



# Mentor Training for Clinical and Behavioral Researchers

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# Table of Contents

## **Preface**

## **Acknowledgements**

### **1 Curriculum Overview**

Content, Format, Implementation, and Assessment..... 11

### **2 Introduction to Facilitation**

Role of Facilitators..... 19

General Notes on Facilitating a Group..... 20

Group Dynamics..... 21

Constructive and Destructive Group Behaviors..... 23

### **3 Introductory Session**

Overview, Learning Objectives, and Activities..... 27

Facilitation Guide ..... 28

### **4 Maintaining Effective Communication**

Overview, Learning Objectives, and Activities..... 35

Facilitation Guide..... 36

### **5 Aligning Expectations**

Overview, Learning Objectives, and Activities..... 49

Facilitation Guide..... 50

### **6 Assessing Understanding**

Overview, Learning Objectives, and Activities..... 79

Facilitation Guide..... 80

### **7 Addressing Equity and Inclusion**

Overview, Learning Objectives, and Activities..... 91

Facilitation Guide..... 92

### **8 Fostering Independence**

Overview, Learning Objectives, and Activities..... 119

Facilitation Guide..... 120

### **9 Promoting Professional Development**

Overview, Learning Objectives, and Activities..... 137

Facilitation Guide..... 139

### **10 Articulating Your Mentoring Philosophy and Plan**

Overview, Learning Objectives, and Activities..... 159

Facilitation Guide ..... 160

**Case Study Appendix..... 165**



# **Preface**

## **Mentoring: Learned, Not Taught**

### **Mentoring principles, not practices, are universal**

Effective mentoring can be learned, but not taught. Most faculty learn to mentor by experimenting and analyzing success and failure, and many say that the process of developing an effective method of mentoring takes years, which is a reflection of the unique qualities, needs, and challenges presented by each mentee. A skilled mentor is guided by a reflective philosophy that directs examination of the mentee's changing needs and how best to address them, creating fluidity in the relationship. No book can prescribe a single 'right' approach, but systematic analysis and discussion of mentoring generates a method for tackling the knotty challenges inherent in the job.

The goal of the curriculum outlined in this book is to accelerate the process of becoming an effective research mentor. The approach described provides mentors with an intellectual framework, an opportunity to experiment with various methods, and a forum in which to solve mentoring dilemmas with the help of their peers. The mentor training process expands each mentor's knowledge through secondhand exposure to the experiences of the entire group, enabling participants to engage with as many mentoring experiences as each of them would typically handle in a decade. This process in turn enhances their readiness to work with diverse mentees and anticipate new situations. At the completion of the training, mentors will have articulated their own approach to mentoring and have a toolbox of strategies to draw upon when confronted with mentoring challenges.

Although no one can provide formulas, practices, or behaviors that will work in every mentoring situation, certain principles guide good mentoring. The principles that shape this curriculum are founded on research that has revealed how people learn and has identified the essential elements of environments shown to be most conducive to learning, productivity, and creativity.

### **Mentoring diversity, not sameness, is essential**

An individual's performance in any endeavor is the product of a complex interaction involving innate ability, experience, confidence, education, and the nature of the performance environment. Professional mentors can directly influence their mentees' performance by creating an environment that is conducive to achieving excellence and that fosters confidence, even in stressful situations. Setbacks are a source of stress that everyone experiences, and the mentee's response can be modulated by a mentor's intervention. A mentor's goal is to promote a mentee's growth and achievement. People build resilience and self-reliance through positive reinforcement coupled with the expectation of excellence. The most important message a mentor can send is faith in the mentee, a willingness to embrace diversity, and an eagerness to continually improve as a mentor. A theme implicit in this book's curriculum is that mentors may facilitate growth best when they work collaboratively with their mentees to continually reexamine and adjust to their individual needs. This process, followed by the mentee producing high-quality research, will generate self-sustaining confidence for both.

Another aspect of creating an environment that is conducive to learning is being open to other ways of doing research and seeing the world, including the world of academia. The next generation of researchers will be more diverse than the last. Working with people who are different from ourselves can at times be frustrating and baffling, though also enlightening and deeply rewarding as we learn from one another. When given the opportunity to work with mentees from different backgrounds and with distinct perspectives, who may not share the characteristics we value most in ourselves, we may struggle to imagine them fitting the academic mold. We are often surprised by the success of those who don't immediately fit in, and find that they may be the very people that bring a key new perspective or insight. Being a good mentor requires accommodating styles that differ from our own, thereby enhancing the diversity and the vibrancy of the scientific community.

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# **Curriculum Overview**



## Curriculum Overview

### Content, Audience, Format, Implementation, and Assessment

#### Content

The content of each session in this curriculum is designed to address the key concerns and challenges identified by research mentors. The topics include:

- Maintaining Effective Communication
- Aligning Expectations
- Assessing Understanding
- Addressing Equity and Inclusion
- Fostering Independence
- Promoting Professional Development

Each of these topics is critical for mentoring; although these divisions are, at some level, artificial and overlapping, focusing on one topic in each session allows mentors to delve more deeply into each. In addition to general content about research mentoring, all of the case studies and some of the discussion questions draw specific attention to the unique circumstances and challenges related to mentoring scholars working in the diverse areas of clinical and behavioral research. Session leaders who use these training materials are encouraged to read through all of the materials ahead of time so they can highlight linkages between topics throughout the training. Additional materials for the topic areas above as well as other topics such as ethics, are available at: <https://mentoringresources.ICTR.wisc.edu>.

#### Audience

This curriculum was adapted for those who wish to implement mentorship development programs for academic research mentors in clinical and behavioral science. While the individual activities included in the curriculum may focus on a specific type of research or a specific aspect of a mentoring relationship, the curriculum as a whole is designed to include activities relevant to a broad range of mentors across diverse areas of research and varied stages of their mentoring relationships. These curricular materials as well as others that target the mentors of biomedical researchers and community-engaged researchers are available at <https://mentoringresources.ICTR.wisc.edu>.

#### Format

The structure of this research mentor training program is based on the experience of faculty and staff who implemented the *Entering Mentoring* curriculum at the University of Wisconsin-Madison. These facilitators have learned that the best results come from keeping an open discussion format to allow for participants' diverse experiences to be integrated into the training. Simply asking the mentors a few guiding questions typically leads to vigorous discussion. The case studies and reading materials can provide a tangible starting point, and the mentors often move quickly from the hypothetical examples to their own experiences with trainees and students. In fact, facilitators are encouraged to use the mentoring situations expressed by participants in place of the provided case studies, when appropriate. The training is most effective with mentors who are currently working with one or more mentees. The short duration of such training intensifies the urgency of dealing successfully with challenges that arise. Likewise, frequent contact with trainees provides mentors opportunities to immediately implement ideas generated by the discussions. You may want to encourage participants to reflect on any changes they have made in their mentoring practices at the start of each training session.

## **Implementation: Facilitating Research Mentor Training**

Facilitating research mentor training is not the same as teaching it. Your role as facilitator is to enable participants to take ownership of their own learning by helping them engage in self-reflection and shared discovery to maximize learning. Your role in the group is to build a community of mentors learning together toward the common goal of becoming more effective in their mentoring relationships. Your role in the group is to help others to work through their thoughts and ideas; it is not your role to be the expert on mentoring. As a facilitator you may also walk a fine line between facilitator and participant—but remember that group members will look to you for guidance and structure. Your own experiences and ideas should enhance the discussion, but not dominate and become the primary focus of the discussion.

Being an effective facilitator is the key to helping the research mentors meet the learning objectives and become more successful mentors. To assist you in and strengthen your own facilitation abilities, we have included a brief facilitator guide in the next section that contains additional information, tips, and tools for facilitation.

## **Implementation: Using this Guidebook to Facilitate Weekly Sessions**

This guidebook contains facilitator instructions and materials for each of the sessions outlined in the sample syllabus. Each session is organized as follows:

1. Introduction
2. Learning objectives
3. “Overview of Activities” table
4. Facilitation guide, including recommended session length, materials needed, objectives in detail, and post-session assignments
5. Activities, case studies, handouts, readings, and mentoring tools

Facilitators should prepare for each session by copying the learning objectives, case studies, worksheets, mentoring tools, and readings for each mentor in the group. Alternatively, all the materials can be copied at the start of the sessions and distributed at the first meeting or posted on a website. The specific themes and objectives for each session are included at the beginning of the materials. Facilitators might consider asking participants to review the themes and learning objectives at the beginning of each session, or to review them after a few weeks to check their progress.

Guiding discussion questions and notes for group facilitators are also included in each session plan. Time estimates for activities and facilitated discussions for each session are indicated in parentheses and can be adjusted at the facilitator’s discretion. The facilitator notes provide directive signposts to support the facilitation process as described below:

|          |                                                                                                                                                       |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACTIVITY | Participants are to engage in some process on their own, in small groups, or as a large group.                                                        |
| TELL     | Information that follows needs to be shared with the whole group.                                                                                     |
| ASK      | A specific question needs to be put to the group.                                                                                                     |
| NOTE     | Some particular issue or content needs to be emphasized.                                                                                              |
| DISCUSS  | A broader discussion, usually supported by guiding questions, needs to occur. Sometimes more discussion questions are provided than can reasonably be |

addressed in the time allotted for the activity or group discussion, but the questions suggested for the case studies in this training are based on the experiences of past facilitators.

We have provided an example of how the sessions might be structured as four two-hour sessions (page 16). While the spacing between these sessions is flexible, former participants found separating them by 1-2 weeks to be effective as it allows time for reflection and practice. Further, facilitators may want to consider alternate session pairing and length. An effective alternative could be one two-hour session, followed by two three-hour sessions:

Session 1 (2 hours): *Introductions and Maintaining Effective Communication*

Session 2 (3 hours): *Aligning Expectations, Assessing Understanding, and Addressing Equity and Inclusion*

Session 3 (3 hours): *Fostering Independence, Promoting Professional Development, and Articulating Your Mentoring Philosophy and Plan*

### ***Assessment of Research Mentor Training***

Following the research mentor training session(s), you might consider asking participants to complete a survey based on their experience. The survey that has been developed for this purpose can be used to collect feedback on the research mentor training sessions themselves, on your skills as a facilitator, and to assess the knowledge and skill gains of your participants upon completion of the training. We recommend using a survey that includes the Mentoring Competency Assessment (MCA) which can be found at <https://mentoringresources.ICTR.wisc.edu>.

# **Curriculum Outline: Competencies and Learning Objectives**

## **Introduction to Mentor Training**

### ***Learning Objectives for Introduction***

Mentors will have the knowledge and skills to:

1. Learn about other mentors in the group to begin building a learning community
2. Reflect on group dynamics and ways to make the group functional
3. Establish ground rules for participation

## **Maintaining Effective Communication**

### ***Learning Objectives for Communication***

Mentors will have the knowledge and skills to:

1. Provide constructive feedback
2. Communicate effectively across diverse dimensions including various backgrounds, disciplines, generations, ethnicities, positions of power, etc.
3. Identify different communication styles
4. Engage in active listening
5. Use multiple strategies for improving communication (in person, at a distance, across multiple mentors, and within proper personal boundaries)

## **Aligning Expectations**

### ***Learning Objectives for Expectations***

Mentors will have the knowledge and skills to:

1. Effectively establish mutual expectations for the mentoring relationship
2. Clearly communicate expectations for the mentoring relationship
3. Align mentee and mentor expectations
4. Consider how personal and professional differences may influence expectations, including differences across disciplines when working in multidisciplinary teams

## **Assessing Understanding**

### ***Learning Objectives for Understanding***

Mentors will have the knowledge and skills to:

1. strategies to enhance mentee understanding across diverse disciplinary perspectives  
Assess their mentees' understanding of core concepts and processes
2. Identify various reasons for a lack of understanding, including expert-novice differences
3. Use multiple

## **Addressing Equity and Inclusion**

### ***Learning Objectives for Equity and Inclusion***

Mentors will have the knowledge and skills to:

1. Improve and expand understanding of equity and inclusion, and how diversity influences mentor-mentee interactions

2. Recognize the potential impact that conscious and unconscious assumptions, preconceptions, biases, and prejudices bring to the mentor-mentee relationship and reflect on how to manage them
3. Identify concrete strategies for learning about, recognizing, and addressing issues of equity and inclusion in order to engage in conversations about diversity with mentees and foster a sense of belonging

## **Fostering Independence**

### ***Learning Objectives for Independence***

Mentors will have the knowledge and skills to:

1. Define independence, its core elements, and how those elements change over the course of a mentoring relationship
2. Employ various strategies to build their mentee confidence, establish trust, and foster independence
3. Identify the benefits and challenges of fostering independence, including the sometimes conflicting goals of fostering independence and achieving grant-funded research objectives

## **Promoting Professional Development**

### ***Learning Objectives for Professional Development***

Mentors will have the knowledge and skills to:

1. Identify the roles mentors play in the overall professional development of their mentees
2. Develop a strategy for guiding professional development using a written format
3. Initiate and sustain periodic conversations with mentees on professional goals and career development objectives and strategies
4. 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.

## **Articulating Your Mentoring Philosophy and Plan**

### ***Learning Objectives for Articulating Your Mentoring Philosophy and Plan***

Mentors will have the knowledge and skills to:

1. Reflect on the mentor-training experience
2. Reflect on any behavioral or philosophical changes they intend to make across the mentoring competencies
3. Articulate an approach for working with new mentees in the future

### ***Sample Clinical and Behavioral Research Mentor Training Schedule***

*Each session is 2 hours (See page 13 for a discussion about session structure and pairing).*

| <b>Sessions</b>  | <b>Topics</b>                                                                                           |
|------------------|---------------------------------------------------------------------------------------------------------|
| <b>Session 1</b> | Introductions (30 min)<br>Maintaining Effective Communication (90 min)                                  |
| <b>Session 2</b> | Aligning Expectations (80 min)<br>Assessing Understanding (40 min)                                      |
| <b>Session 3</b> | Addressing Equity and Inclusion (60 min)<br>Fostering Independence (60 min)                             |
| <b>Session 4</b> | Promoting Professional Development (90 min)<br>Articulating Your Mentoring Philosophy and Plan (30 min) |





## **Introduction to Facilitation**



## Role of Facilitators

The following materials were designed to assist you in your role as group facilitator of the research mentor training curriculum. Specifically, these materials will help you guide the mentors as they work through their thoughts and ideas and engage in self-reflection and shared discovery. *Importantly, your role is not to teach others, but rather to guide them in learning how to be a mentor.* As a facilitator, your role is to:

- **Make it safe:** Take time to tell the group members that the research mentor training sessions are a safe place to be honest about their ideas and feelings. Everyone's ideas are worth hearing. Reinforce the expectation of discretion; what is shared within the group should stay within the group.
- **Keep it constructive and positive:** Remind members of your group to keep things positive and constructive. Ask the group how they want to deal with negativity and pointless venting. Remind them the training is about working together to learn, not complaining about the current situation or discounting the ideas of others in the interest of a personal agenda.
- **Make the discussion functional:** At the start of each session, explain the goals of the session to the group. Try to keep the group on task without rushing them. If the conversation begins to move beyond the main topic, bring the discussion back to the main theme of the session.
- **Give members of the group functional roles and responsibilities:** Assign or ask for volunteers to take notes, keep track of time, and report to the entire group at the end of the session. Functional roles help keep participants engaged.
- **Give all participants a voice:** In a group, there are likely to be issues of intimidation and power dynamics that can play out in ways that allow certain members of the group to dominate while others remain silent. At the start of the conversation, mention that the group is mixed by design, and point out that a diversity of perspectives is an essential part of the process. Remind group members to respect all levels of experience. It's important that everyone's voice is heard.

## General Notes on Facilitating a Group

Each group will take on its own feel and personality based on the people in the group, the facilitator's approach, and a host of external factors beyond your control. It helps if you adopt a no-fault clause stating that if a group is not working well, it is through no fault of a single individual, but rather a combination of circumstances. It's hard to not take it personally if a group doesn't function well, but remember, you are just one part of the whole dynamic.

It also helps if you are able to release your expectations for how a meeting or group should go, and instead focus on core aspects of the process. Your role as facilitator is to be intentional and explicit, while remaining flexible and not overly prescriptive. You can only do so much as a facilitator – to a large extent it is up to the participants to take ownership of their own learning, especially since this training is designed for adults who already have advanced degrees. Individual ownership, self-reflection, and shared discovery and learning will promote the deepest learning for this type of program.

As challenging but normal group dynamics surface, the group will look to you to fix problems. But part of your role is to help others see that they too are also responsible for addressing problems. You can help them realize this by holding on tightly to the following core ideas of group dynamics (and periodically reminding participants of them):

- Respectful interactions (listening, non-judging, non-dominating, genuine questioning, etc.) are essential.
- Relevant tangents that tie back to a central topic, issue, or question are fine, but don't let them derail the central purpose of the discussion.
- You need to keep moving ahead, but there is no need to push the schedule if the group needs time to reflect or slow down. If you slow down or skip something, you can anticipate participants will feel they are behind or missing out, so reassure them that the initial schedule is only a guide and there will be time to revisit topics if needed.
- If you try something and it doesn't go well, don't abandon it right away. Step back and think about what went wrong, talk to the group, learn from it, and try it again. It often takes a time or two to get the group warmed up to something new.
- Discomfort and silence are ok, but with a clearly stated context and purpose. Silence may seem like a waste of time in meetings, but it gives people a chance to think, digest, and reflect. Allow for a few silent breaks before, during, and at the end of each meeting.
- Make it easy, rewarding, and fun for people to participate, and encourage others to do the same for each other. Simple things like friendly reminders of meetings, providing coffee, tea, or snacks, and follow-up calls to check in with someone if they miss a meeting, all send the message that you care and want to make it easy for group members to participate.

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Adapted from the Creating a Collaborative Learning Guidebook, Center for the Integration of Research, Teaching, and Learning:

[http://www.cirtl.net/files/Guidebook\\_CreatingACollaborativeLearningEnvironment.pdf](http://www.cirtl.net/files/Guidebook_CreatingACollaborativeLearningEnvironment.pdf)

## **Group Dynamics: Suggestions for How to Handle Challenges**

### **What do I do when no one talks?**

Have everyone write an idea or answer to a question on a piece of paper and toss it in the middle of the table. Each participant then draws a piece of paper from the center of the table (excluding their own) and reads it out loud. All ideas are read out loud before any open discussion begins.

Have participants discuss a topic in pairs for three to five minutes before reconvening as an entire group.

Ask the group: “This topic seems challenging for us...why do you think that is?”

### **What do I do when one person is dominating the conversation?**

- Use a talking stone to guide the discussion. Participants may only talk when holding the stone. Each person in the group is given a chance to speak before anyone else can have a second turn with the stone. Participants may pass if they choose not to talk. Importantly, each person holding the stone should share their own ideas and resist responding to someone else’s ideas. Generally once everyone has a chance to speak, the group can move into open discussion without the stone.
- Use the Constructive/Destructive Group Behaviors Exercise. Each participant chooses their most constructive and destructive group behavior from a list (see following page). Each person writes the two behaviors on the back of their table tent. Then, participants share their choice with the group and explain why they selected those behaviors. This exercise also helps provide the group with a vocabulary so they may name these behaviors as they later note them in themselves and others. It provides a light hearted and nonthreatening way that they can help each other stay on track.
- Acknowledge the contributions of the person dominating the conversation but then say that you would like to hear another's view or thoughts before moving on. Try to be comfortable with silence until another person speaks up.

### **What do I do when the group members direct all their questions and comments to me, instead of their fellow group members?**

Each time a group member talks to you, move your eye contact to someone else in the group to help the speaker direct his/her attention elsewhere.

Ask the participants for help in resolving one of your mentoring challenges. For example, ask them for advice on how to deal with an apathetic mentee. This helps the group members stop looking to you for the right answers and redirects the problem-solving and discussion focus to the entire group.

### **What do I do when a certain person never talks?**

Have a different participant initiate each day’s discussion so that different people have the chance to speak first.

Assign participants in the group different roles in a scenario or case study and ask them to consider the case from a certain perspective. Ask the participants to discuss the case in the entire group from the various perspectives. For example, some participants could consider the perspective of the mentee, while others consider the perspective of the mentor.

Try smaller group discussions (two to three participants per group) as individuals may feel more comfortable talking in smaller groups or without certain other individuals present.

Outside of the session, speak with the person about what you are observing and inquire about whether you can assist with making participation easier.

**What do I do when the group gets off topic?**

- Have everyone write the ideas they want to share on a given topic for three minutes. This short writing time will help participants collect their ideas and decide what thoughts they would most like to share with the group so they can focus on that point.
- Ask someone to take notes and recap the discussion at the half-way and end points of the session to keep the conversation focused. Remind participants of the day's topic or a question that we asked.

Adapted from Branchaw, J., Pfund, C., and Rediske, R. (2010) *Entering Research: A Facilitator's Manual Workshops for Students Beginning Research in Science*. WH Freeman and Company: New York, NY

## Constructive and Destructive Group Behaviors

Choose your single most constructive group behavior and your single most destructive group behavior from the list below. Share your choices with the members of your group so they may draw on your constructive behavior and minimize your destructive behavior as you work together.

### **Constructive Group Behaviors**

*Cooperating:* Is interested in the views and perspectives of other group members and willing to adapt for the good of the group.

*Clarifying:* Makes issues clear for the group by listening, summarizing, and focusing discussions.

*Inspiring:* Enlivens the group, encourages participation and progress.

*Harmonizing:* Encourages group cohesion and collaboration. For example, uses humor as relief after a particularly difficult discussion.

*Risk Taking:* Is willing to risk possible personal loss or embarrassment for success of the overall group or project.

*Process Checking:* Questions the group on process issues such as agenda, time frames, discussion topics, decision methods, use of information, etc.

### **Destructive Group Behaviors**

*Dominating:* Uses most of the meeting time to express personal views and opinions. Tries to take control by use of power, time, etc.

*Rushing:* Encourages the group to move on before task is complete. Gets tired of listening to others and working with the group.

*Withdrawing:* Removes self from discussions or decision making. Refuses to participate.

*Discounting:* Disregards or minimizes group or individual ideas or suggestions. Severe discounting behavior includes insults, which are often in the form of jokes.

*Digressing:* Rambles, tells stories, and takes group away from primary purpose.

*Blocking:* Impedes group progress by obstructing all ideas and suggestions. "That will never work because..."

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Adapted from Brunt. 1993. Facilitation Skills for Quality Improvement. *Quality Enhancement Strategies*. 1008 Fish Hatchery Road. Madison WI 53715





## **Introduction to Mentor Training**



# **Introduction to Mentor Training**

## **Introduction**

Establishing group dynamics and laying the ground rules are perhaps two of the most important steps to launch a successful mentor training program. Once established, these parameters help ensure mentors engage in shared learning of ways to become more effective mentors.

