and its future direction. She says that the proposal needs to be reworked and focused on a different, more independent direction of research. Dr. Klein leaves the meeting frustrated, disappointed, and unsure how to proceed.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?

|  |
| --- |
|  |

1. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do?

|  |
| --- |
|  |

1. How is independence redefined in a restricted funding climate and an era of collaborative research?

|  |
| --- |
|  |

1. What if Dr. Klein’s proposal describes research that is closely aligned with the project of a graduate student in the same research group? How can boundaries between the projects be established and how can ownership be clearly defined?

|  |
| --- |
|  |

### Strategies for mentoring up | Achieving Independence

You are mentoring up when you:

|  |
| --- |
| With your mentor, define what it takes to do independent work in your field. |
| Define a series of milestones to independence with your mentor and set goals for meeting these milestones as part of your research plan.  |
| Ask peers and mentors to share with you their strategies towards achieving independence.  |
|  |
|  |
|  |

### SMART Goals | Achieving Independence

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

# Session 5

## Seeking Professional Development

Professional development activities are sometimes seen as distractions from the core business of doing research but are critically important to identifying and successfully meeting the mentee’s long-term career objectives.

### Learning objectives:

1. Identify the roles mentors play in your overall professional development
2. Recognize and engage in open dialogue on balancing the competing demands, needs, and interests of mentors and mentees, e.g., research productivity, grant funding, creativity and independence, career preference decisions, non-research activities, personal development, work-family balance, etc.

### Mentor roles in professional development

What roles mentors can or should play in your professional development, *beyond research training?* On Padlet (link shared in session), write down roles that you think mentors should play beyond research training.

#### Guiding Questions for Discussion:

* 1. Which of the roles on the list are the most important? Why?

|  |
| --- |
|  |

* 1. Are there some roles on the list that should not be the mentor’s concern? Why?

|  |
| --- |
|  |

* 1. How do you identify which roles your mentor can serve?

|  |
| --- |
|  |

* 1. How do you determine if you need to seek out another mentor to help further your professional development?

|  |
| --- |
|  |

### Case study: Choosing a different path

You are currently mentoring two post-doctoral scholars in your research group. Both are very talented and hard-working; however, one has made it clear that his career goals do not include becoming a tenure track professor at a research university. He is interested in pursuing a career in industry. The other scholar has her heart set on pursuing a research university tenure track professorship. Lately, you find yourself spending more time giving professional development advice to the post-doc who intends to pursue the research tenure track career. You rationalize this by saying that you are more familiar with this career path and thus have more to offer. Secretly you worry that you are writing off the other postdoc, believing that he is not worth your time and advice if he is leaving academic research.

#### Guiding Questions for Discussion:

* 1. What are the main themes raised in this case study?

|  |
| --- |
|  |

* 1. What should the mentor do now? What value judgments are being made by the mentor?

|  |
| --- |
|  |

* 1. What would the implications be if everyone did become a principal investigator in academia? What other career paths are possible?

|  |
| --- |
|  |

* 1. How do you advise on these paths with which you do not have personal experience? How can you discuss potential career paths with your mentee in an unbiased manner?

|  |
| --- |
|  |

### Strategies for mentoring up | Professional Development

You are mentoring up when you:

|  |
| --- |
| Create an Individual Development Plan (IDP) to set goals and guide your professional development, using resources such as Science Career’s myIDP website (<http://myidp.sciencecareers.org/>)  |
| Seek out and engage multiple mentors to help you achieve your professional goals |
| Ask peers and mentors to discuss with you the fears and reservations you may have about pursuing a certain career path |
|  |
|  |
|  |

### SMART Goals | Professional Development

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

## Work Life Integration

Addressing the complementary roles of work and family life as part of a more comprehensive view of a mentee’s career development is often a feature of successful mentoring relationships. Work/life integration is a concern for both men and women. In its Statement of Principles on Family Responsibilities and Academic Work, the American Association of University Professors stated: “Transforming the academic workplace into one that supports family life requires substantial changes in policy and, more significantly, changes in academic culture.”

Considerable planning and foresight are required to manage the inevitable conflicts that exist for early career academics as they attempt to initiate a research-oriented career at the same time that many choose to begin a family. Even for those without children, managing work and other personal demands and responsibilities can be daunting. Mentors can play an important role in guiding and supporting their mentees through the early stages of a career and family life, but are often unsure of an effective method by which to address these issues with their mentees, or even if it is appropriate to do so.