## **Learning Objectives**

Mentors will have the knowledge and skills to:

1. Learn about other mentors in the group and begin building a learning community
2. Reflect on group dynamics and ways to make the group functional
3. Establish ground rules for participation

**Overview of Activities for Introduction to Mentor Training:** Please note core activities for this introductory session should be chosen by the facilitator from either the list of options provided or their own experience.

|          | <b>Learning Objectives</b>                                                     | <b>Core Activities will be chosen by individual facilitators.</b> Example activities are included below.                                                                                       |
|----------|--------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | Learn about other mentors in the group and begin building a learning community | Pre-introductory online social networking (Activity #1) or mentoring philosophy (Activity #2)<br>Introductory activities (Activity #3)<br>Identify mentoring challenges to solve (Activity #4) |
| <b>2</b> | Reflect on group dynamics and ways to make the group functional                | Constructive and Destructive Group Behaviors (Activity #5)                                                                                                                                     |
| <b>3</b> | Establish ground rules for participation                                       | Give or Generate Group Ground Rules (Activity #6)                                                                                                                                              |

## Facilitation Guide

### Recommended Session for Introduction to Mentor Training (30 minutes)

#### ❖ Materials Needed for the Session

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of introduction and learning objectives for Introduction to Mentor Training (page 27)
  - Any handouts needed for your chosen introductory activities such as copies of the *Constructive/ Destructive Behaviors* list (see page 23)
  - Additional materials as needed based on the introductory activities selected

- ❖ TELL: Remind participants that they are demonstrating a special commitment to mentoring by taking time from their busy schedules to improve their mentoring skills. Mention that over 90% of prior participants have reported research mentor training to be a valuable use of their time and that they found the time to discuss issues with peers as one of the most valuable aspects of training.

#### ❖ Objective 1: Learn about other mentors in the group and begin building a learning community (15 min)

- ACTIVITY #1: Optional Pre Introductory Activity #1

- **ASK:** Before the first training session, have mentors join a private online social networking community. This will allow them to become acquainted with each other before the training, may allow for better rapport during the sessions, and provide an opportunity to maintain connections during and after the training. This is especially encouraged if mentors are from different institutions. Instruct mentors to create their own profiles and share basic information about themselves (name, title, department, area of research interest, mentoring experience). An online community may be created through social networking sites such as Ning ([www.ning.com](http://www.ning.com)), SocialGO ([www.socialgo.com](http://www.socialgo.com)) and wall.fm (<http://wall.fm>) or your own college or university's learning management system. Alternatively, basic information or biographies could be collected from each participating mentor and distributed to the group before the training via email.
- **ACTIVITY #2: Optional Pre Introductory Activity #2**
  - **TELL:** Instruct participants to write a short mentoring philosophy. Let participants know that they can revise their philosophy through the training and reexamine it during or after the last training session. If participants are unsure what to write, encourage them to consider their approaches to each of the curriculum categories: communication, expectations, independence, equity and inclusion, understanding and professional development.
- **ACTIVITY #3: Introductory Activity (10 min)**
  - **ASK:** Invite participants to engage in the activity below, choose an alternative activity from page 31 or use one from your own experience.
  - **TELL:** Remind participants that everyone sees the world through their own cultural lens and that our diversity comes from our biography, our own lived experiences.
  - **ASK:** Ask participants to list three things that are not directly related to their work or career, and then share those three in pairs. Assure participants they can share as little or as much information as they are comfortable with. Have the pairs then introduce one another to the group.
  - Some potential aspects would include the background of their parents, whether they were raised in urban or rural settings, experiences with people with disabilities, time abroad, languages spoken, preferences in music, etc. List the things that people named on a whiteboard or flip chart (save this list for an activity in the session on Equity and Inclusion). Sample list below:
    - ◆ Listens to country music
    - ◆ Speaks more than one language
    - ◆ Has at least one family member who works in medicine and public health
    - ◆ Rides a bike or bus to work
    - ◆ Grew up in a town with a population of less than 30,000
    - ◆ Is a first generation college graduate
    - ◆ Plays a musical instrument
    - ◆ Has been in a play
    - ◆ Has lived abroad
    - ◆ Has more than two siblings
    - ◆ Is a parent
  - **TELL:** Let participants know they will be returning to this list later. Ask them to begin to reflect on how much they know about their mentees, and about how these kinds of factors impact their relationship with their mentees.
- **ACTIVITY #4: Identify Mentoring Challenges to Solve (5 min)**

- **DISCUSS:** Have participants share challenges they hope to resolve or gain insight on during the training. Facilitators should record these on a white board or flip chart. Facilitators should be mindful to address these challenges as they continue through each session. Alternatively, instruct participants to email these challenges to the facilitators before the first session.

❖ **Objective 2: Reflect on group dynamics and ways to make the group functional (10 min)**

- **ACTIVITY #5: Building Constructive Group Dynamics (10 min)**
  - Choose an activity that will engage participants in a discussion of constructive and destructive group behaviors and how to deal with them. For example:
    - ◆ **ASK:** Have each participant choose their single most constructive and destructive group behavior from the list on page 23. Ask participants to write their selections on the back of their table tent. Each participant then explains their choices to the larger group.
    - ◆ **DISCUSS:** Engage participants in a conversation about ways to handle destructive group behavior. For example, ask participants what facilitators and other participants might do if someone starts to dominate the conversation or completely withdraws from the discussion.
    - ◆ **ASK:** Have participants create a list of good and bad group behaviors and brainstorm ways to address these behaviors if they arise in the group.
  - **NOTE:** This exercise helps provide the group with a vocabulary so they may name these behaviors as they later observe them in themselves and others. It provides a light hearted and nonthreatening way that they can help each other stay on track and provides a nice segue to discussing communication.

❖ **Objective 3: Establish ground rules for participation (5 min)**

- **ACTIVITY #6: Establish Ground Rules (5 min):**
  - **DISCUSS or TELL:** Either supply the participants with ground rules or engage them in a discussion to establish group-generated ground rules.
  - The list of ground rules should include ways to address:
    1. Confidentiality
    2. Missing sessions and possible make-up work
    3. Destructive group behaviors
    4. Participant roles and responsibilities
    5. Facilitator roles and responsibilities

## **Introductory Activities: Ways to Help Participants Get to Know One Another**

### **1. Visual Explorer**

Spread thirty or more pictures\* that broadly depict phenomena related to teaching, mentoring, etc. around the room. Participants choose a visual representation in response to a question or statement, such as “Choose a picture that best represents mentoring.” Each participant explains their choice.

\*Adapted from *Paulus, C.J., Horth, D.M., and Drath, W.H. (1999) Visual Explorer: a tool for making shared sense of complexity. Center for Creative Leadership Press.*

<http://www.ccl.org/leadership/index.aspx>. Pictures can be obtained from packets of postcards, pages from a magazine, or printed images from websites. Alternatively participants can be asked to find an image on their own and bring it into the session.

### **2. Significant Mentor**

Participants think of a previous mentor they have had who influenced (positively or negatively) their own research career of mentoring practices. Each person briefly shares one thing they learned from their mentor.

### **3. Who are You?**

Participants add fun information about themselves to the four corners of their nametags. Some examples include:

Hometown

Favorite food

Favorite TV show

Hobby

Favorite kind of music

Number of people in their family (How each person defines family can be very interesting!)

### **4. Interviews**

Participants interview the person next to them and vice versa, and then introduce one another to the entire group.

### **5. Truth or Lie?**

Everyone tells two truths and one lie, and then the group guesses the lie for each person.

### **6. Memorable Moments**

Each person shares something memorable about themselves.

### **7. Letter Names**

Each person says their name and shares characteristics that start with the first letter of their name.

### **8. The M&M Game**

Participants pass around a dish of M&M candies with the instruction to take at least one. After everyone has selected, participants introduce themselves by sharing as many characteristics about themselves as is equal to the number of M&Ms they took from the dish.





## **Maintaining Effective Communication**



# **Maintaining Effective Communication**

## **Introduction**

Good communication is a key element of any relationship and a mentoring relationship is no exception. As research mentors, it is not enough to say that we know good communication when we see it. Rather, it is critical that mentors reflect upon and identify characteristics of effective communication and take time to practice communication skills in the session with their mentees.

## **Learning Objectives**

Mentors will have the knowledge and skills to:

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

**Overview of Activities for the Communication Session:** Please note that a core activity is listed for each learning objective. We encourage you to engage the mentors in this activity. There is a list of additional activities that can be used if there is extra time in the session or the core activity is not working well for your group.

|          | <b>Learning Objectives</b>                          | <b>Core Activities</b>                                                                                                                   | <b>Additional Activities</b>                                                                                                                                                                                           |
|----------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | Provide Constructive Feedback                       | Mentors read and discuss Case #1: <i>Giving Constructive Feedback</i> (Activity #1)                                                      | Mentors read about interpersonal communication and discuss implications for their practice (Activity #4)                                                                                                               |
| <b>2</b> | Communicate effectively across diverse dimensions   | Mentors continue discussion about Case #1, focusing on the discussion questions #1-4 for Objective #2                                    | Mentors read and discuss Case #2: <i>Saying No</i> (Activity #5)                                                                                                                                                       |
| <b>3</b> | Identify different communication styles             | Mentors take a communication styles test and discuss their results in pairs (Activity #2)                                                | Mentors generate a list of different communication styles and discuss styles they feel most and least comfortable with (Activity #6)                                                                                   |
| <b>4</b> | Engage in active listening                          | Mentors work in groups to share current mentoring challenges and practice active listening (Activity #3)                                 | Mentors role play a scripted conversation between mentor and mentee and practice active listening (Activity #7)                                                                                                        |
| <b>5</b> | Use multiple strategies for improving communication | Mentors discuss what they learned from Activity #3 and share specific strategies for improving communication between mentors and mentees | Mentors read and discuss Case #3: <i>Establishing Relationship Boundaries</i> (Activity #8)<br>Mentors create a list of barriers to good communication and share strategies for overcoming such barriers (Activity #9) |

## Facilitation Guide

### Recommended Session on Maintaining Effective Communication (90 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of introduction and learning objectives for *Maintaining Effective Communication* (page 35)
  - Copies of Communication Case Study #1: *Giving Constructive Feedback*, (page 39) and the additional cases if desired (*Saying No* and *Establishing Relationship Boundaries*, page 40 and 42)
  - Copies of a Communication Styles Test (URL on page 37)

- Copies of *Building a Relationship with a Mentee*. (This reading can also be sent to mentors to review in advance.) (pages 43-45)
- ❖ **Introductions (5 min):**
  - TELL: Review the introduction and learning objectives for the session.
- ❖ **Objectives 1 and 2: Provide constructive feedback and communicate effectively across diverse dimensions (30 min)**
  - ACTIVITY #1: Case Study
    - Distribute *Communication Case #1: Giving Constructive Feedback*. Let participants read the case individually for two to three minutes.
    - (Objective 1) DISCUSS (15 min) with entire group: You may want to record the ideas generated in this discussion on a white board or flip chart. Use the guiding questions following the case study. Additional questions are listed below.
      1. How can you communicate constructively with a mentee whose progress is disappointing?
      2. Should there be a balance between positive and negative feedback? If so, how do you achieve that balance?
      3. How can you communicate in a way that fosters a change in behavior?
      4. What are the characteristics of good communication? What does it look like? Does it change depending on the audience? You may wish to provide a handout or a starting list. Let participants supplement the list during group discussion. Don't forget nonverbal communication.
      5. Why might your mentee have difficulty receiving negative feedback? How can you uncover the reasons and address them?
      6. How can you tell if your mentee heard a comment the way it was intended?
      7. How can mentors best address silence or other types of mentee behaviors (e.g., defensiveness, total agreement, avoidance) that can hinder the relationship? Example question: "How are you feeling? Is there something else going on?"
    - (Objective 2) DISCUSS (12 min) with the group: You may want to record the ideas generated in this discussion on a white board or flip chart. Guide the discussion using the following questions.
      1. Discuss the role of trust in this interaction.
      2. What additional things would the mentee have to consider or do if she were using a sign or language interpreter during the presentation?
      3. What if English was the mentee's second language and speaking fluently was a challenge? Would you handle the situation differently? Does it matter that the mentor's first language is not English?
      4. Does a difference in gender affect communication in this case?
- ❖ **Objective 3: Identifying different communication styles (25 min)**
  - ACTIVITY #2: Communication Styles Test (7 min):
    - TELL: Mentors should individually complete a communication styles test and calculate their score. There are many such inventories available online such as the "Effective Communication Styles Inventory" (<http://www.whecare.com/images/form.pdf>) or the "PACE Palette" (<http://www.paceorg.com>).
    - ASK: Think about the way you communicate with your current mentees when engaging in the following activity.

- DISCUSS (8 min): Mentors discuss their results in pairs and compare results. Questions to guide their discussion can include (you may wish to write these questions on a whiteboard or flipchart):
  1. Specifically, to what extent did or didn't the test validate what you know about yourself?
  2. What did you learn and how can this be applied to your communication with mentees?
- DISCUSS (10 min) with entire group additional questions regarding communication styles:
  1. In what other situations could you apply this type of assessment?
  2. How can you determine your mentee's communication style?
  3. What are strategies for communicating across different styles?
  4. What did you learn about yourself and how can you apply this to the mentoring relationship?
- NOTE: We acknowledge that all such tests are at some level oversimplifications, but can be an effective starting point for reflection and discussion. As a facilitator, you may want to provide a specific example of how your results helped you reflect on your communication with mentees.

❖ **Objectives 4 and 5: Engage in active listening and use multiple strategies for improving communication (25 min)**

- ACTIVITY #3: Active Listening (15 min):
  - Mentors form groups of three. One mentor shares a current challenge they are facing in their mentoring relationship(s). The second person practices active listening skills and tries to come to a clear understanding of the situation. The third person acts as observer and notes tone, body language, facial expressions, etc. Participants rotate roles and discuss what they learned as time allows. Refer to the provided reading for tips on active listening or for more information on nonverbal communication.
- DISCUSS (10 min): In the large group have mentors share what they learned from the exercise and the strategies that the pairs elicited. You may want to record the ideas generated in this discussion on a white board or flip chart.
- **Summary Activity (5 min)**
  - REFLECTION (5 min): Invite the mentors to reflect on the handout, *Building a Relationship with a Mentee* about interpersonal communication (pages 43-45) and the strategies generated by the group, and to share two areas for personal improvement.

### **Case #1: Giving Constructive Feedback**

As he leaves the crowded conference room, Dr. Tariq (the mentor) tells Dr. Timms (the mentee) he'll see her in a few minutes. Dr. Timms was the last speaker in the practice presentation. Back in his office Dr. Tariq sits looking distractedly out the window and releases a heavy sigh. He shifts his attention back to his notes for a last review of his written comments on Dr. Timms' talk: reading slides...too fast...too long...text too small...too much text...color contrast...meandering....

A few moments later he hears a knock on the door and beckons Dr. Timms to come in. She plops into a chair across from him and looks up expectantly. He meets her gaze, smiles, and then says in 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 in clinic all day tomorrow—and then I'm out of town." 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," continues Dr. Tariq. "I think this conference will be a great opportunity for you to meet some key colleagues in this field." Dr. Timms 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, adding a quick "Thanks."

### **Guiding Questions for Discussion:**

1. What are the main themes raised in this case study?
2. How could this situation have been handled differently? What should the mentor do now?
3. How do you interpret silence or a minimalist perspective? Does your interpretation of this kind of response differ depending on who the speaker is (e.g., mentee, peer, or supervisor)?

## **Additional Activities (if time allows):**

### **Objective 1; Activity #4:**

Have mentors read about interpersonal communication (below, Adapted from the International Training and Education Center for Health [I-TECH] Clinical Mentoring Toolkit, produced by the I-TECH/University of Washington with funding from the US Health Resources and Services Administration (For more information, visit [www.go2itech.org](http://www.go2itech.org)). Have them discuss their own communication skills and two areas for improvement. Write these down and return to this at the end of the workshop. Have they made improvement on those specific skills?

### **Objective 2; Activity #5:**

#### **Case #2: *Saying No***

Dr. Yin is a clinical faculty member in Psychiatry and a recent recipient of an NIH Career Development Award. Dr. Yin found his first year on this grant very challenging, as he struggled to balance his clinical responsibilities with his research productivity. However, in just the last few months, Dr. Yin has figured out a schedule and an organizational system that is working well for him. He is finally feeling that his research program is moving forward and he is meeting his clinical responsibilities. His research mentor is very pleased with Dr. Yin's progress. However, last week Dr. Yin's department chair asked Dr. Yin to serve on a committee to develop a new anxiety-treatment program that will require committee members to take on specific tasks outside of the meeting time. Dr. Yin cannot imagine finding time for this committee without his research productivity suffering. Dr. Yin feels he must say no to his department chair, but fears the repercussions both in terms of their relationship and the opinion his chair holds of him.

#### **Guiding Questions for Discussion:**

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. What advice could you give the mentee for framing a conversation with his department chair?
4. What strategies have you used to assure that your mentee's time is adequately protected?
5. How do you advise a mentee who is receiving conflicting career advice?

### **Objective 3; Activity #6:**

Have mentors generate a list of different communication styles and discuss the styles they feel most and least comfortable with. If time allows, ask mentors to share practical strategies for working with mentees who have very different communication styles from their own.



#### **Objective 4; Activity #7:**

Have mentors work in pairs and role play the scripted conversation between mentor and mentee. Then discuss how the mentor could have reacted differently; practice a response that includes good active listening. Use the techniques in the reading to guide your approach. (Alternatively, facilitators could role play the scenario and then discuss with the full group.)

#### ***Scripted conversation:***

Mentee walks into his mentor's office excited after coming from a meeting with a co-primary mentor.

Mentee: [Knocks and walks in office] Hi! I'm so glad I caught you in your office. I just came from my meeting with Dr. Jahns and I have really exciting news about our upcoming grant. He said --

Mentor: [Interrupting] I was hoping you'd stop by. I just submitted the abstract for the conference next month. I was thinking... [email notification pops up on computer and mentor is distracted]

Mentee: [Patiently waits for mentor to read email]

Mentor: Ooh I just received an email back from Dr. Tram. He agreed to present at the conference. His ideas are so innovative. I want to make sure you meet him. I have to quickly run to my next meeting. What were you saying before?

Mentee: Dr. Jahns is really excited about our idea for the grant. He and I thought of a few suggestions on how to integrate our projects --

Mentor: [Interrupting] That's great but we already decided our approach at the lab meeting two weeks ago. I already know what he has to say about it and it doesn't make any sense to change it.

Mentee: I really think we should consider --

Mentor: [Interrupting] I have to go. We can talk next week. I expect a draft of the grant at our next meeting.

Mentor walks out of his office and hurries down the hall.

### **Objective 5; Activity #8**

Mentors read the following case and discuss the challenges and strategies for communicating appropriate boundaries for a relationship with a mentee especially when you may work closely together for several years. It's understandable that over time you will each share details of your personal lives, but how do you communicate when the boundaries are becoming blurred?

#### **Case #3: *Establishing Relationship Boundaries***

Susan really likes working with her mentee, Cynthia. She is inquisitive, a hard worker, and a great problem-solver. Susan really enjoyed going over to Cynthia's house for dinner and meeting her husband and family. Since the dinner at Cynthia's house, Susan asks Cynthia to join her for dinner at a restaurant about once a week. Susan appreciates these opportunities to blow off steam and talk about how her department chair is unethical and how her former collaborator treated her poorly. Cynthia appreciates all that she has learned from Susan, but finds that they are spending increasing time talking about Susan's gripes and personal problems, rather than discussing their joint research. She also doesn't like spending that much time away from her family for dinner with her mentor. Cynthia is wondering how she can get Susan back on-track to talk about work. Cynthia is planning to submit a grant application in the next six months with Susan as her mentor, but is wondering if she made a mistake choosing her as a mentor. Susan is wondering if Cynthia is avoiding her because Cynthia has not written up a draft of an article she promised Susan last month.

Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. How much is appropriate to share of your personal life with your mentee? What are the boundaries of what you should ask your mentee about their lives?
4. What are the advantages and disadvantages of becoming "friends" with your mentee?

### **Objective 5; Activity #9:**

Have mentors brainstorm a list of barriers to good communication, record them on a white board or flip chart, and then have mentors choose two or three barriers and discuss practical ways to overcome them. For example, barriers to productive communication might be a lack of frequent contact. Consider issues such as who initiates the meetings (e.g., mentee may not want to disturb his busy mentor) and whether the scheduled appointments are kept (e.g., busy mentor frequently needs to reschedule). Some solutions might be more frequent email, telecoms, or setting up a time to chat by instant message each week and not allowing for interruptions during your face-to-face meeting time.

Alternatively, have the mentors create a list of all the forms of communication used by them and their mentee (face to face meetings, e-mail, sticky notes, and phone calls). Organize the resulting list by types of communication (e.g., oral, face-to-face, and written) and assign each type to a group of two to three mentors. Each sub group should then discuss ways each method can be improved. At the end, have each smaller group report to the larger group. Record all ideas on the whiteboard or flip chart. You may want to send a compiled list to the entire group.

## **Building a Relationship with a Mentee**



Adapted from the I-TECH Clinical Mentoring Toolkit, produced by the International Training and Education Center for Health (I-TECH)/University of Washington with funding from the US Health Resources and Services Administration. For more information, visit [www.go2itech.org](http://www.go2itech.org).

Building an effective relationship of mutual understanding and trust with the mentee is a critical component of effective mentoring. Mentors can establish rapport with their mentees by using effective interpersonal communication skills, actively building trust, and maintaining confidentiality. This document contains information and advice to help mentors build rapport and create positive relationships with mentees so both parties can achieve the greatest benefit from the mentoring experience.

### **Interpersonal Communication**

Interpersonal communication is a person-to-person, two-way, verbal and nonverbal sharing of information between two or more persons. Good communication helps to develop a positive working relationship between the mentor and mentee by helping the mentee to better understand directions and feedback from the mentor, feel respected and understood, and be motivated to learn from the mentor. Mentees learn best from mentors who are sincere, approachable, and nonjudgmental. These qualities are communicated primarily by facial expressions, and, to a limited extent, by words. People often remember more about how a subject is communicated than the speaker's knowledge of the subject.

There are two types of communication: verbal and nonverbal. Verbal communication is communication that occurs through spoken words. Nonverbal communication is communication that occurs through unspoken mediums, such as gestures, posture, facial expressions, silence, and eye contact. It is important for mentors to remember they are communicating to mentees both when they are speaking and when they are not speaking. Up to 93% of human communication is nonverbal.<sup>1</sup> Body language tells those with whom we are communicating a great deal about what we are thinking and feeling. Examples of positive or open body language include:

- Eye contact (depending on the culture)
- Open or relaxed posture
- Nodding or other affirmation
- Pleasant facial expressions

Examples of negative or closed body language include crossed arms, averted eyes, and pointing fingers. The mentor needs to be aware of what he or she is communicating nonverbally as well as what the mentee is communicating nonverbally.

When mentoring, effective communication involves more than providing information or giving advice; it requires asking questions, listening carefully, trying to understand a mentee's concerns or needs, demonstrating a caring attitude, remaining open-minded, and helping solve problems. There are many communication skills that mentors can utilize to effectively communicate with mentees, including the following:

- **Active listening:** Be sure to really listen to what a mentee is saying. Often, instead of truly listening to the mentee, the mentor is thinking about his or her response, what to say next, or something else entirely. It is important to quiet these thoughts and remain fully engaged in the task of listening.

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<sup>1</sup> Mehrabian, Albert. Nonverbal communication. Chicago: Aldine-Atherton, Chicago; 1972.

- Attending: Listen while observing, and communicate attentiveness. This can include verbal follow-up (saying “yes” or “I see”) or nonverbal cues (making eye contact and nodding the head).
- Reflective listening: Verbally reflect back what the mentee has just said. This helps the mentor to check whether or not he or she understands the mentee, and helps the mentee feel understood.  
Examples:
  - “So it seems that you’re overwhelmed with your workload.”
  - “It seems that you are concerned about that experiment.”
- Paraphrasing: Determine the basic message of the mentee’s previous statement and rephrase it in your own words to check for understanding. Examples:
  - “You’re interested in developing a system for improving that.”
  - “It sounds like you’re concerned about the design of the experiment.”
- Summarizing: Select main points from a conversation and bring them together in a complete statement. This helps ensure the message is received correctly. For example, “Let me tell you what I heard, so I can be sure that I understand you. You said that the main challenge right now is balancing your clinical load and writing the research proposal.”
- Asking open-ended questions: Ask mentees questions that cannot be answered with a simple yes or no. Open-ended questions encourage a full, meaningful answer using the mentee’s own knowledge and feelings, whereas closed-ended questions encourage a short or single-word answer. Examples:  
*Close-ended question*: “You didn’t think the experiment would work?”  
*Open-ended question*: “What factors led you to your decision to change the protocol?”  
  
*Close-ended question*: “Did you understand what we discussed today?”  
*Open-ended question*: “Can you summarize what we discussed today?”
- Probing: Identify a subject or topic that needs further discussion or clarification and use open-ended questions to examine the situation in greater depth. For example, “I heard you say you are overwhelmed; please tell me more about that.”
- Self-disclosure: Share appropriate personal feelings, attitudes, opinions, and experiences to increase the intimacy of communication. For example, “I can relate to your difficult situation, I have experienced something similar and recall being very frustrated. Hopefully I can assist you to figure out how to move forward.”
- Interpreting: Add to the mentee’s ideas to present alternate ways of looking at circumstances. When using this technique, it is important to check back in with the mentee and be sure you are interpreting correctly before assigning additional meaning to their words. For example, “So you are saying that the reason the interpretation is flawed is because of the statistical test used to analyze the data? That is likely one reason, but have you also considered that the design may be wrong as well?”
- Confrontation: Use questions or statements to encourage mentees to face difficult issues without accusing, judging, or devaluing them. This can include gently pointing out contradictions in mentees’ behavior or statements, as well as guiding mentees to face an issue that is being avoided. For example, “It’s great that you are so committed to mentoring the younger researcher in the group. However, I am concerned that you are not dedicating enough time to your own research.”

A number of attitudes and/or behaviors can serve as barriers to communication—these can be verbal or nonverbal. Verbal barriers to communication that should be avoided include the following:

- Moralizing: Making judgments about a mentee's behavior, including calling it right or wrong, or telling them what they should or should not do.
- Arguing: Disagreeing with instead of encouraging the mentee.
- Preaching: Telling the mentee what to do in a self-righteous way.
- Storytelling: Relating long-winded personal narratives that are not relevant or helpful to the mentee.
- Blocking communication: Speaking without listening to the mentee's responses, using an aggressive voice, showing impatience, showing annoyance when interrupted, or having an authoritative manner. These behaviors often lead to the mentee feeling down, humiliated, scared, and insecure. As a result, the mentee may remain passive and refrain from asking questions, or distrust the mentor and disregard his or her recommendations.
- Talking too much: Talking so much that the mentee does not have time to express themselves. As a mentor, it is important not to dominate the interaction.

Examples of nonverbal barriers to communication include shuffling papers, not looking directly at the mentee when he or she is speaking, and allowing interruptions or distractions. These barriers may have consequences for both the mentor and the mentee. They may lead to a poor sharing of information, fewer questions being asked by the mentee, difficulty in understanding problems, uncomfortable situations, and a lack of motivation on the part of the mentee.

### **Establishing Trust**

Establishing trust is an essential component in building rapport with a mentee. Trust is the trait of believing in the honesty and reliability of others.<sup>2</sup> Some mentees may be nervous about working with a mentor. To put them at ease, create a trusting relationship by empathizing with their challenges, share knowledge without being patronizing, and remain nonjudgmental. Along with the other communication skills listed above, establishing a trusting dynamic is essential for a productive and positive mentor/mentee relationship.

The following list provides some ideas for how the mentor can build trust with the mentee:

- Share appropriate personal experiences from a time when they were being mentored.
- Acknowledge mentee strengths and accomplishments from the onset of the mentoring process.
- Encourage questions of any type and tell the mentee that there is no such thing as a bad question.
- Take time to learn culturally appropriate ways of interacting with your mentee and helping your mentee to interact appropriately with their peers.
- When appropriate, consider how local knowledge can be incorporated into the mentoring experience.
- Acknowledge the mentee's existing knowledge and incorporate new knowledge into existing knowledge.
- Ask for and be open to receiving feedback from mentees, apply constructive feedback to improve mentoring skills.
- Eat a meal with the mentee to get to know him or her in a non-work setting.

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<sup>2</sup> WordNet. Princeton, NJ: Princeton University, Cognitive Science Library; c2006 [cited 2008 5 June]. Available from: <http://wordnet.princeton.edu>.



## **Aligning Expectations**





# **Aligning Expectations**

## **Introduction**

A shared understanding of what each person expects is critical to establishing effective mentor-mentee relationships. Challenges arise when mentors and mentees have misunderstandings about expectations in the relationship, which naturally changes over time. Therefore, ongoing reflection and communication about expectations is needed to maintain positive and productive mentor-mentee relationships.

## **Learning Objectives**

Mentors will have the knowledge and skills to:

1. Effectively establish mutually beneficial expectations for the mentoring relationship
2. Clearly communicate expectations for the mentoring relationship
3. Align mentee and mentor expectations
4. Consider how personal and professional differences may influence expectations, including differences across disciplines when working in multidisciplinary teams

**Overview of Activities for the Expectations Session:** Please note that a core activity is listed for each learning objective. We strongly encourage you to engage your mentors in this activity. There is a list of additional activities that can be used if there is extra time in the session or the core activity is not working well for your group.

|   | Learning Objectives                                                                   | Core Activities                                                                                    | Additional Activities                                                                                                                     |
|---|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Effectively establish mutually beneficial expectations for the mentoring relationship | Mentors read and discuss Case #1: <i>The Second Year Blues</i> (Activity #1)                       | Mentors create a list of predicted mentee expectations and discuss how they can determine if these are being met (Activity #4)            |
| 2 | Clearly communicate expectations for the mentoring relationship                       | Mentors review compact examples and begin to outline their own (Activity #2)                       | Mentors discuss how to elicit their mentees' learning goals and incorporate those into individualized compacts (Activity #5)              |
| 3 | Align mentee and mentor expectations                                                  | Mentors have a post-session meeting with their mentee to discuss their drafted compact (see above) | Mentors develop strategies to identify their own expectations, those of their mentee, and align the two (Activity #6)                     |
| 4 | Consider how personal and professional differences may influence expectations         | Mentors read and discuss Case #2: <i>Misaligned Expectations</i> (Activity #3)                     | Mentors discuss challenges mentees may face when working with multiple mentors and brainstorm solutions to these challenges (Activity #7) |

## Facilitation Guide

### Recommended Session on Aligning Expectations (80 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of introduction and learning objectives for *Aligning Expectations* (page 49)
  - Copies of *Expectations* case studies (*The Second Year Blues* and *Misaligned Expectations*) (pages 53-54)
  - Copies of example mentor-mentee compacts (pages 55-74)

#### ❖ Introductions (10 min)

- REFLECTION: Ask mentors to write down any new mentoring activities they have engaged in since the last session. If none, they should write down something they are thinking about regarding their mentoring relationship based on the previous session

- ASK: Introduce yourself and share the most important thing you learned from the last mentor-training session.
- TELL: Review the introduction and learning objectives for the session.

❖ **Objective 1: Effectively establish mutually beneficial expectations for the mentoring relationship (20 min)**

- ACTIVITY #1: Case Study
  - Distribute *Expectations Case #1: The Second-Year Blues* and let participants read the case individually for two to three minutes.
  - DISCUSS (17 min) with entire group. You may want to record the ideas generated in this discussion on a white board or flip chart. Use the guiding questions following the case study. Additional questions are listed below.
    1. How do you establish and communicate your expectations of your mentee?
    2. What are strategies for uncovering the unspoken expectations mentees and mentors may have about issues such as authorship, job placement, hierarchy, letters of recommendation, etc.?
    3. How do you find out what expectations your mentee has of you and for their research experience?

❖ **Objectives 2 and 3: Clearly communicate expectations and how to align mentee and mentor expectations (25 min)**

- ACTIVITY #2: Reviewing Mentor: Mentee Compacts (15 min)
- ASK: Do any of you use mentor-mentee compacts? If so, what has your experience been in using them?
 

Mentors review sample compacts and circle or highlight the items in the examples that they would like to include in their own compact. Additional compacts may be found at <https://mentoringresources.ictr.wisc.edu/ExampleMentoringCompacts>. *Working with Norman Ramsey: A Guide for Research Students* provides a lengthy but informative example of the use of mentoring agreements for junior researchers at different stages of their career (undergraduates, graduate students and postdoctoral associates). <http://www.cs.tufts.edu/~nr/students/guide.pdf>
- NOTE: We use the term compacts in this curriculum, but others refer to these expectations documents as contracts. Both are agreements between two parties and we use the terms interchangeably. However, contracts are legally binding and compacts are not.
- NOTE: The sample compacts provided include:
  1. University of Pittsburgh Clinical Research Scholars Program's Team Mentoring Agreement and Mentoring Expectations
  2. AAMC Compact between Postdoctoral Appointees and their Mentors
  3. UC Davis Mentorship Agreement
  4. Mayo Clinic Expectations for the CTSA Scholar Mentoring Relationship
  5. University of Alabama-Birmingham Center for Clinical and Translational Science (CCTS) Mentoring Contract for CCTS KL2 Scholars
- NOTE: Some of the items from these agreements will resonate with you, while others will not. The goal today is to identify those elements that you would include in your own compact and note additional items you would like to incorporate later.
- TELL: Remind mentors that while they may create a template expectations document that can be used to initiate a discussion on the topic with mentees, the essential component is the process of sharing goals and expectations and arriving at a common understanding. Individual development plans, like those included in the "Promoting Professional Development" session (pages 145-153) can be utilized in concert with your expectations template to tailor a holistic plan for each mentee.

An additional resource mentors may consider are learning compacts:

<http://www-distance.syr.edu/contract.html>

[http://cte.uwaterloo.ca/teaching\\_resources/tips/self-directed\\_learning\\_learning\\_contracts.html](http://cte.uwaterloo.ca/teaching_resources/tips/self-directed_learning_learning_contracts.html)

- DISCUSS (10 min) in pairs: Mentors discuss items chosen for their compacts.

❖ **Objective 4: Consider how personal and professional differences may impact expectations, including differences across disciplines when working in multidisciplinary teams (20 min)**

➤ **ACTIVITY#3: Case Study**

- Distribute *Expectations Case #2: Misaligned Expectations* and let participants read the case individually for two to three minutes.
- DISCUSS (17 min) with entire group. You may want to record the ideas generated in this discussion on a white board or flip chart. Use the guiding questions following the case study. Additional questions are listed below:
  1. What kind of conversations regarding expectations might have been helpful earlier in this relationship?
  2. What kind of conversations would be helpful at this point? Who should be involved in these conversations?
  3. What are the differences to consider when clinician investigators work with basic scientists?
  4. How is it possible for each individual to succeed in this arrangement?
  5. How does a mentee learn the social dynamics and culture of a research group and the sense of hierarchy of personnel and projects? How can a mentor communicate these aspects of research? At what point is it appropriate for the mentor and mentee to discuss these topics?
  6. How can you confirm that your expectations take into account a mentee's research training and individual learning style, background, and abilities?

➤ **Follow-Up Activity (5 min)**

- TELL: You should try to find time to complete a draft of your mentoring compact and then meet with your mentee to discuss the draft, while recognizing that the draft may change based on the discussion. Make sure the compact aligns your expectations with those of your mentee. It will be a document that you can revisit and revise on a regular basis as your relationship and research evolves.

## *Aligning Expectations*

### **Case #1: *The Second-Year Blues***

Dr. Allen is beginning the second year of her faculty appointment in Population Health at a large academic health center. She has a mentor and is working towards establishing an independent research program investigating changes related to obesity, eating behavior, and physical activity in the treatment and prevention of diabetes. However, she is concerned that her mentor never has enough time for a focused discussion about Dr. Allen's research aims for the preparation of a major grant proposal. This situation is becoming frustrating for Dr. Allen. She likes her mentor, whom she understands has been extremely busy the past few months adapting to economic budget constraints, preparing applications for the NIH, and adopting a new family member. Being a politically astute assistant professor, Dr. Allen is reluctant to make a misstep with her well-established, senior mentor, yet she knows how important it is to her academic development to get this grant proposal submitted and funded. Dr. Allen is also concerned that her strong interests in intervention-based research are too divergent from her mentor's more theoretical approach. She wants to start making tangible progress.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. Dr. Allen is relying on having her needs met by one mentor. Do you advise your mentees to have more than one mentor and how can you help a mentee navigate the different expectations articulated by multiple mentors?

## *Aligning Expectations*

### **Case #2: Misaligned Expectations**

Dr. Wadsworth is a practicing psychologist who has been on the clinical faculty for three years. She is highly motivated to expand her psycho-social research to patients with breast cancer and has discussed this exciting line of investigation with her new mentor, Dr. Sandstone, a senior research faculty member in the Cancer Center with a well-established interdisciplinary research team. Dr. Sandstone was very enthusiastic about Dr. Wadsworth's proposed intervention to improve psychological outcomes of breast cancer patients after surgery. After a few discussions, Dr. Sandstone invited Dr. Wadsworth to join his research team. He introduced Dr. Wadsworth to the research nurse coordinator, Ms. Anderson, and instructed them to work together to develop a research subject recruitment plan. Ms. Anderson has previously been very frustrated with Dr. Sandstone bringing on new investigators who have major clinical responsibilities. However, Ms. Anderson did not feel comfortable expressing any of these concerns directly to Dr. Wadsworth or Dr. Sandstone because of the hierarchy between faculty and research program staff. After about two months, Ms. Anderson finally spoke to Dr. Sandstone, informing him that Dr. Wadsworth's recruitment plan will not yield an adequate number of subjects to power the analysis she wants to conduct. However, Dr. Wadsworth has a heavy clinic schedule and whenever Ms. Anderson tries to set up a meeting to review the plan, Dr. Wadsworth is distracted and in a hurry to leave. Ms. Anderson also advised Dr. Wadsworth to meet with a statistician, but her response was she doesn't think this is a worthwhile investment of her time.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now?
3. What are the questions to consider for a research mentor when establishing an interdisciplinary research team that includes clinician scientists?
4. How might Dr. Sandstone's research team work together more effectively in the future?
5. What could Dr. Wadsworth learn from this situation?

## **Examples of Mentor-Mentee Compacts**

- 1. University of Pittsburgh Clinical Research Scholars Program Team Mentoring Agreement**
- 2. Association of American Medical Colleges Compact Between Postdoctoral Appointees and their Mentors**
- 3. University of California Davis Health System Mentorship Agreement**
- 4. Mayo Foundation for Medical Education and Research Expectations for the CTSA Scholar Mentoring Relationship**
- 5. University of Alabama-Birmingham Center for Clinical and Translational Science Mentoring Contract**

Note: All of the examples presented here are designed for one-on-one mentor-mentee relationships. If a mentee has multiple mentors, then s/he may have individual compact agreements with each mentor or create one compact to which everyone agrees.





## **Example: University of Pittsburgh Team Mentoring Agreement Clinical Research Scholars Program (CRSP) Team Mentoring Expectations**

A critical element of the CRSP is the use of team mentoring. For this program, team mentoring means more than having multiple mentors working with the mentee; it means having mentors working together as a team to contribute to the mentee's career development. The concept was developed through the NIH Roadmap initiative which found that "the scale and complexity of today's biomedical research problems increasingly demands that scientists move beyond the confines of their own discipline and explore new organizational models for team science." Today's research requires bringing together the perspectives of multiple disciplines to examine a research question right from the beginning. This multidisciplinary approach allows us to develop and conduct research projects that are new and innovative and that would not be possible using a traditional single discipline or multiple disciplines working individually with a mentee approach. It is the synergy created when investigators from multiple disciplines come together that will result in the development of new scientific approaches. This team mentoring model provides benefits for the mentee as he/she learns multidisciplinary methods of discovery and the mentors as they have the opportunity to bring fresh perspectives to the research question they are examining. The CRSP is promoting the development of this team science through the conduct of multidisciplinary research and the use of team mentoring for mentees.

### **Team Mentoring Goals**

1. To enhance the supportive academic environment for the conduct of team science for the mentee.
2. Working as a team and providing multiple perspectives, to facilitate the entry of mentee into the University culture, including the structures, processes, and interpersonal climate of the University.
3. To facilitate the development of appropriate clinical research skills and team science approaches related to the balance and evaluation of research, scholarship, and service.
4. To provide opportunities for developing and working on mentored and independent multidisciplinary research projects with a multidisciplinary clinical research team.
5. To enhance decision-making and other skills involved in working with a team related to the mentee's career development and advancement.

### **Expectations of Mentors**

1. The mentoring team must conduct regular and frequent team meetings with the mentee. There should be a minimum of one hourly meeting of the primary mentors and the mentee per week, and at least one hourly meeting per month of the entire mentoring team and the mentee. Consultants contributing to specific research issues should meet with the team when these issues are being discussed or decisions regarding these issues are being made.
2. The mentoring team must participate in the one-day team mentoring training retreat to obtain or enhance skills in team mentoring.
3. The mentoring team will develop, with the mentee, clearly delineated specific expectations of the substantive learning/skills to be achieved through the use of team mentoring in the program.
4. The mentoring team will develop, with the mentee, clearly delineated specific milestones and timelines for achieving program goals.
5. The mentoring team will attend meetings and seminars in which the mentee is presenting.
6. The mentoring team will participate in biannual evaluations and assessments of the team mentoring relationships. The MAC reserves the right to change the mentoring team should difficulties continue for a sustained period of time.

7. The content of all exchanges between the team mentors and the mentee are subject to the expectations of professional confidentiality. Although this confidentiality is legally limited, the contents should not be discussed with anyone else without written permission from the mentee.

### Expectations of Mentees

1. The mentee must conduct regular and frequent team meetings with the mentoring team. There should be a minimum of one hourly meeting with the primary mentors per week and at least one hourly meeting per month with the entire mentoring team. Consultants contributing to specific research issues should meet with the team when these issues are being discussed or decisions regarding these issues are being made.
2. The mentee must participate in the one-day team mentoring training retreat to obtain skills in working in a team science environment.
3. The mentee will develop, with the mentoring team, clearly delineated specific expectations of the substantive learning/skills to be achieved through team mentoring in the program.
4. The mentee will develop, with the mentoring team, clearly delineated specific milestones and timelines for achieving program goals.
5. The mentee will share career plans, recount initiatives on behalf of his/her professional development; ask for advice; reflect on the mentoring team's observations and inform the mentoring team about the results of the mentee's efforts.
6. The mentee must present the mentee's work to the MAC and at seminars with the mentoring team in attendance.
7. The mentee will participate in biannual evaluations and assessments of the mentoring team relationships. The MAC reserves the right to change the mentoring team should difficulties continue for a sustained period of time.
8. The mentee will keep the content of the team mentoring relationship confidential; the mentoring team may share personal information that they wish to be honored as confidential.

We, acting as team mentors and mentee, agree to enter into a team mentoring relationship based on the criteria described above, which sets forth the expectations, parameters, and process for the mentoring relationship.

\_\_\_\_\_ (mentor's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_ (mentor's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_ (mentee's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_ (CRSP director's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_

Additional mentors as applicable

\_\_\_\_\_ (mentor's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_ (mentor's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_

\_\_\_\_\_ (mentor's signature)                      date\_\_\_\_/\_\_\_\_/\_\_\_\_



**The Institute for Clinical Research Education, serving as the Research Education and Career Development Core of the Clinical and Translational Science Institute (CTSI) University of Pittsburgh**





Tomorrow's Doctors, Tomorrow's Cures®

# Compact Between Postdoctoral Appointees and Their Mentors

December 2006

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Learn

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Serve

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Lead

The *Compact Between Postdoctoral Appointees and Their Mentors* is intended to initiate discussions at the local and national levels about the postdoctoral appointee-mentor relationship and the commitments necessary for a high quality postdoctoral training experience.

The Compact was drafted by the AAMC Group on Graduate, Research, Education, and Training (GREAT) and its Postdoctorate Committee. It is modeled on the AAMC *Compact Between Resident Physicians and Their Teachers*, available at [www.aamc.org/residentcompact](http://www.aamc.org/residentcompact). Input on the document was received from the GREAT Group Representatives, members of the AAMC governance, and other members of the postdoctoral community, including the National Postdoctoral Association. At its October 8, 2006, annual business meeting, the GREAT Group unanimously endorsed the document. The document was subsequently endorsed by the AAMC Executive Committee on October 20, 2006.

The Compact is available on the AAMC Web site at [www.aamc.org/postdoccompact](http://www.aamc.org/postdoccompact)

## Compact Between Postdoctoral Appointees and Their Mentors

Postdoctoral training is an integral component of the preparation of scientists for career advancement as scientific professionals. Postdoctoral appointees typically join an institution to further their training in a chosen discipline after recently obtaining their terminal degree (e.g., Ph.D., M.D., D.V.M.). This training is conducted in an apprenticeship mode where she/he works under the supervision of an investigator who is qualified to fulfill the responsibilities of a mentor. The postdoctoral appointee may undertake scholarship, research, service, and teaching activities that together provide a training experience essential for career advancement.

### Core Tenets of Postdoctoral Training

#### **Institutional Commitment**

Institutions that train postdoctoral appointees must be committed to maintaining the highest standards of training and to providing a program sufficient to ensure, that when completed, the trainee can function independently as a scientific professional. Institutional oversight must be provided for terms of appointment, salary, benefits, grievance procedures, and other matters relevant to the support of postdoctoral appointees. A responsible institutional official must be designated to provide this oversight, and a suitable office should be available for the administrative support of postdoctoral affairs.

#### **Quality Postdoctoral Training**

Individuals should be trained to independently formulate meaningful hypotheses, design and conduct interpretable experiments, adhere to good laboratory practices, analyze results critically, understand the broad significance of their research findings, and uphold the highest ethical standards in research. The development of additional skills—including oral and written communication, grant writing, and laboratory management—are considered integral to this training.