### Learning objectives:

1. Recognize the importance of all four domains of life to achieve overall career satisfaction.
2. Identify targeted areas for achieving better work/life integration.

### Case study: Looking for harmony

Dr. Feinstein is a postdoc whose wife is expecting their first child. He would like to request three months of parental leave. However, Dr. Feinstein has not raised this issue with his mentor, a 60-year-old professor whom he senses is already growing frustrated that he does not put in the number of hours that his generation did when they were coming up. Additionally, Dr. Feinstein has heard a rumor that his mentor is considering taking on a new postdoc this spring. Dr. Feinstein has heard that this new postdoc is a real “go-getter" working 70-80 hours a week. Dr. Feinstein fears this new post-doc will make him look as if he is not serious about his research career.

#### Guiding Questions for Discussion:

What are the main themes raised in this case study?

|  |
| --- |
|  |

How can the concept of workforce flexibility be translated for faculty in clinical and behavioral research?

|  |
| --- |
|  |

As a mentor how do you address generational differences (with respect to work ethic, work-life integration, or other areas) that arise with your younger mentees?

|  |
| --- |
|  |

How do differences in mentor/mentee gender affect these discussions?

|  |
| --- |
|  |

### The four-way view

This exercise uses materials from Total Leadership ([www.totalleadership.org](http://www.totalleadership.org)) and is designed to guide you through a reflective exercise assessing the goals you have for yourself in four domains of their life: 1) work, 2) family, 3) community, and 4) self.

The term “work/life balance” often implies an assumed tension between work and family life: as you devote more time and attention to one, you must necessarily devote less to the other. This places work and family life into conflict with one another, rather than approaching work as an element of a life that includes family, community, and attention to one’s own physical, emotional, and spiritual life.

Instead using a “work/life integration” approach is meant to help you assess goals you have in each domain, and to better align these goals, rather than pit them against one another. While there will inevitably be times when you must decide, e.g., to either attend a conference out of town or spend more time with your family, by reflecting on the goals you set in each domain and the value you place on each, the individual decisions you make each day as to how to spend your time and allocate your attention will feel less like a conflict between these domains and more like an integrated system.

This exercise will assess the current state of integration of these four domains, where you are being more (or less) successful in achieving your goals and identifying opportunities for improving the alignment of various domains of your life.

Improved “work/life integration” skills on the part of mentors serve not only as an effective way to model desired behaviors for mentees, but also provides a practical experience from which mentors may feel more comfortable addressing issues related to work/life integration with their mentees.

**The four-way view**

|  |  |  |  |
| --- | --- | --- | --- |
| **Importance**Allocates a theoretical 100% maximum of importance that you assign to each domain of your life. In other words, how would you rank the importance of each domain vis a vis the others so that they add up to 100%. | **Focus**Represents how you actually spends your waking time and attention in each domain. It is important to consider that even though you might physically be in one location (e.g. at home), your attention might be elsewhere (i.e. allocation of attention). | **Satisfaction**Self-assessment of how satisfied you feel with each domain.  | **Performance**Self-assessment of how well you think you are doing in each domain, through a combination of reflecting on “how well do I think I’m doing,” as well as “how well would my stakeholders in each area say I’m doing.”  |

Assess importance, focus, satisfaction, and performance in each domain below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Importance | Focus | Satisfaction1 = Not at all10 = Fully | Performance1 = Poor10 = Excellent |
| Workcareer | % | % | 1 2 3 4 5 6 7 8 9 10 | 1 2 3 4 5 6 7 8 9 10 |
| HomeFamily | % | % | 1 2 3 4 5 6 7 8 9 10 | 1 2 3 4 5 6 7 8 9 10 |
| CommunitySociety | % | % | 1 2 3 4 5 6 7 8 9 10 | 1 2 3 4 5 6 7 8 9 10 |
| SelfMind, body, spirit | % | % | 1 2 3 4 5 6 7 8 9 10 | 1 2 3 4 5 6 7 8 9 10 |
| Overall | 100 % | 100 % | 1 2 3 4 5 6 7 8 9 10 | 1 2 3 4 5 6 7 8 9 10 |

© Total Leadership. All rights reserved. [www.totalleadership.org](http://www.totalleadership.org)

#### Guiding Questions for Discussion:

1. What is the biggest or most striking disconnect between the importance of a domain and the percentage of your time you spend in it (i.e. focus)?