#### **Importance of Mentoring in Postdoctoral Training**

Effective mentoring is critical for postdoctoral training and requires that the primary mentor dedicate substantial time to ensure personal and professional development. A good mentor builds a relationship with the trainee that is characterized by mutual respect and understanding. Attributes of a good mentor include being approachable, available, and willing to share his/her knowledge; listening effectively; providing encouragement and constructive criticism; and offering expertise and guidance.

#### **Foster Breadth and Flexibility in Career Choices**

Postdoctoral appointees must have training experiences of sufficient breadth to ensure that they are prepared to pursue a wide range of professional career options. Effective and regular career guidance is essential and should be provided by the mentor and the institution.

## Commitments of Postdoctoral Appointees

- **I acknowledge that I have the primary responsibility for the development of my own career.** I recognize that I must take a realistic look at career opportunities and follow a path that matches my individual skills, values, and interests.
- **I will develop a mutually defined research project with my mentor that includes well-defined goals and timelines.** Ideally, this project should be outlined and agreed upon at the time of the initial appointment.
- **I will perform my research activities conscientiously, maintain good research records, and catalog and maintain all tangible research materials that result from the research project.**
- **I will respect all ethical standards when conducting my research including compliance with all institutional and federal regulations as they relate to responsible conduct in research, privacy and human subjects research, animal care and use, laboratory safety, and use of radioisotopes.** I recognize that this commitment includes asking for guidance when presented with ethical or compliance uncertainties and reporting on breeches of ethical or compliance standards by me and/or others.
- **I will show respect for and will work collegially with my coworkers, support staff, and other individuals with whom I interact.**
- **I will endeavor to assume progressive responsibility and management of my research project(s) as it matures.** I recognize that assuming responsibility for the conduct of research projects is a critical step on the path to independence.
- **I will seek regular feedback on my performance and ask for a formal evaluation at least annually.**
- **I will have open and timely discussions with my mentor concerning the dissemination of research findings and the distribution of research materials to third parties.**
- **I recognize that I have embarked on a career requiring “lifelong learning.”** To meet this obligation I must stay abreast of the latest developments in my specialized field through reading the literature, regular attendance at relevant seminar series, and attendance at scientific meetings.
- **I will actively seek opportunities outside the laboratory (e.g. professional development seminars and workshops in oral communication, scientific writing, and teaching) to develop the full set of professional skills necessary to be successful for my chosen career.**
- **At the end of my appointment, in accordance with institutional policy, I will leave behind all original notebooks, computerized files, and tangible research materials so that other individuals can carry on related research. I will also work with my mentor to submit the research results for publication in a timely manner.** I can make copies of my notebooks and computerized files, and have access to tangible research materials which I helped to generate during my postdoctoral appointment according to institutional policy.



## Commitments of Mentors

- I acknowledge that the postdoctoral period is a time of advanced training intended to develop the skills needed to promote the career of the postdoctoral appointee.
- I will ensure that a mutually agreed upon set of expectations and goals are in place at the outset of the postdoctoral training period, and I will work with the postdoctoral appointee to create an individual career development plan.
- I will strive to maintain a relationship with the postdoctoral appointee that is based on trust and mutual respect. I acknowledge that open communication and periodic formal performance reviews, conducted at least annually, will help ensure that the expectations of both parties are met.
- I will promote all ethical standards for conducting research including compliance with all institutional and federal regulations as they relate to responsible conduct in research, privacy and human subjects research, animal care and use, laboratory safety, and use of radioisotopes. I will clearly define expectations for conduct of research in my lab and make myself available to discuss ethical concerns as they arise.
- I will ensure that the postdoctoral appointee has sufficient opportunities to acquire the skills necessary to become an expert in an agreed upon area of investigation.
- I will provide the appointee with the required guidance and mentoring, and will seek the assistance of other faculty and departmental/institutional resources when necessary. Although I am expected to provide guidance and education in technical areas, I recognize that I must also educate the postdoctoral appointee by example and by providing access to formal opportunities/programs in complementary areas necessary for a successful career.
- I will provide a training environment that is suited to the individual needs of the postdoctoral appointee in order to ensure his/her personal and professional growth. I will encourage a progressive increase in the level of responsibility and independence to facilitate the transition to a fully independent career.
- I will encourage the interaction of the postdoctoral appointee with fellow scientists both intra- and extramurally and encourage the appointee's attendance at professional meetings to network and present research findings.
- I will ensure that the research performed by a postdoctoral appointee is submitted for publication in a timely manner and that she/he receives appropriate credit for the work she/he performs. I will acknowledge her/his contribution to the development of any intellectual property and will clearly define future access to tangible research materials according to institutional policy.

- **I recognize that there are multiple career options available for a postdoctoral appointee and will provide assistance in exploring appropriate options.** I recognize that not all postdoctoral appointees will become academic faculty. To prepare a postdoctoral appointee for other career paths, I will direct her/him to the resources that explore non-academic careers, and discuss these options.
- **I will commit to being a supportive colleague to postdoctoral appointees as they transition the next stage of their career and to the extent possible, throughout their professional life.** I recognize that the role of a mentor continues after the formal training period.

*This compact serves both as a pledge and a reminder to mentors and their postdoctoral appointees that their conduct in fulfilling their commitments to one another should reflect the highest professional standards and mutual respect.*

# Mentor/Mentee Relationship

## *Mentorship Agreement*

**1. Check the topics you will address in mentoring sessions.**

- |                                        |                                             |
|----------------------------------------|---------------------------------------------|
| <input type="checkbox"/> Teaching      | <input type="checkbox"/> Additional Mentors |
| <input type="checkbox"/> Research      | <input type="checkbox"/> Self Development   |
| <input type="checkbox"/> Clinical Care | <input type="checkbox"/> Networking         |
| <input type="checkbox"/> Service       | <input type="checkbox"/> Work/Life Balance  |

**2. Check the frequency of meetings for this year.**

- |                                  |                                     |                                      |
|----------------------------------|-------------------------------------|--------------------------------------|
| <input type="checkbox"/> Weekly  | <input type="checkbox"/> Bi-monthly | <input type="checkbox"/> Other _____ |
| <input type="checkbox"/> Monthly | <input type="checkbox"/> Quarterly  |                                      |

The Administrative Assistant responsible for scheduling meeting is: \_\_\_\_\_

The Administrative Assistant phone number is: \_\_\_\_\_

**3. Information provided by mentee prior to each meeting.**

- ☐ None
- ☐ Updated CV (with highlight of new additions)
- ☐ Narrative of each topic to be discussed
- ☐ Mentoring Worksheet
- ☐ Other

**4. Please review, discuss, edit and check the expectations for this mentoring relationship**

**Responsibilities of Mentor:**

- ☐ Provide assessment and feedback regarding accomplishments in each topic area and help plan "next steps"
- ☐ Emotional Support
- ☐ Advocacy
- ☐ Actively address any problems with mentorship relationship
- ☐ Help set priorities to achieve academic advancement
- ☐ Encourage creativity and broader thinking
- ☐ Other (please specify) \_\_\_\_\_

**Responsibilities of Mentee:**

- ☐ Understand the academic series; review career with Department Chair annually and with the Associate Dean of Academic Personnel when needed
- ☐ Provide goals and updates
- ☐ Actively address any problems with mentorship relationship
- ☐ Other (please specify) \_\_\_\_\_

**5. If mentorship relationship not working, we will discuss with Departmental Director of Faculty Development and seek guidance and resolution.**

6. Mentor, Signature: \_\_\_\_\_ Mentee, Signature: \_\_\_\_\_

Date: \_\_\_\_\_ Date: \_\_\_\_\_

\*Accessed from UC Davis Health System:

[www.ucdmc.ucdavis.edu/mentoring/pdfs/MentorMenteeAgreement.pdf](http://www.ucdmc.ucdavis.edu/mentoring/pdfs/MentorMenteeAgreement.pdf)





## ***Detailed Agreement***

### **Center for Translational Science Activities**

### ***Expectations for the CTSA Scholar Mentoring Relationship***

**Objectives:** This agreement is intended to assist the scholar and mentor to: 1) explicitly define their goals and specific expectations with respect to their mentoring relationship; 2) ensure alignment of their expectations in order to achieve each other's goals. This agreement is a follow-up to the "Initial Agreement" submitted by the scholar and the primary mentor with the scholar's program application and will assist with more specific definition of the goals and expectations of the scholar and their primary and secondary mentors (if applicable) for their mentoring relationships. These agreements augment (but do not replace) the scholar's career development plan and the mentor's letter of support.

**Instructions:** The scholar, and each of his/her primary and secondary mentors (if applicable), should discuss their goals for the mentoring relationship and review the expectations listed in the "Initial Agreement" between the scholar and the primary mentor that accompanied the scholar's application. The scholar and each mentor should discuss and agree upon their expectations for the mentoring relationship. Specific expectations, especially for the upcoming year, should be described in this "Detailed Agreement." Separate Detailed Agreements should be formulated between the scholar and each of the mentors, although agreements may cross-reference each other. Signed copies of this document, signifying agreement, should accompany submission of the research proposal. These agreements will be reviewed and updated at least once a year.

### **Goals of the Scholar**

### **Goals of the Primary/Secondary Mentor**

|                                                                                                                   |                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Print Name:                                                                                                       | Print Name:                                                                                                       |
| Describe your short- and long-term goals in this relationship. Relate your goals to your career development plan. | Describe your short- and long-term goals in this relationship. Relate your goals to your career development plan. |

## Expectations for the Scholar Research

Describe your specific expectation for this relationship, especially for the upcoming year. Focus on the following:

- Major research milestones, including protocol development and approval, presentations, manuscripts, and grant submissions;
- Support you will need to conduct your research, including protected time and funds for research expenditures and the sources of this support;
- Interactions with your mentor and your research team (including other mentors and co-investigators), including the nature and frequency of meetings.

## Expectations for the Mentor Research

Describe your specific expectations for this relationship, especially for the upcoming year. Focus on the following:

- Major research milestones for the scholar, including protocol development and approval, presentations, manuscripts, and grant submissions;
- Support the scholar will need to conduct his/her research, including protected time and funds for research expenditures and the sources of this support, including the support you will provide;
- Interactions with the scholar and the research team (including other mentors and co-investigators), including the nature and frequency of meetings.

## Education/Training

Describe the additional education and training you need for your career, focusing on that which will occur outside of coursework offered through the CTSA (refer to your career development plan, as needed).

## Education/Training

Describe how you will assist the scholar to obtain the additional education and training, particularly that which will occur outside of coursework offered through the CTSA. (Note: you may also identify others, such as another mentor, who will play a major role in assisting the scholar with additional education and training.)

### Academic Skills

Describe the academic skills you need to develop (e.g., critical thinking, writing grants and manuscripts, oral presentation, leadership, teaching, mentoring).

### Academic Skills

Describe how you will assist the scholar to develop his/her academic skills (e.g., critical thinking, writing grants and manuscripts, oral presentation, leadership, teaching, mentoring). (Note: you may also identify others, such as another mentor, who will play a major role in assisting the scholar with the development of specific academic skills.)

### Career Development

Describe what you need to do to advance your career (e.g., work toward independence, obtain a faculty position, be promoted academically, be named to positions on key committees or groups, network with other researchers inside and outside the institution).

### Career Development

Describe how you will assist the scholar to advance his/her career. (Note: you may also identify others, such as another mentor, who will play a major role in assisting the scholar with specific aspects of career advancement.)

### Personal Conduct

Describe any factors that may affect interpersonal interactions with your mentor and how you plan to manage them. (Note: it is appropriate to acknowledge differences in gender, race/ethnicity, culture, personality, or style that may need to be managed actively.)

### Personal Conduct

Describe any factors that may affect interpersonal interactions with the scholar and how you plan to manage them. (Note: it is appropriate to acknowledge differences in gender, race/ethnicity, culture, personality, or style that may need to be managed actively.)

**Signature** \_\_\_\_\_

**Signature** \_\_\_\_\_

**Date** \_\_\_\_\_

**Date** \_\_\_\_\_





**University of Alabama-Birmingham (UAB)**  
**CENTER FOR CLINICAL AND TRANSLATIONAL SCIENCE**  
**MENTORED CAREER DEVELOPMENT PROGRAM (CCTS KL2)**  
**Mentoring Contract**

This contract is between the KL2 Scholar (mentee) and his/her mentors. It is to be thoroughly reviewed and completed prior to the Selection Interview. Before completing the contract, the mentee should make at least four copies of the document. The mentee and each mentor must complete the form individually, and then jointly review and discuss each person's answers in order to reach an agreement. The mentee must re-write the agreed upon answers before the contract is signed and dated by him/her and each mentor. The mentee is responsible for keeping the contract and reviewing/updating it as necessary. The first joint review should occur one month after the initial meeting to check-up and agree to any needed changes.

1. What type of assistance does the mentee want from the mentor?
2. What expectations do the mentors have of the mentee?
3. What expectations does the mentee have of the mentors?
4. How often will you meet?
5. When and where will you meet?
6. For how long?
7. Who will be responsible for scheduling the meetings?
8. What will meeting topics include?
9. What will be the ground rules for discussions? (e.g., confidentiality, openness, candor, truthfulness, etc.)
10. If problems arise, how will they be resolved?
11. Any concerns the mentee wants discussed and resolved?
12. Any concerns the mentors want discussed and resolved?

13. How will you know when the mentoring relationship has served its purpose and needs to be terminated?

14. We have agreed that our initial meetings will focus on these three topics:

a. \_\_\_\_\_

b. \_\_\_\_\_

c. \_\_\_\_\_

15. Any additional areas/issues you want to discuss and agree to?

\_\_\_\_\_  
Mentee Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mentor Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Mentor Signature

\_\_\_\_\_  
Date

Hook, Edward W III and Wrenn, Audrey. *UAB Center for Clinical and Translational Science Mentoring Contract*. (<http://www.uab.edu/ccts/TrainingAcademy/Pages/Mentoring.aspx>)

## **Additional Activities (if time allows):**

### **Objective 1; Activity #4:**

Have mentors create a list of the things they believe their mentees expect from them and then discuss how they can determine if these expectations are reasonable and how well they are meeting them. You may want to record the ideas generated in this discussion on a white board or flip chart.

### **Objective 2; Activity #5:**

Mentors discuss how to elicit their mentees' learning goals and incorporate those into individualized compacts. (See comment about Individual Development Plans and learning contracts on pages 51-52 and examples pages 145-153). You may want to record the ideas generated in this discussion on a white board or flip chart.

- NOTE: You may want to suggest that mentor focus on only one level of mentee (i.e. undergraduate, graduate student or post-doc) when doing this activity.

### **Objective 3; Activity #6:**

Have mentors develop strategies to identify their own expectations, those of their mentee, and align the two. You may want to record the ideas generated in this discussion on a white board or flip chart.

### **Objective 4; Activity #7:**

Have mentors discuss the challenges that mentees may face when working with multiple mentors and then brainstorm solutions to these challenges. You may want to record the ideas generated in this discussion on a white board or flip chart.



## **Assessing Understanding**



# **Assessing Understanding**

## **Introduction**

Determining if someone understands the content and process of their discipline is not easy, yet critical in a productive mentoring relationship. Developing strategies to assess understanding, especially of core research concepts, is an important part of becoming an effective mentor. Moreover, it is important for mentors to be able to identify the causes for a lack of understanding and strategies to address such misunderstandings.

## **Learning Objectives**

Mentors will have the knowledge and skills to:

1. Assess their mentees' understanding of core concepts and processes
2. Identify various reasons for a lack of understanding, including expert/novice differences
3. Use multiple strategies to enhance mentee understanding across diverse disciplinary perspectives

**Overview of Activities for the Understanding Session:** Please note that a core activity is listed for each learning objective. We strongly encourage you to engage the mentors in your group in this activity. There is a list of additional activities that can be used if there is extra time in the session or the core activity is not working well for your group.

|   | Learning Objectives                                                                              | Core Activities                                                                                                               | Additional Activities                                                                                                                               |
|---|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Assess their mentees' understanding of core concepts and processes                               | Mentors read and discuss Case #1: <i>I Thought He Knew These Things</i> and Case #2: <i>Should I Know That?</i> (Activity #1) | Mentors generate a list of strategies for assessing understanding in face-to-face meetings, over email, through written reports, etc. (Activity #4) |
| 2 | Identify various reasons for a lack of understanding, including expert-novice differences        | Mentors brainstorm reasons behind a lack of understanding (Activity #2)                                                       | Mentors read an excerpt from an expert-novice study and discuss the implications for understanding (Activity #5)                                    |
| 3 | Use multiple strategies to enhance mentee understanding across diverse disciplinary perspectives | Mentors share strategies to enhance understanding (Activity #3)                                                               | Mentors practice one of the strategies generated in Activity #3 (Activity #6)                                                                       |

## Facilitation Guide

### Recommended Session on Assessing Understanding (40 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of introduction and learning objectives for *Assessing Understanding* (page 79)
  - Copies of *Understanding Case #1: I Thought He Knew These Things* and *Case #2: Should I Know That?* (page 83)

#### ❖ Overview (5 min)

- TELL: Review the introduction and learning objectives for the session. Be clear that this session is about assessing a mentee's understanding of research concepts and processes. While understanding other factors that impact your mentor/ mentee relationships is important, keep the focus on research.

### Objectives 1 and 2: Assessing a mentee's understanding of core concepts and processes and identifying reasons for a lack of understanding (20 min)



➤ **ACTIVITY #1: Case Study**

- Distribute the *Understanding Case #1: I Thought He Knew These Things* and *Case #2: Should I Know That?* and let participants choose a case to read for two to three minutes.
- **DISCUSS** (12 min) with entire group. You may want to record the ideas generated in this discussion on a white board or flip chart. Use the guiding questions following the case study. Additional questions are listed below.
  1. How do you know if your mentee understands something?
  2. How can you help your mentees accurately assess their own understanding?
  3. How can you explain something in more detail without sounding condescending?
  4. How would you know if a scholar is in need of alternative communication modes to understand the research, i.e., written instructions to augment verbal? Is it the scholar's responsibility to let you know their needs in this area?
  5. How can you tell the difference between a miscommunication and a true lack of understanding?
  6. How do you decide if you are qualified to assess a mentee's understanding?
  7. In cases in which there are multiple mentors, how do you assess how other mentors are monitoring a mentee's understanding? How is this affected if the mentor is from another institution or a nonacademic mentor?

➤ **ACTIVITY #2: Follow-up Discussion (5 min)**

- **DISCUSS** the questions below with entire group. You may want to record the ideas generated in this discussion on a white board or flip chart.
  1. What reasons can you think of that would explain a mentee having difficulty understanding?
  2. We all unconsciously make assumptions about ability and level of understanding on the basis of other cues and factors such as race, ethnicity, gender, English fluency, prior experience and background, the types of questions someone asks, etc. How can you acknowledge those assumptions and remain open-minded?
- **NOTE:** Some of the reasons that may arise include differing backgrounds, (e.g., clinical expertise versus research training), different modes of communication, misunderstandings regarding the level of understanding that is expected, cultural differences, disciplinary differences, etc.
- **NOTE:** You may want to ask mentors to consider the differences between the perspectives of a novice and an expert. As an expert, there are many steps in an explanation that you may leave out because they are second nature, or because it is hard to remember what it was like to be a novice. For example, when you see a master chef cooking, it looks easy; however, when you try the same recipe yourself, you realize that many steps have been left out of the explanation. See included summary on pages 85-87 for more information.

❖ **Objective 3: Use multiple strategies to enhance mentee understanding across diverse disciplinary perspectives (15 min)**

➤ **ACTIVITY #3: Identifying Strategies to Enhance Understanding (15 min)**

- **ASK:** Ask mentors to share one strategy they use to promote understanding. You may want to record the ideas generated in this discussion on a white board or flip chart. aspects of a mentee's research program, such as when you are a secondary mentor.
- **NOTE:** Strategies you can add to the list include:
  1. Taking a minute to consider any assumptions made about what mentees know or do not know.

2. Taking time to remember what it was like to not understand something before I became an expert.
  3. Writing out an explanation and asking one of my peers from outside the discipline to identify all of the terms they do not understand.
  4. Asking my mentees to explain something back to me so I can assess potential gaps in their knowledge and suggest areas in which their understanding could be enhanced.
  5. Asking my mentee to explain something to another scholar or trainee.
  6. Asking my mentee to organize information with a flowchart, diagram, or concept-map.
  7. Asking my mentee to come up with an analogy from their own work that relates to our research.
- NOTE: How do you know when you are qualified to assess a mentee's understanding?
    1. Be sure to include a discussion about what to do if you are not an expert in all aspects of a mentee's research program, such as when you are a secondary mentor.

## *Assessing Understanding*

### **Case #1: *I Thought He Knew These Things***

You are mentoring Dr. Johnson, a primary care physician who is in the second year of a fellowship training program in community health. He is designing a study to investigate the prevalence and health impact of adolescent obesity in the low income, multi-cultural urban community served by the clinic where he recently began seeing patients. Dr. Johnson has been drafting an interview protocol for both parents and teens to better understand the role of family stress on food consumption and physical activity. In reviewing the protocols with Dr. Johnson, it becomes apparent that the protocol has not been written to accommodate participants who may not be fluent in English. Moreover, the overall project design seems unrealistic in terms of the number of participants Dr. Johnson can recruit. You realize that although Dr. Johnson genuinely wants to help underserved communities, you assumed that his previous completion of research methods coursework had adequately prepared him to understand the unique needs of this community population.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now?
3. How can mentors balance promoting independence with confirming understanding?

### **Case #2: *Should I Know That?***

Dr. Saldaña, MD, PhD, is a new assistant professor in Population Health with a focus on treatment of children with asthma. He recently made contacts within the local Hmong community who would like to work with him to improve treatment adherence in Hmong children with asthma. Dr. Saldaña is very excited about this potential partnership and wants to apply for an NIH Career Development Award to pursue a community-based participatory research (CBPR) project. He approaches Dr. Hunter, a senior member of his department and asthma expert who has studied treatment adherence, as a potential mentor on the award. However, Dr. Hunter is very reluctant to accept, letting Dr. Saldaña know that she has no experience with CBPR and doesn't know whether she could adequately guide him. Dr. Saldaña assures her that this experience is not necessary because he has identified a mentor in another university with CBPR expertise who can fill that role. He further points out that there is no one in the department who has this expertise and reminds her that his community contacts will be able to help guide and mentor him in this area. Dr. Hunter is still uncertain how well she can assess his study design and progress and wonders how well this other mentor can fill that role at a distance. She is also feeling uncomfortable because she has no experience treating Hmong asthma patients.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What types of guidance could Dr. Hunter have offered even though she was not a CBPR investigator? What should Dr. Hunter's next steps be? Where could she send Dr. Saldaña for help?
3. What can mentors do to improve their ability to work with mentees whose professional background and research do not fully match their own?

## **Additional Activities (if time allows):**

### **Objective 1; Activity #4**

Have mentors generate a list of strategies that can be used to assess their mentee's understanding. Ask mentors to consider strategies that can be used in face-to-face meetings, over email, through written reports, etc. You may want to record the ideas generated in this discussion on a white board or flip chart.

### **Objective 2; Activity #5**

Have mentors read a summary of how people learn, paying particular attention to the results from expert-novice studies (Mestre, Jose, 2008. Brief Summary and Implications for Teaching from "How People Learn: Brain, Mind, Experience, and School."<sup>3</sup>) (pages 85-87). Have mentors discuss how they could better help their mentee understand one aspect of their research if they considered it from a novice point of view.

### **Objective 3; Activity #6**

Have mentors get in pairs or small groups to practice one of the strategies generated in Activity #3. One option could be having them write out, or verbally describe their research topic or study design and then ask one of the mentors from a different discipline to identify all of the terms he/she does not understand. They could also incorporate strategies from the handout from the *Maintaining Effective Communication* session, such as reflective listening, paraphrasing, and summarizing (see pages 43-45).

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<sup>3</sup> National Research Council. 1999a. How People Learn: Brain, Mind Experience, and School. Commission on Behavioral and Social Sciences and Education, National Academies Press.

## **How People Learn: Brain, Mind, Experience, and School**

### **Brief Summary & Implications for Teaching**

#### **Developing Expertise**

Experts have acquired extensive knowledge that affects what they notice and how they organize, represent, and interpret information.

#### **Key Findings:**

Experts have a great deal of content knowledge that is highly organized; this organization reflects a deep understanding of the subject matter, and allows them to retrieve information quickly with relatively little attentional effort.

- Experts' knowledge is linked to contexts for applying that knowledge.
- Experts notice features and meaningful patterns that are not noticed by novices.
- Expertise in one domain does not transfer to other domains, e.g., being a chess master does not mean the master is good at solving crossword puzzles or complex math problems.
- Even experts have varying degrees of flexibility in applying their knowledge in new situations.

#### **Implications for Teaching:**

- Being an expert on a topic does not imply ability to instruct others effectively on the topic.
- Equally important to teaching the content of a discipline (facts, definitions, and concepts) is helping trainees organize this knowledge and apply it flexibly across many contexts.

#### **Transferring Knowledge Flexibly Across Different Contexts**

Ability to transfer knowledge learned in one context to another context is non-trivial.

#### **Key Findings:**

- Skills and knowledge must be extended beyond the narrow contexts in which they are initially learned.
- Learning should be linked to conditions of applicability, i.e., learning *what* should be linked to learning *when* the *what* can be applied.
- All new learning depends on previous learning. Students come to the classroom with preconceptions, and if their preconceptions are not engaged, students may fail to grasp new concepts and information that are being taught. Engaging in this context means identifying preconceptions, and, when preconceptions are misconceptions, actively helping students construct appropriate understanding based on scientific principles.

- Learning by rote rarely transfers; learning in the context of tying material to underlying principles is more effective.
- The more you know about a topic the easier it is to learn more about that topic.

### **Implications for Teaching:**

- Help students identify appropriate contexts and conditions for application of different concepts and strategies.
- Probe often for students' preconceptions during instruction. When misconceptions that interfere with understanding scientific concepts are identified, engage the student to help her or him reconstruct appropriate understanding. Providing the right answer does not suffice in helping students overcome misconceptions.
- Link all teaching and learning to major concepts or principles in the discipline.

### **Designing Learning Environments**

The design of learning environments is linked to issues that are important in the processes of learning, transfer, and competent performance. Those processes, in turn, are affected by the degree to which learning environments are *learner centered*, *knowledge centered*, *assessment centered*, and *community centered*.

#### **Learner Centered:**

- Learners use their current knowledge to construct new knowledge. Thus, what they know or believe at the moment affects how they interpret new information; sometimes learners' current knowledge hampers new learning, sometimes it supports learning. Effective instruction must take into account what learners bring to the classroom. Active engagement in learning supports the construction of knowledge.
- Learners should be assisted in developing *metacognitive* strategies. Metacognition refers to people's abilities to monitor their own level of understanding and decide when it is not adequate. Transfer can be improved by helping students become more aware of themselves as learners who actively monitor their learning and performance strategies.
- Learners learn more efficiently and effectively when they are provided with feedback to help them monitor progress. *Deliberate practice* refers to engagement in educational activities that include active monitoring of one's learning. For example, when left on their own to do homework in the physical sciences, students often practice the wrong habits (e.g., equation finding and manipulating), thereby reinforcing such habits. Instead, students need to be given opportunities to practice skilled problem solving and provided with both feedback and support to ensure progress.

#### **Knowledge Centered:**

- Instruction should begin with students' current knowledge and skills, rather than assuming students are blank slates ready to absorb knowledge. Emphasis on how knowledge is organized will help to promote this goal.
- Instruction should help students organize knowledge in ways that are efficient for recall and for application in solving problems.
- Instruction should focus on helping students gain deep understanding of the major concepts and principles, rather than acquisition of disconnected facts and skills.

#### **Assessment Centered:**

- Formative assessment (assessment done during the course of instruction to monitor students' progress and to help shape instruction) is pivotal for providing feedback to students so that they can revise and improve the quality of their thinking. This should be done continuously, but not intrusively, as a part of instruction.
- Formative assessment strategies should be developed that make students' thinking visible to the instructor, the learner, and other classmates.
- Summative assessments (assessment done at the end of instruction for such purposes as assigning grades or evaluating competence) should reflect the knowledge, concepts, principles, and problem solving & lab skills of the discipline considered crucial by experts.
- Students should learn how to assess their own work and that of peers.

#### **Community Centered:**

- Learners are embedded in social contexts. If they are going to make effective use of their prior knowledge, they need to be encouraged to relate the origins of their learning to school-based concepts.
- Students spend only 14% of their time in school, but 53% of their waking hours out of school. It is important to help students see the relevance of their school-based learning to non-school contexts and problem solving.
- Communities of practice need to be encouraged. Local leaders and practitioners can facilitate community-centered learning through internships, class participation, and site visits to illustrate learning and problem solving in the workplace.

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## **Addressing Equity and Inclusion**



## **Addressing Equity and Inclusion**

### **Introduction**

Diversity, along a range of dimensions, 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 an effective mentoring relationship, as well as a vibrant learning environment.

In the last session, your group discussed the importance of assessing mentees' understanding and how to best facilitate their learning. In this session, mentors will expand upon this by considering how to foster an equitable and inclusive environment where everyone can do their best learning and create the highest quality of research, both because of and in spite of their diverse perspectives.

### **Learning Objectives**

Mentors will have the knowledge and skills to:

1. Improve and expand understanding of equity and inclusion and how diversity influences mentor-mentee interactions
2. Recognize the potential impact of conscious and unconscious assumptions, preconceptions, biases, and prejudices on the mentor-mentee relationship and reflect on how to manage them
3. Identify concrete strategies for learning about, recognizing, and addressing issues of equity and inclusion in order to engage in conversations about diversity with mentees and foster a sense of belonging

**Overview of Activities for the Equity and Inclusion Session:** Please note that a core activity is listed for each learning objective. We encourage you to engage the mentors in your group in this activity. There is a list of additional activities that can be used if there is extra time in the session or the core activity is not working well for your group.

|   | Learning Objectives                                                                                                                                                                                                | Core Activities                                                                                                                                                                                                                   | Additional Activities                                                                                     |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 1 | Improve and expand understanding of equity and inclusion, and how diversity influences mentor-mentee interactions                                                                                                  | Mentors consider the many ways they are and can be different from their mentees and how these differences affect the mentoring experience for both (Activity #1)                                                                  | Mentors reflect and share an experience in which they felt like an outsider (Activity #5)                 |
| 2 | Recognize the potential impact that conscious and unconscious assumptions, preconceptions, biases, and prejudices bring to the mentor-mentee relationship and reflect on how to manage them                        | Mentors reflect on their own unconscious assumptions (Activity #2)<br>Mentors read the results of diversity studies, discuss implications, and brainstorm strategies for reducing bias (Activity #3)                              | Mentors explore their own biases using an implicit assumptions test and discuss the results (Activity #6) |
| 3 | Identify concrete strategies for learning about, recognizing, and addressing issues of equity and inclusion in order to engage in conversations about diversity with their mentees and foster a sense of belonging | Mentors break into two or three groups and read one of three case studies ( <i>Is it Okay to Ask?</i> , <i>Communication Challenges</i> , or <i>You Can't Do That</i> ), then discuss reactions with the full group (Activity #4) | Mentors read and discuss Case #4: <i>Cultural Sensitivity</i> (Activity #7)                               |

## Facilitation Guide

### Recommended Session on Addressing Equity and Inclusion (60 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard or flip chart
- Handouts:
  - Copies of introduction and learning objectives for *Addressing Equity and Inclusion* (page 91)
  - Copies of the *Diversity Study Results* Handout (pages 97-98)
  - Copies of *Equity and Inclusion* case studies (*Is It Okay to Ask?*, *Communication Challenges*, and *You Can't Do That*) (pages 99-100 ) and the additional case if desired (*Cultural Sensitivity*) (page 101)
  - Copies of the reading “*Benefits and Challenges of Diversity*” (pages 103-115)

❖ **Introduction (5 min)**

- REFLECTION: Ask mentors to write down any new mentoring activities they have engaged in since the last session. If none, they should write down something they are thinking about regarding their mentoring relationship based on the previous session.
- TELL: Review the introduction and learning objectives for the session.
- TELL: Discussions around equity and inclusion can easily exceed the time allotted. If that occurs, the group can decide to forego some of the suggested activities.

❖ **Objective 1: Improve and expand understanding of equity and inclusion, and how diversity influences mentor-mentee interactions (10 min)**

- ACTIVITY #1: Reflecting on diversity (10 min)
  - TELL: Acknowledge that in this society, it is engrained in our subconscious to first think of diversity in terms of race and ethnicity, but remember that it is broader than that. For example, consider the impact of learning and physical disabilities, gender, age/generation, professional experience, sexual orientation, class, religion, and differences in communication, learning, and work styles. Think about the list we generated in the introductory session. Do you have any additions to that list? (If your group did an alternative activity in the introductory session and did not generate a list, you can have them do so now. See page 29).
  - NOTE: Leave this list displayed throughout the session and tell mentors that they can add to it as you move through the other activities. As you add items, you may discuss how these differences impact their mentoring relationships and how they can be capitalized upon to create high quality innovative research as time allows.
  - DISCUSS: How do these differences impact their mentoring relationships and how can they be capitalized on to create high quality innovative research? They may consider the concept of cognitive diversity, or diversity of thought, and how knowledge they've gained from other life experiences has influenced and enriched their thinking as a researcher. List the ideas generated in this discussion on a white board or flip chart.
  - DISCUSS: How do these differences pose challenges to effective mentoring? They may consider how differences in their mentee's beliefs, work ethic and cognitive ability may present challenges. Also, how does one effectively mentor an entire research team comprised of individuals who are different from one another? How does one develop in their research team members an appreciation for (or at least tolerance of and respect for) differences among individuals on the team?

❖ **Objective 2: Recognize the potential impact that conscious and unconscious assumptions, preconceptions, biases and prejudices bring to the mentor-mentee relationship and reflect on how to manage them (25 min)**

- ACTIVITY #2: Reflect on Unconscious Assumptions
  - TELL: Think about some of your assumptions when you entered the room on the first day of this training—that there would be electricity, a table, a bathroom etc. Let's think about some of the assumptions we make about the people we work with.
  - TELL: Read each word on the list below and ask mentors to focus on the first image that comes to their mind and quickly jot down three words that describe the person they pictured. Pacing is important; only leave about five seconds between each item on the list so that they are focused on the first image that comes to mind.
    1. Cook
    2. Pilot

3. Mountain Climber
  4. Caretaker
  5. Politician
  6. Clinical Researcher
  7. Health Services Researcher
- DISCUSS (10 min) with entire group: Have mentors share some of the words they noted about each prompt, with special attention given to the clinical researcher and health services researcher. For example, did their images include mention of gender, race, body shape and size, or age? Was there some uniformity in their images?
  - TELL: Remind mentors that we all carry these unconscious assumptions and they need not be a source for guilt or embarrassment. We discuss them as a means of raising awareness so we can minimize their impact on our behavior. The following studies highlight how enculturation affects us all and how it may impact the mentoring relationship.
- **ACTIVITY #3: Implications of Diversity Research (15 min)**
- Distribute the *Diversity Study Results* Handout (pages 97-98) and let participants read it individually for two to three minutes.
    - NOTE: Many of these studies are summarized in “Benefits and Challenges of Diversity,” (pages 103-115).
  - DISCUSS (5 min) in pairs, your reaction to one of the studies and the implications for your mentoring practice
  - DISCUSS (7 min) with entire group: You may want to record the ideas generated in this discussion on a white board or flip chart. Guide the discussion using the following questions:
    1. What were your initial reactions to the studies?
    2. Which study captured your attention? Why?
    3. What implications do these study results have for your mentoring practice?
    4. What are two to three practical things you could do to minimize the impact of bias, prejudice, and stereotype in your mentoring relationship?
- ❖ **Objective 3: Identify concrete strategies for learning about, recognizing and addressing issues of equity and inclusion, in order to engage in conversations about diversity with their mentees and foster a sense of belonging (20 min)**
- **ACTIVITY #4: Case Studies**
- Distribute the three *Equity and Inclusion* case studies (*Is It OK to Ask?*, *Communication Challenges*, and *You Can't Do That*) and give participants a couple of minutes to review them and choose which one they would like to discuss in a small group so that there are two or three groups.
  - TELL (8 min): Discuss in the small groups one of the case studies.
  - DISCUSS (10 min) with the entire group. You may want to record the ideas generated in this discussion on a white board or flip chart.
  - NOTE: In some groups, mentors can be fairly quiet and reluctant to speak first in this discussion, but just give them a few minutes. Once mentors get going with the discussion, it is often rich and engaging. Allowing mentors to choose which case they would like to discuss should help. Be sensitive to the fact that some minority mentors often get tapped as the token “spokesperson” on issues of diversity.

- NOTE: In some groups, mentors can be fairly quiet and reluctant to speak at first in this discussion, but just give them a few minutes. Once mentors get going with the discussion, it is often rich and engaging. Allowing mentors to choose which case they would like to discuss should help. Be sensitive to the fact that minority mentors often get tapped as the token “spokesperson” on issues of diversity.
- There are a few guiding questions at the end of each case, *Is it Okay to Ask?*, or *You Can’t Do That*. Some additional questions include:
  1. As a mentor, would you feel comfortable asking a mentee about how their identity impacts their experiences? How do you decide when asking questions about these issues is appropriate or not?
  2. Specifically, how would you go about engaging someone in a discussion about their race, ethnicity, gender, disability, age, sexual orientation, background, or personal values? How do you engage in such conversations based on interest without feeling or expressing a sense of judgment about differences? How do you ask without raising issues of tokenism?
  3. Do you think everyone should be treated the same? Does treating everyone the same mean they are being treated equally?
  4. As a mentor, reflect on how diversity can be viewed as an asset to a mentor-mentee relationship. Reframe conversations with mentees in terms of how you can benefit and learn from experiences that differ from your own.
- Views of the impact of race, class, ethnicity, gender, disability, age, sexual orientation, background on the research experience vary widely. Remember that as a facilitator you are not expected to be an expert on the topic. Given that some facilitators have expressed less comfort mediating this session, we have included some possible responses to the cases below. Given the complexity of human relationships and the importance of situational contexts, these responses are of course by no means exhaustive or comprehensive.
  1. Possible general responses to all of the cases:
    - ◆ Race, gender, ethnicity, sexual orientation, and other aspects of diversity have nothing to do with a research experience because the experience should focus on research and not on personal characteristics.
    - ◆ Race, gender, ethnicity, sexual orientation, and other aspects of diversity have everything to do with a research experience and permeate every aspect of the experience, impacting perceptions, confidence, and motivation. Ignoring the impact of diversity sends a message that those aspects of a person have no role in one’s work, which may turn students off to science. The level of impact will vary across the relationship. At times it may be invisible. At other times, it may be the most important factor.
    - ◆ Individuals want to be assessed for their ability, independent of race, gender, etc. The trick is deciding how to balance acknowledging someone’s background and taking it into consideration when deciding how to work with that person, but not letting a person’s background bias your interaction with them.
    - ◆ Regular conversations with ALL mentees to check on how they are doing and whether they are happy in their overall environment are important. This will build relationships that allow mentees to be comfortable sharing concerns AND allow mentors to notice if there are issues surrounding race or other diverse personal characteristics that need to be addressed, or identify opportunities for growth.
  2. Possible responses to “Is It Okay to Ask”?

- ◆ There is no consensus on if and when it is — “OK to ask”. Some feel it is important to ask early, others feel it is never ok to ask, and others still feel there are special situations when it is necessary to ask.
  - ◆ It is not ok to ask. Some are tired of telling their story and feel that the question sometimes carries an implicit “explain yourself” or “justify yourself.”
  - ◆ Establishing a sufficiently personal relationship with ALL mentees allows mentors to better understand diversity-related issues from mentees without directly asking questions about their personal characteristics and background.
3. Possible responses to “Communication Challenges”
- ◆ The key issue is that the mentee’s difficulties with English impeded successful communication of her research. Thus, a mentor should focus on working with Dr. Hlavek (either directly or by referring her to local resources) to improve her oral presentation skills so as to minimize her accent, slow her speech patterns, etc.
  - ◆ The key issue is that Dr. Hlavek felt unfairly singled out in a public setting for her difference in appearance and language, and that possibly her credibility as a researcher was being questioned. This experience may have diminished her confidence, provoked feelings of isolation, or in other ways challenged Dr. Hlavek’s perceptions that she can become a successful and well-regarded scholar in her field. A mentor should not hesitate to engage in conversations with mentees about concerns such as these. The stress of having to acculturate, feeling isolated, and/or being singled out as different can be significant barriers to career success.
  - ◆ Both of these issues are important for a mentor to explore and work in partnership with the mentee to address.
4. Possible responses to “You Can’t Do That”
- ◆ Dr. Roust is assuming that Dr. Mandova’s research will be of no real value to them, that it is only anecdotal ‘soft science.’ He is not considering how it could provide context to the quantitative research.
  - ◆ Dr. Roust is being realistic when noting the time involved and the risk the mentee is taking in his career. He should further discuss these risks with the mentee, and allow him to make his own decision. The discussion should include a plan that will allow the mentee to meet deadlines with his fellowship project.
  - ◆ Dr. Roust is assuming that an Indo-Romanian speaking in accented English would not be well-received among a poor rural population, which could be primarily white. He could discuss his concerns with Dr. Biswas by providing some context for possible reactions he might get, while being careful not to stereotype the rural white population either. He should further refer him to someone, or have him seek out someone with experience in community engaged research. [He may also be assuming the rural population will be white, but he may know their racial composition since he has demographic data on the population.]
- FOLLOW-UP ACTIVITY: Encourage mentors to return to their compacts (if applicable) and make any changes based on their reflections on equity and inclusion.



## *Addressing Equity and Inclusion*

### **Activity #3: Diversity Study Results for Discussion**

Read the description of the study results and discuss your reaction and the implications for your mentoring practice. See the “Benefits and Challenges of Diversity” article in the guidebook for more details about these and other studies.

**Study 1:** Studies of hiring involve assigning a man’s name or woman’s name to the same application and randomly distributing the applications to a group of reviewers. The reviewers are more likely to hire the person if there is a man’s name on the application. The sex of the reviewer has no effect on the outcome. The result has not changed much over 40 years of doing the study (Steinpreis, Anders et al. 1999; Dovidio and Gaertner 2000; Moss-Racusin, Dovidio, et al. 2013).

**Study 2:** Many studies show that when reviewers are asked to review job performance based on a written description of the person’s accomplishments, they rate the performance higher if they told that they are reviewing a man. In one study the difference between ratings for men and women candidates was greater when the evaluator was busy or distracted. The sex of the reviewer was not significant (Martell and Leavitt 2002).

**Study 3:** A linguistic analysis of 300 letters of recommendation for successful candidates applying for (and ultimately being offered) faculty positions at a major medical school showed differences in language and content. Male candidates were referred to more often as “researchers” and “colleagues,” whereas women were referred to as “teachers” and “students.” There were 4X more references to women’s personal lives than to men’s and there were more “doubt raisers” in letters about women (Trix and Psenka 2003).

**Study 4:** An ecology journal initiated double blind review (authors’ names not revealed to reviewers, reviewers’ names not revealed to authors). During the 6-month period of the trial, the acceptance rate for papers first-authored by women increased significantly. There was no change in the frequency of acceptance of papers first-authored by women in a similar ecology journal during same period (Budden, Tregenza et al. 2008).

**Study 5:** Evaluators expressed less prejudice against African American candidates if they were instructed to avoid prejudice (Lowery, Hardin et al. 2001).

**Study 6:** When participants were shown images of admired black figures they associated negative words with black people less than those who were shown pictures of disliked black figures or not shown pictures at all (Blair, Ma et al. 2001; Dasgupta and Greenwald 2001).

**Study 7:** Subjects were told to select one of two rooms in which to watch a movie. In each situation there is a handicapped person sitting in one of the rooms. If both rooms are showing the same movie, the subjects were more likely to choose the room where the handicapped person is sitting. If the rooms are showing different movies, the subjects are more likely to choose the room where the handicapped person is not sitting. The result is the same independent of which movie is showing in the room with the handicapped person (Snyder 1979).

**Study 8:** One study examined differences over a ten-year period of whites' self-reported racial prejudice and their bias in selection decisions involving black and white candidates for employment. They report that self-reported prejudice was lower in 1998-9 than it was in 1988-9. At both time points, white participants did not discriminate against black candidates when their qualifications were clearly strong or weak, but they did discriminate when the qualifications were mixed or the decision ambiguous (Dovidio and Gaertner 2000).

**Study 9:** Stereotype threat is the anxiety people feel about confirming stereotypes of a group to which they belong. When stereotype threat is activated, usually by reminding a person of their race or sex, a person may identify with a negative stereotype and perform less well than without activation. MRI examination of the human brain shows that activating stereotype threat makes blood move from the cognitive centers to the affective centers of the brain (Krendl, Richeson et al. 2008).

**Study 10:** A wide range of studies show that racial and ethnic minorities tend to receive lower quality healthcare and are less likely to receive routine medical procedures than non-minorities patients, even when the issue of access to health-care is controlled (Smedley, Stith and Nelson, 2003).

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Many of these studies and others are summarized in: Fine and Handelsman (2005). "The Benefits and Challenges of Diversity" in *Entering Mentoring: A Seminar to Train a New Generation of Scientists*. Madison, WI: University of Wisconsin Press and Handelsman, Miller and Pfund (2005). "Diversity" in *Scientific Teaching*. New York: W.H. Freeman and Co. This activity was taken from the National Academies Summer Institute on Undergraduate Education in Biology (<http://www.academiessummerinstitute.org>, access June 2010)

## ***Addressing Equity and Inclusion***

### **Case #1: *Is it Okay to Ask?***

Last year I worked with a scholar who has since left to work at another institution. She was a great member of the team and generated a fair amount of data. I think that she had a positive experience working with our research team, but there are a few questions that 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 woman in our 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?
2. What might the mentor's intent have been in asking the question, and what might the impact be on the mentee?
3. How might you react to this case differently if the mentee was the only openly gay man in the department? How do you engage in such conversations based on interest without feeling or expressing a sense of judgment about differences? How do you ask without raising issues of tokenism? Can you generate questions or approaches to broaching this subject with the mentee?