|  |
| --- |
|  |

1. Are there obvious adjustments you can make to your focus to be more consistency with how important some domains are?

|  |
| --- |
|  |

### Strategies for mentoring up | Work Life Integration

You are mentoring up when you:

|  |
| --- |
| Engage in meaningful conversations about work/life integration with your mentor |
| Recognize that your work/life integration is different to your mentors |
| Share how you integrate your work and life to peers and mentees |
|  |
|  |

### SMART Goals | Work Life Integration

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |

# Homework

## Articulating your Mentoring Philosophy

Reflecting upon your mentoring relationships is a vital part of becoming a more effective mentor. This is especially important immediately following mentoring training so that you can consider how to implement changes in your mentoring practice based on the training. Reflection on your mentoring practice at regular intervals is also strongly encouraged.

### Learning objectives:

1. Reflect on the mentor-training experience
2. Reflect on any intended behavioral or philosophical changes across your mentoring competencies
3. Articulate an approach for working with mentors and mentees in the future

### Lessons learned

List some ideas (at least 2!) that stand out from the mentoring training. These can include lessons learned, ideas that did or did not resonate with you, etc.

|  |
| --- |
|  |

### Self-reflection

The following reflection sheets are intended to give you a framework to think about your mentoring philosophy and identify action items you can put in practice moving forward.

* Mentoring Competencies Reflection Worksheet

This worksheet will guide you through each module and ask you to reflect on a practice that has worked in the past, and on a practice you plan to implement in the future.

* Mentor self-reflection template

This worksheet will guide you through challenges and opportunities you have encountered in the past in your mentoring relationships and to reflect on what you plan to implement in the future.

#### Mentoring Competencies Reflection Worksheet

|  |  |  |
| --- | --- | --- |
| Competency | Approaches you have used in the past | Approaches you intend to try in the future |
| Effective communication |  |  |
| Aligning expectations |  |  |
| Addressing equity and inclusion |  |  |
| Ethical behavior |  |  |
| Self-efficacy |  |  |
| Achieving independence |  |  |
| Seeking professional development |  |  |
| Work-life integration |  |  |

#### Mentor self-reflection template

##### Past year

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Identify unique **challenges** and **opportunities** from the past year | What was your role? | What happened?  | Was there any further action? |
| Meetings & Communication |  |  |  |  |
| Expectations & feedback |  |  |  |  |
| Career development |  |  |  |  |
| Research support |  |  |  |  |
| Psychosocial support |  |  |  |  |

##### Upcoming year

What do you want to keep doing?

|  |
| --- |
|  |

What would you like to try differently with your mentee/mentor in the upcoming year?

|  |
| --- |
|  |

What different resources or training would be helpful to you as a mentee, or as a mentor?

|  |
| --- |
|  |

### Future mentees/mentors

Imagine that you will soon begin a new mentoring relationship. You and your mentee/mentor have had exchanges by email/phone several times over the past year to discuss project ideas, and you are going to meet in person next week for the first time.

What steps would you take to prepare for this meeting with the new mentee/mentor?

|  |
| --- |
|  |

What will you do within the first month after that?

|  |
| --- |
|  |

What do you think is the most important thing you can do to start this new mentoring relationship on the right foot?

|  |
| --- |
|  |

### Strategies for mentoring up | Mentoring Philosophy

You are mentoring up when you:

|  |
| --- |
| Reflect on your own mentoring philosophy and share it with your mentor(s) |
| Make changes to your mentoring philosophy to improve your mentoring relationship |
| Discuss mentoring philosophies with peers and mentees |
|  |
|  |
|  |
|  |
|  |

### SMART Goals | Mentoring Philosophy

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Specific** | **Measurable** | **Achievable** | **Relevant** | **Timely** |
| What is the specific goal? Try to state the goal as concretely and simply as possible. How will you know if you succeeded? Break down large goals into simpler steps. | How will you measure or evaluate the goal, to determine whether you’ve achieved it? Take note that evaluating the goal doesn’t always require a quantitative measurement. | Can you do this? Do you have the knowledge, skills, and resources you need? Will you need to seek help from others? Are all parts realistic? | Is this goal worth achieving? Does it reflect your priorities and align with other goals? | When is the deadline? When does each sub-task need to be done? What is a realistic timeline? |
|  |  |  |  |  |