*From Handelsman, J., Pfund, C., Miller Lauffer, S., and Pribbenow, C.M. 2005. Entering Mentoring: A Seminar to Train a New Generation of Scientists. Madison, WI: University of Wisconsin Press.*

### **Case #2: *Communication Challenges***

Dr. Hlavek recently joined the faculty as an assistant professor in the School of Public Health. She has an excellent training record and has had strong research mentoring in health services research. Although her knowledge of the science and research methodology is sound, she struggles with oral presentations as English is not her first language. Recently while giving an important presentation on her research at a professional meeting, someone in the audience commented that she needed to speak slower because he couldn't understand her. Dr. Hlavek was embarrassed and became very self-conscious. Her Slavic accent became more apparent and she started speaking even faster. She also wondered afterwards if her headscarf influenced the public criticism she received.

#### **Guiding Questions for Discussion:**

1. What are the main themes raised in this case study?
2. Dr. Hlavek calls you after this presentation. She is very upset about what transpired at the conference and shares her concerns about why she may have been singled out. As her mentor how do you advise her?
3. What are the challenges for a mentor when a mentee's second language skills present a barrier to effective communication of his/her research?

## *Addressing Equity and Inclusion*

### **Case #3: “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 descent, Dr. Biswas, who has an interest in the underlying sociocultural factors affecting the prevalence and treatment of Type 2 diabetes. It was agreed that Dr. Biswas 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.

However, Dr. Roust dismisses the feasibility of the idea almost immediately; he doesn’t understand how what he considers to be anecdotal historical data could be used in a convincing way: he is concerned how the added work will impact the current project effort and that it will be far too time consuming for Dr. Biswas to stay on track with his fellowship; he also doubts the NIH would be supportive of the endeavor. He lets Dr. Biswas know his feelings and tells him he can’t take such risks so early in his career, especially in a tight funding environment. He also wonders privately how well Dr. Biswas will be received by community members and how well equipped he is for this kind of research, especially given Biswas’s own limited cultural knowledge and language barrier.

### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. 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, and if so, how?
3. 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?

## **Additional Activities (if time allows):**

### **Objective 1; Activity #5:**

Ask mentors to think back to a time when they felt conspicuous as someone who did not fit in to a situation or setting. Ask: What was the situation, what did it feel like, and how did you react?

Alternatively, mentors could share an experience in which they could see that *someone else* felt like they did not belong or fit in. What kinds of differences make us feel like outsiders and what differences are irrelevant? Why?

- NOTE: Have each mentor share an experience. If a mentor cannot think of an experience to share, ask them to pass and then come back to them at the end of the activity. As a facilitator, you may need to encourage people to keep their comments relatively short so everyone has a chance to share. The time each person has to talk will depend on the size of the group.

### **Objective 2; Activity #6:**

At Project Implicit <https://implicit.harvard.edu/implicit/> mentors can find a number of tests that enable them to explore specific biases and assumptions, such as those about gender, disabilities, skin-tone, etc. These are not only informative, but fun and quick to take. These sites could be explored during the session if computers are available or could be distributed on a handout or via email and done outside of the session.

### **Objective 3; Activity #7:**

#### **Case #4: Cultural Sensitivity**

You just finished your master's degree in Public Health and a residency in Pediatrics. To further your research training, you join an established research team studying the impact of free clinics on public health in economically-depressed urban areas. Your project will be to examine the effect of a new, free pediatric clinic on children's health in an African-American community. There are many research questions you could ask, but your mentor insists you use the research questions used in his other studies, so he can compare the data across studies. Most of those previous studies were developed and used in Latino communities. After visiting the community you will study and noting several cultural differences, you believe that the questions should be revised for your study. Your mentor disagrees and tells you to use the standard questions.

#### **Guiding Questions for Discussion:**

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. What assumptions about the study population and the research is the mentor making? What might be the impact of those assumptions?



# Benefits and Challenges of Diversity\*

By Jo Handelsman and Eve Fine

The diversity of a university's faculty, staff, and students influences its strength, productivity, and intellectual personality. Diversity of experience, age, physical ability, religion, race, ethnicity, gender, and many other attributes contributes to the richness of the environment for teaching and research. We also need diversity in discipline, intellectual outlook, cognitive style, and personality to offer students the breadth of ideas that constitute a dynamic intellectual community.

A vast and growing body of research provides evidence that a diverse student body, faculty, and staff benefits our joint missions of teaching and research by increasing creativity, innovation, and problem solving. Yet diversity of faculty, staff, and students also brings challenges. Increasing diversity can lead to less cohesiveness, less effective communication, increased anxiety, and greater discomfort for many members of a community.<sup>1</sup> Learning to respect and appreciate each other's cultural and stylistic differences and becoming aware of unconscious assumptions and behaviors that may influence our interactions will enable us to minimize the challenges and derive maximum benefits from diversity.

This article summarizes research on the benefits and challenges of diversity and provides suggestions for realizing the benefits. Its goal is to help create a climate in which all individuals feel *personally safe, listened to, valued, and treated fairly and with respect*.<sup>2</sup>

It is time to renew the promise of American higher education in advancing social progress, end America's discomfort with race and social difference, and deal directly with many of the issues of inequality present in everyday life.

Sylvia Hurtado

## Benefits for Teaching and Research

Research shows that diverse working groups are more productive, creative, and innovative than homogeneous groups, and suggests that developing a diverse faculty will enhance teaching and research.<sup>3</sup> Here are some of the findings.

- A controlled experimental study of performance during a brainstorming session compared ideas generated by ethnically diverse groups composed of Asians, blacks, whites, and Latinos to those generated by ethnically homogenous groups composed of whites only. Evaluators who were unaware of the source of the ideas found no significant difference in the number of ideas generated by the two types of groups. However, when applying measures of feasibility and effectiveness, they rated the ideas generated by diverse groups as being of higher quality.<sup>4</sup>

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\*From Handelsman, J., C. Pfund, S. Miller Lauffer, and C. M. Pribbenow (2005), *Entering Mentoring: A Seminar to Train a New Generation of Scientists*, Madison, WI: University of Wisconsin Press)

- The level of critical analysis of decisions and alternatives was higher in groups exposed to minority viewpoints than in groups that were not. Minority viewpoints stimulated discussion of multiple perspectives and previously unconsidered alternatives, whether or not the minority opinion was correct or ultimately prevailed.<sup>5</sup>
- A study of corporate innovation found that the most innovative companies deliberately established diverse work teams.<sup>6</sup>
- Data from the 1995 Faculty Survey conducted by UCLA's Higher Education Research Institute (HERI) demonstrated that scholars from minority groups have expanded and enriched scholarship and teaching in many academic disciplines by offering new perspectives and by raising new questions, challenges, and concerns.<sup>7</sup>
- Several investigators found that women and faculty of color more frequently employed active learning in the classroom, encouraged student input, and included perspectives of women and minorities in their coursework.<sup>8</sup>

### **Benefits for Students**

Numerous research studies have examined the impact of diversity on students and educational outcomes. Cumulatively, these studies provide extensive evidence that diversity has a positive impact on all students, minority and majority.<sup>9</sup> Here are some examples.

- A national longitudinal study of 25,000 undergraduates at 217 four-year colleges and universities showed that institutional policies fostering diversity of the campus community had positive effects on students' cognitive development, satisfaction with the college experience, and leadership abilities. These policies encouraged faculty to include themes relating to diversity in their research and teaching, and provided students with opportunities to confront racial and multicultural issues in the classroom and in extracurricular settings.<sup>10</sup>
- Two longitudinal studies, one conducted by HERI in 1985 and 1989 with over 11,000 students from 184 institutions and another in 1990 and 1994 with approximately 1,500 students at the University of Michigan, showed that students who interacted with racially and ethnically diverse peers both informally and within the classroom showed the greatest "engagement in active thinking, growth in intellectual engagement and motivation, and growth in intellectual and academic skills."<sup>11</sup> A more recent study of 9,000 students at 10 selective colleges reported that meaningful engagement rather than casual and superficial interactions led to greater benefit from interaction with racially diverse peers.<sup>12</sup>
- Data from the National Study of Student Learning indicated that both in-class and out-of-class interactions and involvement with diverse peers fostered critical thinking. This study also found a strong correlation between "the extent to which an institution's environment is perceived as racially nondiscriminatory" and students' willingness to accept both diversity and intellectual challenge.<sup>13</sup>
- A survey of 1,215 faculty members in departments granting doctoral degrees in computer science, chemistry, electrical engineering, microbiology, and physics showed that women faculty played important roles in fostering the education and success of women graduate students.<sup>14</sup>



## Challenges of Diversity

Despite the benefits that a diverse faculty, staff, and student body provide to a campus, diversity also presents considerable challenges that must be addressed and overcome. Here are some examples.

- Numerous studies have reported that women and minority faculty members are considerably less satisfied with many aspects of their jobs than are majority male faculty members. These aspects include teaching and committee assignments, involvement in decision making, professional relations with colleagues, promotion and tenure, salary inequities, and overall job satisfaction.<sup>15</sup>
- A study of minority faculty at universities and colleges in eight midwestern states showed that faculty of color experience exclusion, isolation, alienation, and racism in predominantly white universities.<sup>16</sup>
- Multiple studies demonstrate that minority students often feel isolated and unwelcome in predominantly white institutions and that many experience discrimination and differential treatment. Minority status can result from race, ethnicity, national origin, sexual orientation, disability, and other factors.<sup>17</sup>
- Women students, particularly when they are minorities in their classes, may experience unwelcoming climates that can include sexist use of language, presentation of stereotypic or disparaging views of women, differential treatment from professors, and/or sexual harassment.<sup>18</sup>
- When a negative stereotype relevant to their identity exists in a field of interest, women and members of minority groups often experience “stereotype threat”—the fear that they will confirm or be judged in accordance with the stereotype. Such stereotype threat exists both for entry into a new field and for individuals already excelling in a specific arena. Situations or behaviors that heighten awareness of one’s minority status can activate stereotype threat.<sup>19</sup> Research demonstrates that once activated, stereotype threat leads to stress and anxiety, which decreases memory capacity, impairs performance, and reduces aspirations and motivation.<sup>20</sup> Human brain imaging, which shows that activating stereotype threat causes blood to move from the cognitive to the affective centers of the brain, indicates how situational cues reduce cognitive abilities.<sup>21</sup>
- Research has demonstrated that a lack of previous positive experiences with “outgroup members” (minorities) causes “ingroup members” (majority members) to feel anxious about interactions with minorities. This anxiety can cause majority members to respond with hostility or to avoid interactions with minorities.<sup>22</sup>

## Influence of Unconscious Assumptions and Biases

Research studies show that people who have strong egalitarian values and believe that they are not biased may unconsciously behave in discriminatory ways.<sup>23</sup> A first step toward improving climate is to recognize that unconscious biases, attitudes, and other influences unrelated to the qualifications, contributions, behaviors, and personalities of our colleagues can influence our interactions, *even if we are committed to egalitarian views*. Although we all like to think that we are objective scholars who judge people on merit, the quality of their work, and the nature of their achievements, copious research shows that a lifetime of experience and cultural history shapes every one of us and our judgments of others.

*People confident in their own objectivity may  
overestimate their invulnerability to bias.*

Eric Uhlmann and Geoffrey Cohen

The results from controlled research studies demonstrate that people often hold unconscious, implicit assumptions that influence their judgments and interactions with others. Examples range from expectations or assumptions about physical or social characteristics associated with race, gender, age, and ethnicity to those associated with certain job descriptions, academic institutions, and fields of study. Let's start with some examples of common social assumptions or expectations.

- When shown photographs of people of the same height, evaluators overestimated the heights of male subjects and underestimated the heights of female subjects, even though a reference point, such as a doorway, was provided.<sup>24</sup>
- When shown photographs of men of similar height and build, evaluators rated the athletic ability of black men higher than that of white men.<sup>25</sup>
- When asked to choose counselors from a group of equally competent applicants who were neither exceptionally qualified nor unqualified for the position, college students chose white candidates more often than African American candidates, exhibiting a tendency to give members of the majority group the benefit of the doubt.<sup>26</sup>

These studies show that we often apply generalizations about groups that may or may not be valid to the evaluation of individuals.<sup>27</sup> In the study on height, evaluators applied the statistically accurate generalization that men are usually taller than women to estimate the height of individuals who did not necessarily conform to the generalization. If we can inaccurately apply generalizations to objective characteristics as easily measured as height, what happens when the qualities we are evaluating are not as objective or as easily measured? What happens when, as in the studies of athletic ability and choice of counselor, the generalizations are not valid? What happens when such generalizations unconsciously influence the ways we interact with other people? Here are some examples of assumptions or biases that can influence interactions.

- When rating the quality of verbal skills as indicated by vocabulary definitions, evaluators rated the skills lower if told that an African American provided the definitions than if told that a white person provided them.<sup>28</sup>
- When asked to assess the contribution of skill versus luck to successful performance of a task, evaluators more frequently attributed success to skill for males and to luck for females, even though males and females performed the task identically.<sup>29</sup>
- Evaluators who were busy, distracted by other tasks, and under time pressure gave women lower ratings than men for the same written evaluation of job performance. Sex bias decreased when they took their time and focused attention on their judgments, which rarely occurs in actual work settings.<sup>30</sup>
- Research has shown that incongruities between perceptions of female gender roles and leadership roles can cause evaluators to assume that women will be less competent leaders. When women leaders provided

clear evidence of their competence, thus violating traditional gender norms, evaluators perceived them to be less likable and were less likely to recommend them for hiring or promotion.<sup>31</sup>

- A study of nonverbal communication found that white interviewers maintained higher levels of visual contact, reflecting greater attraction, intimacy, and respect, when talking with white interviewees and higher rates of blinking, indicating greater negative arousal and tension, when talking with black interviewees.<sup>32</sup>

Several research studies conclude that implicit biases and assumptions can affect evaluation and hiring of candidates for academic positions. These studies show that the gender of the person being evaluated significantly influences the assessment of résumés and postdoctoral applications, evaluation of journal articles, and the language and structure of letters of recommendation. As we attempt to enhance campus and department climate, the influence of such biases and assumptions may also affect selection of invited speakers and conference presenters, committee membership, interaction and collaboration with colleagues, and promotion to tenure and full professorships. Here are some examples of assumptions or biases in academic contexts.

- A study of over 300 recommendation letters for medical faculty hired by a large American medical school found that letters for female applicants differed systematically from those for males. Letters written for women were shorter, provided “minimal assurance” rather than solid recommendations, raised more doubts, and included fewer superlative adjectives.<sup>33</sup>
- In a national study, 238 academic psychologists (118 male, 120 female) evaluated a junior-level or a senior-level curriculum vitae randomly assigned a male or a female name. These were actual vitae from an academic psychologist who successfully competed for an assistant professorship and then received tenure early. For the junior-level applicant, both male and female evaluators gave the male applicant better ratings for teaching, research, and service and were more likely to hire the male than the female applicant. Gender did not influence evaluators’ decisions to tenure the senior-level applicant, but evaluators did voice more doubts about the female applicant’s qualifications.<sup>34</sup>
- A study of postdoctoral fellowships awarded by the Medical Research Council of Sweden found that women candidates needed substantially more publications to achieve the same rating as men, unless they personally knew someone on the selection panel.<sup>35</sup>
- A 2008 study showed that when the journal *Behavioral Ecology* introduced a double-blind review process that concealed the identities of reviewers and authors, there was a significant increase in the publication of articles with a woman as the first author.<sup>36</sup>

### **Reaping the Benefits and Minimizing the Challenges of Diversity**

To reap the benefits and minimize the challenges of diversity, we need to overcome the powerful human tendency to feel more comfortable when surrounded by people we resemble. We need to learn how to understand, value, and appreciate difference. Here is some advice for doing so.

**Become aware of unconscious biases that may undermine your conscious commitment to egalitarian principles.**

One way of doing this is to take the Implicit Association Test (IAT) offered by Project Implicit, a research collaborative at the University of Virginia, Harvard University, and the University of Washington (<https://implicit.harvard.edu/implicit/demo>).

**Consciously strive to minimize the influence of unintentional bias.**

Question your judgments and decisions and consider whether unintentional bias may have played a role. One way to do so is to perform a thought experiment: ask yourself if your opinions or conclusions would change if the person was of a different race, sex, religion, and so forth. Some questions to consider include the following:

- Are women or minority colleagues/students subject to higher expectations in areas such as number and quality of publications, name recognition, or personal acquaintance with influential colleagues?
- Are colleagues or students who received degrees from institutions other than major research universities undervalued? Are we missing opportunities to benefit from the innovative, diverse, and valuable perspectives and expertise of colleagues or students from other institutions such as historically black universities, four-year colleges, community colleges, government, or industry?
- Are ideas and opinions voiced by women or minorities ignored? Are their achievements and contributions undervalued or unfairly attributed to collaborators, despite evidence to the contrary in their publications or letters of reference?
- Is the ability of women or minorities to lead groups, raise funds, and/or supervise students and staff underestimated? Are such assumptions influencing committee and/or course assignments?
- Are assumptions about whether women or minorities will “fit in” to an existing environment influencing decisions?
- Are assumptions about family obligations inappropriately influencing appointments and other decisions?

**Seek out opportunities for greater interaction with women and minority colleagues.**

Get to know women and minority colleagues in your department, your campus, and your professional associations. Pursue meaningful discussions with them about research, teaching methodologies, and ideas about the direction of your department, college, and profession. Listen actively to any concerns they express and try to understand and learn from their perspectives and experiences.

**Focus on the individual and on their personality, qualifications, merit, and interests.**

Consciously avoid the tendency to make assumptions about an individual based on the characteristics (accurate or not) of their group membership. Likewise, avoid the tendency to make assumptions about groups based on the behavior, personality, or qualifications of an individual group member. Instead, concentrate on the individual and their qualities.

**Treat all individuals—regardless of race, sex, or status—with respect, consideration, and politeness.**

- Greet faculty, staff, and students pleasantly in hallways or in other chance encounters.

- Make requests to faculty, staff, and students politely—even when the work you are asking for is part of their obligations.
- Acknowledge and appreciate the work, assistance, and contributions of faculty colleagues, staff, and students. Do so in public forums as well as privately.
- Address individuals by their appropriate titles or by their preferred forms of address.

#### **Actively promote inclusive communities.**

- In classroom, committee, laboratory, and departmental settings, work to ensure that everyone has a chance to voice opinions, concerns, or questions. Acknowledge and attribute ideas, suggestions, and comments accurately. Women and minorities often report that their remarks or contributions are ignored or unheard.
- Support efforts to ensure that leadership and membership of departmental and professional committees are diverse with respect to age, gender, nationality, race, ethnicity, and so on.
- Support efforts to ensure that departmental events such as seminar series and sponsored conferences include presenters of various ages, genders, nationalities, races, and ethnicities.
- Promote inclusive language by example. Avoid using only male pronouns when referring to groups of both sexes. Avoid language that makes assumptions about marital status and or/sexual orientation; for example, consider using “partner” rather than “spouse.”
- Welcome new departmental members by initiating conversations or meetings with them. Attend social events hosted by your department and make efforts to interact with new members and others who are not part of your usual social circle.

#### **Avoid activating stereotype threat.**

In addition to the preceding advice for actively promoting inclusive communities, the following suggestions can prevent the activation of stereotype threat or counteract its effects:

- Teach students and colleagues about stereotype threat.<sup>37</sup>
- Counter common stereotypes by increasing the visibility of successful women and minority members of your discipline. Ensure that the posters and/or photographs of members of your department or discipline displayed in hallways, conference rooms, and classrooms reflect the diversity you wish to achieve. Choose textbooks that include the contributions and images of diverse members of your discipline.<sup>38</sup>
- Support and encourage your students by providing positive feedback as well as constructive criticism to ensure that they know their strengths and develop confidence in their abilities. Save your harshest criticism for private settings so that you do not humiliate or embarrass students in front of either their peers or more senior colleagues. Such respectful practices are important for all students, but are likely to be more important for women and members of minority groups, who may have received less encouragement and may be at greater risk of being discouraged due to the influence of stereotype threat. Demonstrate similar respect and encouragement for your colleagues.
- For more suggestions, see <http://reducingstereotypethreat.org/reduce.html>.

## Conclusion

*Diversity is not an end in itself.* Diversity is a means of achieving our educational and institutional goals. As such, merely adding diverse people to a homogeneous environment does not automatically create a more welcoming and intellectually stimulating campus.

Long-term efforts, engagement, and substantial attention are essential for realizing the benefits that diversity has to offer and for ensuring that all members of the academic community are respected, listened to, and valued.

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## Prepared for WISELI by Eve Fine and Jo Handelsman

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## **Fostering Independence**



# **Fostering Independence**

## **Introduction**

An important goal in any mentoring relationship is helping the mentee become independent; yet defining what an independent mentee knows and can do is often not articulated by the mentor or the mentee. Defining what independence looks like and developing skills to foster independence is important to becoming an effective mentor. Defining independence becomes increasingly complex in the context of team science.

## **Learning Objectives**

Mentors will have the knowledge and skills to:

1. Define independence, its core elements, and how those elements change over the course of a mentoring relationship
2. Employ various strategies to build mentee confidence, establish trust, and foster independence
3. Identify the benefits and challenges of fostering independence, including the sometimes conflicting goals of fostering independence and achieving grant-funded research objectives

**Overview of Activities for the Fostering Independence Session:** Please note that a core activity is listed for each learning objective. We encourage you to engage the mentors in this activity. There is a list of additional activities that can be used if there is extra time in the session or the core activity is not working well for your group.

|   | Learning Objectives                                                                                               | Core Activities                                                                                                         | Additional Activities                                                                                                                                              |
|---|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Define independence, its core elements, and how those elements change over the course of a mentoring relationship | Mentors share ideas on the core elements of independence and then organize the list based on career stage (Activity #1) | Mentors engage in a follow-up conversation to Activity #1, with more in-depth discussion about the growing need for multidisciplinary research teams (Activity #4) |
| 2 | Employ various strategies to build mentee confidence, establish trust, and foster independence                    | Mentors read and discuss Case #1: <i>Independent Research?</i> or Case #2: <i>How Much to Help?</i> (Activity #2)       | Mentors share strategies they have used to foster independence (Activity #5)                                                                                       |
| 3 | Identify the benefits and challenges of fostering independence                                                    | Mentors list the benefits of an independent mentee, as well as the challenges (Activity #3)                             | Mentors read and discuss Case #3: <i>Granting Independence: How Much and When?</i> or Case #4: <i>The Slow Writer</i> (Activity #6)                                |

## Facilitation Guide

### Recommended Session on Fostering Independence (60 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of introduction and learning objectives for *Fostering Independence* (page 119)
  - Copies of *Independence* case studies (*Independent Research?* and *How Much to Help?*) (page 123) and the additional cases if desired Case #3: *Granting Independence: How Much and When?* and Case #4: *The Slow Writer* (pages 124-125)
  - Copies of reading *Mentoring Research Writers* (pages 127-133)
  - Handout on “The Staged Self-Directed Learning Model”.  
<http://www.longleaf.net/ggrow/SSDL/Model.html#Figure1>

#### ❖ Overview (5 min)

- TELL: Review the introduction and learning objectives for the session.

#### ❖ Objective 1: Define independence, its core elements, and how those elements change over the course of a mentoring relationship (25 min)

- ACTIVITY #1: Defining Independence



- **ASK:** Please describe your definition of independence. What does “independence” look like across career stages? Include in your discussion what it means at your institution and how that might differ from other places.
- **TELL (15 min):** We recognize that independence looks different at various stages of a researcher’s career. As we list the elements of independence, let’s also note the most appropriate career stage for each element.
- You may want to record the ideas generated in this discussion on a white board or flip chart, writing elements of independence along a continuum based on the discussion. The continuum should stretch from MD or PhD student to clinical fellow, post-doc, new faculty member, and senior faculty member.
- **NOTE:** Some elements of independence include:
  - ◆ Advanced knowledge of discipline, including expertise in their sub-area
  - ◆ Ability to critically read the literature and find answers to questions through extended literature searches and consulting experts
  - ◆ Ability to write a grant proposal for an entire research project
  - ◆ Ability to design and give an oral presentation on their work at a national meeting
  - ◆ Ability to design experiments for an entire grant proposal and conduct them
- **DISCUSS (10 min)** with the entire group the following questions:
  1. How can you tell if a certain level of independence is achieved? For example, what does independent thinking look like?
  2. Do mentees know what level of independence is expected of them? Do they understand that this will change as they progress in their career?
  3. Do you think your mentee’s estimations of their level of independence are aligned with yours?
  4. How can a mentee work both as an independent researcher and a team clinician?
- **FOLLOW-UP ACTIVITY:** Draw your own timeline for establishing independence and discuss it with your mentee to see if it aligns with their expectations. You may consider adding this timeline to your compact (if applicable).

❖ **Objective 2: Employ various strategies to build mentee confidence, establish trust, and foster independence (20 min)**

➤ **ACTIVITY #2: Case Study**

- Distribute either *Independence Case #1: Independent Research?* or *Case #2: How Much to Help?*, and let participants read the case individually for two to three minutes.
- **DISCUSS (17 min)** with entire group. You may want to record the ideas generated in this discussion on a white board or flip chart. Use the guiding questions following the case study. Additional questions are listed below:
  1. How does a mentor come to understand a mentee's decision-making ability so that the mentor can trust the mentee’s decisions?
  2. How can you foster collegial sharing or partnership within an existing power dynamic between a mentor and mentee?
  3. How can you determine what level of independence a mentee is ready for? How do you account for your mentee’s strengths and weaknesses in this decision?
  4. How can you determine if you are making assumptions about a mentee’s ability based on their productivity or work style, especially if they differ from yours?
  5. A natural consequence of fostering early independence can sometimes be a reduced quality and quantity of data produced. Is this a worthwhile sacrifice?

6. How do you convey the level of independence you expect from your mentee?
  7. How can team mentoring help or hinder in this case study?
  8. How can you create an environment where a mentee feels confident to ask questions without fear that it may reflect poorly on his/her competence?
- NOTE: You may wish to distribute the reading *Mentoring Research Writers* on pages 127-133 which provides specific strategies for helping mentees become more effective, independent writers.

❖ **Objective 3: Identify the benefits and challenges of fostering independence (10 min)**

- **ACTIVITY #3: Identifying Benefits and Challenges of Fostering Independence (10 min)**
  - **ASK:** Please share one benefit or one challenge of a mentee achieving independence. You may want to record the ideas generated in this discussion on a white board or flip chart.
  - **NOTE:** Benefits and challenges that may be included are:
    1. Benefits
      - ◆ Affirmation of your ability to train another researcher
      - ◆ Increased capacity and creativity in your research field
      - ◆ Authorship on joint publications
      - ◆ Increased capacity and skill in your research group
      - ◆ Broadened diversity within your research group
      - ◆ Enhanced professional reputation when your mentees are promoted
    2. Challenges
      - ◆ Expense
      - ◆ Slower progress toward achieving grant-funded objectives
      - ◆ Greater risk of new ideas not panning out
      - ◆ Issues of intellectual property
      - ◆ Time needed to mentor effectively
      - ◆ Misalignment of expectations and goals
      - ◆ Addressing the challenges of interdisciplinary work
      - ◆ Overlapping research interests
      - ◆ Allowing the relationship to evolve to a more collegial once independence is achieved
      - ◆ Feelings of loss when the mentee achieves independence

## ***Fostering Independence***

### **Case #1: Independent Research?**

Dr. Klein is very excited about the grant proposal she is writing to the NIH. The proposal builds upon research she has been conducting as an early-stage investigator in Dr. Janco's research group. Dr. Klein feels strongly that the proposal clearly describes the logical next steps in the project and relates the proposed research to her previous clinical work. When Dr. Klein meets with Dr. Janco to discuss the proposal, she is surprised to discover that Dr. Janco is less than enthusiastic. Dr. Janco informs Dr. Klein 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, 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?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do?
3. How is independence redefined in a restricted funding climate and an era of collaborative research?

\*Note: This case is taken from the mentee's perspective, providing mentors a slightly different lens.

### **Case#2: How Much to Help?**

Dr. Richardson is a clinician who is nearing the end of his fellowship, but wishes to continue his research training in his mentor's research group. Thus, he is independently applying for a Career Development award from the NIH. His mentor believes that Dr. Richardson is a very valuable asset to the team and is highly supportive of Dr. Richardson continuing his training, but does not have funding to support Dr. Richardson's salary. The mentor has agreed to advise Dr. Richardson in the preparation of the application, although noting that it should represent Dr. Richardson's independent work.

When Dr. Richardson provides his mentor with a draft of the application, his mentor becomes concerned about the quality of the writing. The research ideas are fairly solid, but the research plan has some minor flaws and the proposal is very poorly written.

Dr. Richardson's mentor believes that the proposal in its current form would not be a strong contender for funding. Although the application should reflect Dr. Richardson's work, the mentor has a vested interest in the proposal succeeding so that he can retain one of his program's most productive researchers. The mentor is unsure how to improve Dr. Richardson's proposal while still preserving it as Dr. Richardson's independent work. Moreover, Dr. Richardson has invested more than a month in preparing this application so the mentor is concerned that Dr. Richardson's defensiveness may create a further obstacle to improving the proposal.

Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now?
3. How would independent research be defined in this case?

## **Additional Activities (if time allows):**

### **Objective 1; Activity #4**

Have mentors engage in a follow up conversation to Activity #1, with a more in-depth discussion of the ways in which research team composition is becoming more diverse and how an increasing reliance on multidisciplinary expertise is transforming how independence is defined. Ask mentors to think through who it is they include in the ‘team’ and what each member contributes. For example, are they counting statisticians, data managers/analysts, editors, program coordinators, and support staff?

### **Objective 2; Activity #5**

Have mentors generate a list of strategies that can be used to foster independence. Ask mentors to review the list of elements generated in Activity #1 for guidance. Consider strategies that can be used in face-to-face meetings, over email, through written reports, etc. You may want to record the ideas generated in this discussion on a white board or flip chart.

### **Objective 3; Activity #6**

Distribute Case #3: *Granting Independence: How Much and When?* or Case #4: *The Slow Writer* and let participants read the case individually for two to three minutes. Discuss in a large group. You might want to revisit the list of benefits and challenges of fostering independence recorded in Activity #3.

- NOTE: You may wish to distribute the reading *Mentoring Research Writers* on pages 127-133 which provides specific strategies for helping mentees become more effective, independent writers.

### **Case #3: *Granting Independence: How Much and When?***

Dr. Lindstrom, junior faculty member in my research group, has just had a manuscript accepted for publication in a major journal that reports the results of a project that was supported by an R21 grant of which he was Principal Investigator. I was his mentor during his fellowship and K23 award. The topic is related to work that we originally did together, though he took the lead on the project. I encouraged him to submit the manuscript without my name on it, but I wonder if that was the right thing. After all, this research was all built on a foundation of work that originally was mine. In addition, one of my big grants is about to end and I need to apply for a new grant. At this point, I am not sure whether it is appropriate for me to submit a grant proposal that would be the logical next step after my former mentee’s published project. I am very proud of Dr. Lindstrom, but I am not sure that I am really ready to have him be completely independent working in an area so closely related to my own work.

### **Guiding Questions for Discussion:**

1. What are the main issues that are raised in this case study?
2. What advice would you give the mentor on how best to proceed? Is it too late for him to have second thoughts about his mentee’s independence?
3. What is an alternative perspective Dr. Lindstrom’s mentor might take?

**Case #4: *The Slow Writer***

A young investigator in my research group is adept at analysis of large data sets, but is a very slow writer. Last fall, I set multiple deadlines that this scholar missed, while another post-doc in my group wrote a grant proposal, submitted a paper, and recruited subjects for a clinical trial. Over the holidays, the slow writer had a breakthrough and produced an outline of a manuscript. To avoid delays in publication, I have now taken the lead in writing the manuscript based on this investigator's work. However, to become an independent investigator, I know this mentee must be able to write independently. Setting deadlines for detailed outlines, manuscript sections, figures, etc. hasn't worked. Trying to communicate the importance of manuscripts to the scientific endeavor hasn't worked either. Neither has encouragement. Veiled threats don't seem professional. Other than being patient, what should I do?

**Guiding Questions for Discussion:**

1. What are the main themes raised in this case study?
2. How do you convey the level of independence you expect from your mentee?
3. What is the mentor's responsibility in this case?



## READING

### Mentoring Research Writers

by Bradley Hughes

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#### Recognizing the Power of Writing as a Component of the Research Process

As a mentor you have a great opportunity to encourage your trainees to set high goals for their research writing and to help them achieve those goals. You should recognize, in fact, that you have a serious responsibility to motivate and to help researchers-in-training become excellent writers. Why should you and your trainees make writing a priority? The answer is clear to all experienced researchers: researchers earn their living and develop their careers *through the writing they do*—writing proposals to fund research, writing conference abstracts and posters and papers to disseminate new knowledge and to influence future research and the shape of their fields, documenting their research methods and findings, writing reviews of literature, writing reviews of colleagues' manuscripts, and writing letters of recommendation. Writing pervades the research process, and successful researchers spend a significant amount of their time planning, drafting, and revising complex forms of writing. Experienced researchers also know that writing is not just a way to communicate completed findings and polished arguments: writing is actually a powerful form of thinking and learning, one that clarifies thought and makes analyses and arguments more precise.

#### Acknowledging the Complexity of Research Writing

In order to appreciate the complexity of research writing and to guide new researchers, mentors need to understand that writing is a highly situated practice—that is, it is not a generic, general skill. Successful researchers need to achieve very specific purposes and speak persuasively to particular groups of readers. What is valued in writing and what is conventional and effective in writing varies across particular scientific communities and even within particular communities of researchers.

As researchers transition from writing within particular disciplines or professions to new ones, they often struggle to write successfully, even if they had success in previous writing situations. Given how varied purposes and audiences are for advanced research writing, as a research mentor, you should have intentional conversations about research writing with your mentees—working on and talking about writing are natural and important parts of training programs, and you should not expect new biomedical researchers to be accomplished writers from the start. Becoming an excellent research writer takes time, effort, and dedicated, consistent mentoring.

Mentors should also remember that researchers-in-training, like all students, bring varied literacy backgrounds to each new writing challenge. Some of your research trainees will have done lots of writing and reading, been held to high standards for written communication, and learned to receive and give critical feedback on writing. Others may feel that their intellectual strengths lie in quantitative rather than verbal areas. Some may have great strengths in oral communication rather than academic writing. Others may be multilingual writers, who are very skilled communicators in their first or second languages and who have great cross-cultural linguistic knowledge, but less experience writing and reading English. Some multilingual writers may have internalized organizational structures or styles for academic writing from their first language that are at odds with standard patterns in English. Still other writers may have a tenuous grasp on the subject that they are writing about, and their conceptual struggles may manifest themselves in their writing. At the same time, many researchers find writing difficult and as a consequence avoid writing, procrastinate, and eventually end up in stressful time crunches that reinforce their dislike for writing.

Given what varied experiences and strengths researchers-in-training may bring, you should ask your mentees about their previous experience and about their perceived strengths and areas for improvement. Acknowledge that research writing is always hard work, especially when researchers are learning to write in a new field or in a new genre, when they are making arguments that are more complex than they have made before, or when they're not sure what their findings mean or what is interesting or important in their findings. For these reasons, research writers need their mentors to be patient and encouraging as well as critical. And above all, mentors need to *normalize revision*; revision is a normal and crucial part of writing, not a sign that a writer has failed because she or he did not achieve perfection in an early draft. Research shows that experienced, successful writers spend a lot of time revising their work.

### Key Principles In Mentoring Writers

1. Signal from the very start and reinforce frequently that excellent writing is a high priority for you, for your research group, and for all successful researchers.
2. Figure out what your mentees already know about research writing and find ways to help them learn what they need to learn.
3. Work collaboratively with your research mentees to motivate them to write every week, sometimes every day.
4. Talk with your mentees regularly about their writing—analyzing successful examples, planning new pieces of writing, brainstorming, kicking ideas around, discussing drafts, and planning revisions.
5. Schedule meetings to plan and work on drafts. Make discussions of in-progress writing in progress part of the culture and rhythm of your research group.
6. Give clear, specific, encouraging feedback. Start first with global concerns and then move on to more local, smaller concerns.
7. Be sure your feedback identifies strengths and potential as well as problems.
8. Honor and celebrate successful research writing within your research group.

Writing is hard work and time-consuming for mentees. Let's face it---helping mentees learn to become strong research writers is hard work and time-consuming for you as a mentor. Although the recommendations that follow should make the time you spend on mentoring more successful and effective for you and for the writers you are mentoring, there are no shortcuts. Reading drafts carefully and critically and charitably; discerning



what is and what is not working well in a draft; giving clear, specific, helpful, and encouraging feedback; reading yet another draft; meeting to talk through your feedback and the writer's plan for revision—these critical tasks will always require concentration and time. But they are what every writer needs in order to learn and to improve—to become the strongest possible research writer they can be and to launch their research career.

Here are some specific strategies, drawn from research and practice, for mentors to try.

### **Before the First Draft**

**Find ways to signal that writing is crucial to research in your field and that mentoring researchers to become strong writers is a high priority for you and for your research group.** When, for example, a prospective researcher interviews with you, talk about writing and your commitment to mentoring writing. If you use some form of written expectations, such as a mentoring compact, you might consider including a section for your mentees on writing. Create a culture within your group of sharing and discussing drafts and of sharing and celebrating successful writing. In your meetings or discussions, always find time to talk about writing—even long before it is time to begin writing.

**Talk with trainees about their writing processes, and yours.** You might read and discuss writing resources, which offer valuable advice about establishing good habits for academic writing. You might also want to share some drafts of your own research writing in progress, seeking feedback from your mentees—learning to give constructive, critical feedback helps writers grow, and sharing your drafts will give you valuable feedback and model the drafting, critique, and revision process that you are trying to teach.

**Recognize that *talk* is a crucial part of writing.** Be sure that you are talking regularly with trainees about their writing in progress. Your mentoring discussions about research questions, methods, literature, and results are all critical for helping a newer researcher figure out how they will explain their research project in research publications, in funding proposals, in presentations, and in interviews. In discussions, ask questions that point toward future writing, such as

“How are you thinking about organizing your literature review?”

“How might you phrase that as a research question?”

“In your results, what's new? What's most significant?”

These kinds of questions and many others help researchers clarify their thoughts through talk and help them prepare for writing. And by your choice of questions, you are helping reinforce the key principles of scientific research and helping researchers imagine the audiences for whom they will be writing.

**Your trainees will benefit if you ask them to prepare and discuss the main information and arguments in their papers.** Researchers benefit from having to organize information in a logical outline and giving colleagues a chance to ask questions and offer advice *before* investing hours and hours in drafting sentences and paragraphs. You might ask them to prepare and discuss informally, with you and with peers, a few PowerPoint slides outlining the main information and arguments they hope to include in their paper. Another good reason to invest time upfront clarifying key ideas and arguments: if you and your mentee do *not* clarify and agree on the main points and arguments for the paper early in the process of writing, don't be surprised if your mentee is reluctant to make major changes after she or he has invested all the time that it takes to write a full draft.

**New research writers need to develop a robust understanding of the *genres* commonly written by researchers in their discipline.** Strong, successful research writers can take an aerial view of a document and can talk intentionally about the purpose of a particular piece of writing and about the choices authors have made about the content and organization for a given genre. Mentors should work systematically with mentees to identify and to analyze the key genres (or kinds of writing) in relevant fields or subfields, looking at what a particular kind of writing accomplishes and how it is tailored to a particular audience. For each key genre, mentors should first explore mentees' experience and understanding about that genre. As you have these discussions, you might want to ask trainees to analyze, together with you, the different kinds of articles in major journals in your field. In talking about genre, try to focus not on surface features of a genre (e.g., the citation system) but aim to develop—in yourself as a mentor and in your mentees—an ability to talk about the rhetoric of each genre; that is, the purpose of that genre, its audience, and its persuasive elements. For example, talk systematically about which questions get answered in the introduction, in the literature review, in the methods, in the results, and in the discussion sections. How is information organized *within* a particular section (such as the results section)? How much detail do authors give? What do the authors assume about the knowledge their readers already have about the topic under study?

**Engage in “prewriting.”** Before your mentee begins drafting a proposal or research report, use your conversations to help your mentee plan and do what is called “prewriting.” You can use your time—and your mentee's time—wisely by doing some explicit planning of a paper before your mentee starts actually drafting sections of it. Through collaborative talk and questions, you can help an author clarify the purpose of a piece of writing, central research questions, a plan, an outline, lists of main points, and the logic of an argument. Moreover, you can capture good ideas, plans, and important language—the mentee's and yours—by writing them down often as they emerge in these conversations. Your conversation and interest and encouragement also provide crucial motivation for doing the hard work of starting a writing project. And by correcting major misconceptions at this stage, you're helping writers, rather than waiting for a writer to invest countless hours in writing a full draft that may be misguided in some fundamental ways.

**Set intermediate deadlines for portions of a draft, and insist that mentees meet those deadlines.** Less experienced research writers need to write a partial draft long before they think they are ready to write, in order to give mentors a chance to give formative feedback and in order to give mentees plenty of time to revise. Early drafts, tough but encouraging critical feedback, and lots of revisions—these are what produce strong thinking and strong scientific writing. You might consider scheduling a weekly draft discussion for all lab members, with different members scheduled to share their work each week. It is natural for busy postdocs or graduate students to fall behind with deadlines, and of course mentors should be understanding and flexible, but you are not doing your mentees a favor if you allow them to delay writing for too long. Be sure your expectations for writing are clear and that the mentee understands the consequences of falling behind in writing given the number of publications they are expected to produce while working with you.

**Ask your trainees to include a cover sheet with each draft.** Each time your mentee provides you with a draft of their writing it should be accompanied by a cover sheet, which can orient you as a reader. This cover sheet might include relevant questions, such as

- What is this draft?
- Who is the intended audience?
- How is it organized?
- What are your main points?
- What do you think is working well? What are you pleased with?
- What would you especially like me to focus on as I read, or what would you like my help with?

Answers to these questions can guide your reading, and you will be able to use your time more effectively and be sure to respond to the writer's needs. Learning to reflect critically on their own writing is valuable for writers as well; experienced writers can talk effectively about their writing, can offer an aerial view of a draft, and can ask readers for particular kinds of help.

### **Giving Feedback and Guiding Revisions on Drafts**

**Encourage mentees to welcome criticism and advice about their writing.** Before you ever give specific feedback on a draft, find comfortable ways to ask your mentees about their experience receiving feedback on drafts and about their feelings about feedback and criticism. Talk about your own feelings about advice and criticism and encourage your mentee to welcome and consider all feedback, to ask for clarification during an in-person conversation, and to feel comfortable choosing not to accept some advice but justifying that choice. Explain that the strongest, most successful writers seek out tough, critical readers while their writing is still changeable.

**Explain your approach to feedback and contextualize your comments.** For example, if you have commented only on big ideas or the next steps you are suggesting, be sure to tell that to the writer. Otherwise, it is easy for a writer to assume that because you have not commented on something that means there are no problems with it. If you commented on local concerns only in one section but similar problems continue in other parts of the draft where you did not comment, be sure to explain this lack of feedback so that writers do not have to guess what it means.

**Focus first on global concerns before local concerns.** In your reading, in your comments, and in your conversations with the writer, focus first on whether the big picture is working well by addressing *global, high-level concerns* like these:

- Is the central research question clear?
- Is the significance of the research clear and persuasive?
- Is the progression of ideas and arguments logical?
- Does the writer demonstrate a clear understanding of the major concepts under study?
- Does the review of literature emphasize the most important ideas?
- Are findings clearly explained and easy to grasp—in figures and graphs as well as in the text?
- Are ideas thoroughly explained?
- Is the discussion focused on the most important points?

Later in the process of writing and revising, when the big stuff is working pretty well, narrow your focus and the writer's to more *local concerns* like these:

- Are there effective transitions between sections?
- How can the style be improved?
- Where do sentence or word problems interfere with the writer's ability to communicate clearly?
- Are there any grammatical errors?
- How can the word choice be improved?

- Are there punctuation errors?
- Are there proofreading mistakes?

Why is it important to start our feedback with global concerns? First, it is just a matter of efficiency—you have limited time to give feedback and your trainees have limited time to revise, so there is not much point to your commenting on small edits and not much point to the writer’s making small edits when the writer needs to make larger changes. Second, research shows that less experienced writers are often confused by what faculty and mentors want them to concentrate on in their writing and in their revisions. They may think, for example, that correcting semicolon mistakes or rephrasing part of a sentence is as important as clarifying the logic of their discussion or anticipating and addressing counterarguments or emphasizing some ideas and subordinating others. And mentor comments on their writing too often lead writers to make only superficial revisions to words and sentences, overlooking larger conceptual, rhetorical, and structural revisions that would most improve a paper. By starting your feedback with global concerns, mentees get clear guidance from you about how to strengthen their ideas, their analyses, and their arguments, so that they have papers worth editing and polishing. *Then* you can turn your attention—and your trainees’ attention—to improving sentences, words, and punctuation.

**Identify strengths and potential in a draft, teach from success, and offer encouragement.** In your comments, instead of jumping right into what’s wrong or needs improving, try starting with what you see as the specific strengths in a draft, what’s promising, and what’s working well. And it’s important to make some of your praise specific, as specific as some of your criticism. So instead of saying “Good start,” or just “Good,” try identifying what in particular is working well in a draft. This does not mean to offer false or insincere praise, but writers need to know what they are doing well and they need to see you as a reader who is genuinely interested in what they have to say and eager for them to succeed, rather than seeing you only as an error hunter. Teaching or coaching for success means if a writer has done something well in one section of a draft (if, for example, their topic sentences orient a reader well to the topic and main point of a paragraph) but not in another section, you can encourage the writer to do what they have already done well elsewhere.

**Be direct and clear in your request for revisions.** When giving feedback, indicate in specific terms how much work remains to be done. For example, “This will need a fair amount of revision in order to clarify your key research questions and to report your key findings effectively. As you revise, here are my key suggestions: (1) . . . ; (2) . . . ; (3) . . . .” Or “After you’ve worked on focusing the literature review around just a few central concepts, you’ll need to do some substantial editing to clarify sentences. I’ve shown the kinds of edits in the first paragraph of the lit review, but the rest of the draft needs that same kind of editing.” You can be clear and constructive in your feedback, even if you are delivering bad news, but you are not doing a writer any favors if you hide or sugarcoat how much work remains to be done.

**Ask writers to document their revisions.** When you’re reviewing a revised version of something you’ve read before, ask the writer to attach a cover sheet explaining the major changes they’ve made since you last read it. Asking trainees to do this signals that you expect them to make major revisions before you read something again. This kind of cover letter resembles what you would write in a cover letter or email with a revised manuscript if you received a “revise and resubmit” decision from a journal editor. In addition, you might want to ask the trainee to use “track changes” so that you can focus your reading on what’s changed.

**Close your comments with some encouragement and a look forward.** Be sure to include notes of encouragement and expectation with your feedback. For example, you might say, “Looking forward to reading the next draft of this,” or “Looking forward to seeing this in print soon!” or “Looking forward to meeting on Thursday to talk through your plans for revising.”

**Within your research group, create a culture that celebrates important milestones in writing.** Acknowledge and celebrate proposals and manuscripts when they are submitted, when revisions are completed, grants funded, publications accepted, and publications appear.

Mentors play a critical role in helping researchers-in-training become excellent, independent writers. Be sure to set the bar high for your trainees' thinking, research, and writing and then provide them with support to meet those expectations. If at any point you feel that a mentee requires additional feedback and support, seek out local resources and encourage your mentee to take advantage of them.



## **Promoting Professional Development**





# **Promoting Professional Development**

## **Introduction**

The ultimate goal of most research mentoring situations is to enable the mentee to identify and achieve some academic and professional outcomes after the training period. Along the way, there are many objectives to be achieved, all of which must be consciously considered so they do not get lost or forgotten. While non-research professional development activities are sometimes seen as distractions from the core business of doing research, they are often critically important to identifying and successfully meeting the mentee's long-term career objectives. Therefore, it is important to recognize and promote relevant professional development opportunities for mentees.

## **Learning Objectives**

Mentors will have the knowledge and skills to:

1. Identify the roles mentors play in the overall professional development of their mentees
2. Develop a strategy for guiding professional development using a written document
3. Initiate and sustain periodic conversations with mentees on professional goals and career development objectives and strategies
4. 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)

**Overview of Activities for the Professional Development Session:** Please note that a core activity is listed for each learning objective. We encourage you to engage the mentors in this activity. There is a list of additional activities that can be used if you have extra time or if the core activity is not working well for your group.

|   | Learning Objectives                                                                                                             | Core Activities                                                                                                                                                          | Additional Activities                                                                                                                                                                                          |
|---|---------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Identify the roles mentors play in the overall professional development of their mentees                                        | Mentors brainstorm a list of the roles mentors play in the professional development of their mentees beyond research, and rank them in order of importance (Activity #1) | Mentors discuss the ways in which their own mentors supported and promoted their professional development (Activity #5)<br>Mentors review and discuss Case #2: <i>Teaching Ethical Behaviors</i> (Activity #6) |
| 2 | Develop a strategy for guiding professional development using a written document                                                | Mentors review and discuss three different documents that could be used as guides to create Individual Development Plans (IDPs) (Activity #2)                            | Mentors revise the draft compact they created in the <i>Aligning Expectations</i> session to include more specific expectations for professional development (Activity #7)                                     |
| 3 | Initiate and sustain periodic conversations with mentees on professional goals and career development objectives and strategies | Mentors use the written professional development plan created in Activity #2 as a guide for a conversation with their mentee about career development (Activity #3)      | Mentors use the revised expectations compact created in the <i>Aligning Expectations</i> session to guide a conversation with their mentee about career development (Activity #8)                              |
| 4 | Engage in open dialogue on balancing competing demands, needs, and interests of mentors and mentees                             | Mentors read and discuss Case #1: <i>Choosing a Different Path</i> (Activity #4)                                                                                         | Mentors share some of their own challenges and strategies advising mentees on work-life balance issues (Activity #9)<br>Mentors read and discuss Case #3: <i>Looking for Balance</i> (Activity #10)            |

## Facilitation Guide

### Recommended Session on Promoting Professional Development (90 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of introduction and learning objectives for *Professional Development* (page 137)
  - Copies of the three example Individual Development Plans (pages 145-153)
  - Copies of the *Professional Development* Case #1, *Choosing a Different Path*, (page 142) and the additional cases if desired (Case #2, *Teaching Ethical Behaviors*, Case #3: *Looking for Balance*, pages 154-155)

#### ❖ Introduction (10 min)

- REFLECTION: Ask mentors to write down any new mentoring activities they have engaged in since the last session. If none, they should write down something they are thinking about regarding their mentoring relationship based on the previous session.
- TELL: Review the introduction and learning objectives for the session.

#### ❖ Objective 1: Identify the roles mentors play in the overall professional development of their mentees (30 min)

- ACTIVITY #1: Brainstorming Mentor Roles in Professional Development)
  - ASK: (10 min) In pairs, please list all of the roles mentors can or should play in the professional development of their mentee, beyond research training.
  - DISCUSS (15 min) with entire group the roles each pair listed. You may want to record the ideas generated in this discussion on a white board or flip chart.
  - NOTE: Some elements of professional development include:
    1. Networking-social and professional
    2. Socialization to local professional culture
    3. Finding funding
    4. Managing research staff
    5. Time management
    6. Leadership skills
    7. Drafting IRB protocols
    8. Career path guidance
    9. Work-life balance
    10. Public speaking
    11. Research Ethics
    12. Writing Skills
    13. Drafting a grant budget
    14. Fostering informal mentoring relationships
- DISCUSS (5 min) with entire group the following questions:
  - ◆ Which of the roles on the list are the most important? Why?

- ◆ Are there some roles on the list that should not be the mentor's concern? Why?

❖ **Objective 2: Develop a strategy for guiding professional development using a written document (15 min)**

- ACTIVITY #2: Reviewing Individual Development Plans and Mentoring Plans
  - REVIEW (15 min) individually: Mentors review example plans individually and make notes on them to indicate which aspects of the plans they would like to adopt for use with their own mentees. Some mentors may already use such plans and may wish to share their own versions.
  - TELL: Suggest that IDPs be used in the mentee selection process. Mentors have found it helpful to request them as a means of better assessing fit.
  - NOTE: Additional examples are available at <https://mentoringresources.ictr.wisc.edu>. Mentors may also wish to refer their mentees to <http://myidp.sciencecareers.org> where they can develop their IDP through a guided, online process.

❖ **Objective 3: Initiate and sustain periodic conversations with mentees on professional goals and career development objectives and strategies (15 min)**

- ACTIVITY #3: Using the Individual Development Plans (IDPs) and Mentoring Plans
  - ACTIVITY (10 min) in pairs: Mentors share specific ways they could introduce the idea of an individual development plan to their mentee and how the completed plan can be used to navigate the mentoring relationship.
  - DISCUSS (5 min) with the entire group. You may want to record ideas generated on a whiteboard or flip chart.
    - FOLLOW-UP ACTIVITY: With their mentees, mentors should collaboratively choose or adapt an individual development plan and ask their mentee to complete it annually (at a minimum). The completed plan should be used to guide a conversation between mentor and mentee about professional development needs and expectations. For examples of IDPs visit: <https://mentoringresources.ictr.wisc.edu/MentorIDPTemplates>
  - NOTE: These plans are an important step towards creating some form of expectations document that can be used to initiate a discussion on goals and expectations with mentees. Mentoring compacts, like those included in the *Aligning Expectations* session can be utilized in concert with these IDPs to tailor a holistic plan for each mentee (see pages 57-74). An additional resource mentors may consider are learning compacts: <http://www-distance.syr.edu/contract.html> [http://cte.uwaterloo.ca/teaching\\_resources/tips/selfdirected\\_learning\\_learning\\_contracts.html](http://cte.uwaterloo.ca/teaching_resources/tips/selfdirected_learning_learning_contracts.html)

❖ **Objective 4: Recognize and engage in open dialogue on balancing the competing demands, needs, and career interests of mentors and mentees (20 min)**

- ACTIVITY #4: Case Study
  - Distribute *Professional Development Case #1: Choosing a Different Path*
  - Let participants read the case individually for two to three minutes.
- DISCUSS (17 min) in a large group. You may want to record the ideas generated in this discussion on a white board or flip chart. Use the guiding questions following the case study. Additional questions are listed below.

1. What are the responsibilities of the mentor to every mentee, regardless of career path?
  2. To what extent are the differing value systems of the mentor and mentee a factor in their relationship?
  3. Does the gender of the mentee and mentor impact your assessment of this case?
  4. How do issues of socialization arise in this case study? What does it look like to belong to the academic enterprise?
  5. How can the concept of workforce flexibility be translated for investigators in clinical and behavioral research?
  6. How could issues of the dual-career family play into this mentee's decision and thus influence the discussion?
- NOTE: Encourage mentors to return to their compact (if applicable) and include text on how both they and the mentee are expected to communicate a sudden change in the work plan due to health issues, family issues, etc., and how they will move forward.
- NOTE: For more information, a mentor training module on work-life balance can be found at <http://mentoringresources.ictr.wisc.edu>.

## ***Promoting Professional Development***

### **Case #1: *Choosing a Different Path***

You are currently mentoring two post-doctoral scholars in your research group. Both are very talented and hardworking; however, one has made it clear that once completing his fellowship, he would like to work for a private non-profit research institute. The other scholar has her heart set on applying for tenure track positions at large academic medical centers. Lately, you find yourself spending more time giving professional development advice to the post-doc who intends to apply for faculty positions. 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 neglecting the other scholar, believing that he is not worth your time and advice if he is pursuing a research career outside of academia.

#### **Guiding Questions for Discussion:**

1. What are the main themes raised in this case study?
2. What should the mentor do now? What value judgments are being made by the mentor?
3. How might non-academic career interests and personal goals or obligations play into a mentee's decision of career path? How might the mentor draw these factors out in discussion?
4. What may have motivated the mentee to pursue a career path outside of academic medicine? Does he feel he belongs?
5. What other career paths are possible and how do they fit into the overall pursuit of improving human health?

## **Examples of Individual Development Plans (IDPs)**

- 1. Medical College of Wisconsin**
- 2. Duke University School of Medicine**
- 3. University of California-Davis**

Additional examples are available at: <https://mentoringresources.ictr.wisc.edu>. Mentors may also wish to refer their mentees to <http://myidp.sciencecareers.org> where they can develop their IDP through a guided, online process.





## ***Example #1: Individual Development Plan (IDP)\****

**1. Name**\_\_\_\_\_ **2. Date**\_\_\_\_\_

### **3. Academic Series and Rank**

- |                                                  |                                    |
|--------------------------------------------------|------------------------------------|
| <input type="checkbox"/> Ladder Rank             | <input type="checkbox"/> Assistant |
| <input type="checkbox"/> In-Residence            | <input type="checkbox"/> Associate |
| <input type="checkbox"/> Adjunct                 | <input type="checkbox"/> Professor |
| <input type="checkbox"/> Clinical                |                                    |
| <input type="checkbox"/> Health Science Clinical |                                    |

**4. Primary Mentor**\_\_\_\_\_  
Additional Mentor(s)\_\_\_\_\_

### **5. Identify Personal and Institutional Long Term Goals**

*Why did you decide to work at a medical school?*

*What do you personally hope to accomplish in your career?*

*List your Academic Series requirements (see Academic Criteria for Series)*

List other goals discussed with Chair/Division head.

### **6. Areas of Focus: Definition and Distribution of Effort**

The following six areas of focus generally describe the areas where faculty direct their efforts to successfully accomplish their personal, institutional and academic series goals.

#### **• Teaching—Excellence in Education**

Teaching, student advising, continuing medical education (CME), new course development

#### **• Research/Creative Activity—Leadership in Innovative Research**

Conducting basic science and/or clinical research, presentations, publications, application for and receipt of grant support, copyrights and patents, editing, and peer review

#### **• Clinical Care—State-of-the-Art Clinical Care**

Direct patient care, chart review, related clinical activities, and clinical budget performance

#### **• Service—Leadership in Governance**

Participation or leadership in governance, committee membership, collegial activities.  
Suggested service priority: Department, SOM, UCDHS, University, Professional, Community

#### **• Self Development—Networking, Work-Life Balance and Additional Mentors**

Faculty Development activities, leadership programs, CME training, earning advanced degrees, participation in professional academic associations or societies, developing

professional contacts, consulting in one's field, expanding network contacts, balancing work and personal life, utilizing additional mentors in specific areas of focus

### **Distribution of Effort**

Estimate the hours per week spent in each focus area, then list the percentage of total duties.

| <b>Focus Area</b>                                                       | <b># Hrs/Week</b> | <b>% of Total Duties</b> |
|-------------------------------------------------------------------------|-------------------|--------------------------|
| Teaching                                                                |                   |                          |
| Research                                                                |                   |                          |
| Clinical Care                                                           |                   |                          |
| Community Engagement                                                    |                   |                          |
| Administration/Service                                                  |                   |                          |
| Self-Development<br>(Networking, Work-Life Balance, Additional Mentors) |                   |                          |
| <b>Total</b>                                                            |                   |                          |

## **7. Specific Goals in Focus Areas**

Complete the focus areas that specifically apply to the criteria for your academic series that will help you accomplish your personal and institutional long- term goals.

### **Teaching**

Year in Review: Please list last year's goal(s) and significant accomplishments (teaching appointments, invitations, and course or program improvements). If the goals were not met, explain and identify barriers.

*Upcoming year's teaching goal(s):*

*Identify resources, collaborators, and time commitment needed to achieve goal(s):*

*Identify barriers to achieving new goal(s):*

### **Research and Research Related/Creative Activities**

Year in Review: Please list last year's goal(s) and significant accomplishments (major publications, grants, presentations, invitations). If the goals were not met, explain and identify barriers.

*Identify in a single sentence the focus of your scholarly activity.*

*Upcoming year's research goal(s):*

*Identify resources, collaborators, and time commitment needed to achieve goal(s):*

*Identify barriers to achieving new goal(s):*

### **Clinical Care**

Year in Review: Please list last year's goal(s) and significant accomplishments (exceptional patient care, development of new techniques, clinical programs). If the goals were not met, explain and identify barriers.

*Upcoming year's patient care goal(s):*

*Identify resources, collaborators, and time commitment needed to achieve goal:*

*Identify barriers to achieving new goals:*

### **Service**

Recommended service priority: Department, School, University, Professional, and Community.

Year in Review: Please list last year's goal(s) and significant accomplishments. If the goals were not met, explain and identify barriers.

*Upcoming year's administration goal(s):*

*Identify resources, collaborators, and time commitment needed to achieve goal:*

*Identify barriers to achieving new goal(s):*

### **Self Development (Networking, Work-Life Balance, Additional Mentors)**

Year in Review: Please list year's goal(s) and significant accomplishments. If the goal were not met, explain and identify barriers.

*Upcoming year's self-development goal(s):*

*Identify resources, collaborators, and time commitment needed to achieve goal(s):*

*Identify barriers to achieving new goal(s):*

## 8. Optimal Distribution of Effort

Revisit the table, "Distribution of Effort," in step 6. Create a new Optimal Distribution of Effort table, taking into account your specific goals listed in step 7.

| Focus Area                                                                 | # Hours/Week | % of Total Duties |
|----------------------------------------------------------------------------|--------------|-------------------|
| Teaching                                                                   |              |                   |
| Research                                                                   |              |                   |
| Clinical Care                                                              |              |                   |
| Community Engagement                                                       |              |                   |
| Administration/Service                                                     |              |                   |
| Self-Development<br>(Networking, Work/Life Balance and Additional Mentors) |              |                   |
| <b>Total</b>                                                               |              |                   |

## 9. We have met and discussed this annual Individual Development Plan (IDP)

Mentee\_\_\_\_\_ Date\_\_\_\_\_

Mentor\_\_\_\_\_ Date\_\_\_\_\_

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\*Adapted from IDP form presented by Russell G. Robertson MD, Medical College of Wisconsin, 2004 AAMC Faculty Affairs Professional Development Conference. Accessed 5/15/10 at:  
<http://www.ucdmc.ucdavis.edu/mentoring/resources.html>

## ***EXAMPLE #2: MENTORING PLAN WORKSHEET\****

### **YOUR GOALS**

Prior to meeting with your mentor, take some time to think about and write down your research and professional goals. You may want to articulate one- and five-year goals. For example, a short-term goal might be “to submit an NIH career development grant application” and a long-term goal might be “to have enough publications for promotion to Associate Professor.”

| <b>Short-term Goals (next year)</b> | <b>Long-term Goals (next 5 years)</b> |
|-------------------------------------|---------------------------------------|
| 1.                                  | 1.                                    |
| 2.                                  | 2.                                    |
| 3.                                  | 3.                                    |

### **POTENTIAL MENTORS**

Identify people who can assist you in meeting your goals. These can be mentors internally or at other institutions. For each potential mentor, identify objectives, develop a list of what you can offer, and propose outcomes. A blank grid is included on the next page to help you organize your thoughts. Put your initial thoughts down on paper before you approach a mentor, and then revise it as your relationship changes.

### **APPROACHING MENTORS**

We suggest that you first approach mentors by sending an e-mail that includes a request for a meeting, a brief summary of your goals, and why you think there would be a good fit between you and the mentor. Let potential mentors know how you are hoping to work with them, such as one-on-one, as one of many mentors, or as part of a mentoring team or committee. You might want to let them know how you think they would be able to contribute.

### **IDENTIFY MENTORSHIP NEEDS**

Identify competencies that you will need to gain expertise in (see Table below for examples). Identify people who can assist you in achieving these competencies and in meeting your goals. These can be mentors internally at your institution, or at other institutions. A blank grid is included on the next page to help you organize your thoughts. Put your initial thoughts down on paper before you approach a mentor, and then revise it as your relationship changes.

|                           |                         |
|---------------------------|-------------------------|
| Designing research        | Establishing goals      |
| Writing grants            | Finding funding         |
| Managing your career      | Managing staff          |
| Leading teams             | Preparing for promotion |
| Cultural competence       | Navigating institution  |
| Managing care             | Managing conflict       |
| Speaking before groups    | Knowing career paths    |
| Teaching effectively      | Hiring personnel        |
| Collaborating effectively | Managing budgets        |
| Managing data             | Mentoring others        |
| Giving feedback           | Evaluating literature   |
| Assessing students        | Medical informatics     |
| Organizational dynamics   |                         |

### **MANAGING RELATIONSHIPS WITH YOUR MENTORS**

Relationships should be nurtured and respected. If you and your proposed mentor develop a working relationship, have some guidelines for how you will work together. Here are some tips:

- ❖ Schedule standing meetings ahead of time and keep them
- ❖ Give your mentor(s) plenty of time to review drafts of grants and manuscripts
- ❖ Don't be a black hole of need – limit the number of requests you make of any given mentor
- ❖ Develop authorship protocols so that expectations are clear
- ❖ Saying thank you is priceless

| <b>Mentoring Plan</b>     |                                                                                           |                                                                       |                                                                              |
|---------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------------------------|
| <b><i>Mentor Name</i></b> | <b><i>Objectives</i></b><br>(e.g., understand how to manage multi-site research projects) | <b><i>What I can offer</i></b><br>( e.g. grant writing, publications) | <b><i>Outcomes</i></b><br>(e.g. submit multi-center research grant proposal) |
|                           |                                                                                           |                                                                       |                                                                              |
|                           |                                                                                           |                                                                       |                                                                              |
|                           |                                                                                           |                                                                       |                                                                              |
|                           |                                                                                           |                                                                       |                                                                              |

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\*Adapted from Ann J Brown, MD MHS, Vice Dean for Faculty, Duke University School of Medicine.  
 Accessed 5/28/10 at <http://facdev.medschool.duke.edu>

### ***Example #3: Mentoring Worksheet\****

Mentor: \_\_\_\_\_ Mentee: \_\_\_\_\_

Date of Meeting: \_\_\_\_\_

#### **Goal: Teaching**

☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Obstacles: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

New goal or strategy to overcome obstacles (if  
needed): \_\_\_\_\_

\_\_\_\_\_

#### **Goal: Clinical Care**

☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Obstacles: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

New goal or strategy to overcome obstacles (if  
needed): \_\_\_\_\_

\_\_\_\_\_

#### **Goal: Research**

☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Obstacles: \_\_\_\_\_

\_\_\_\_\_

---

---

New goal or strategy to overcome obstacles (if needed):

---

---

**Goal: Service**

☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments:\_\_\_\_\_

---

---

Obstacles:\_\_\_\_\_

---

---

New goal or strategy to overcome obstacles (if needed):

---

---

**Goal: Self Development**

☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments:\_\_\_\_\_

---

---

Obstacles:

---

---

---

New goal or strategy to overcome obstacles (if needed):

---

---

**Goal: Networking**

☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments:\_\_\_\_\_

---



Obstacles: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

New goal or strategy to overcome obstacles (if needed): \_\_\_\_\_  
\_\_\_\_\_

**Goal: Work/Life Balance**    ☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Obstacles: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

New goal or strategy to overcome obstacles (if needed): \_\_\_\_\_  
\_\_\_\_\_

**Goal: Additional Mentors**    ☐ Goal met    ☐ Making Progress    ☐ No Progress

Accomplishments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Obstacles: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

New goal or strategy to overcome obstacles (if needed): \_\_\_\_\_  
\_\_\_\_\_

\*Accessed from University of California-Davis on 5/15/10 at  
<http://www.ucdmc.ucdavis.edu/mentoring/resources.html>

**Additional Activities (if time allows):****Objective 1; Activity #5:**

Have mentors discuss the ways in which their mentors supported and promoted their professional development in the past (or that they wish their mentor had done). In general, how did they get where they are now and how did their mentors, formal and informal, play a role in that process? You may want to record the ideas generated in this discussion on a white board or flip chart.

**Objective 1; Activity #6:****Case #2: Teaching Ethical Behaviors**

Megan and Matthew are doctoral students in Clinical Investigation, working at the same university, but in different research groups. They are in a few classes together and frequently discuss the progress of their research projects, both of which focus on the implications of patient trust in health care providers. At a graduate student research seminar, Megan presents her study design and preliminary findings. After the seminar, Megan shares with Matthew how excited she is to get this work published, but is frustrated that her mentor, who is co-author on the paper, has been working on a grant and hasn't had the time to review her draft and provide feedback. Without telling Megan, Matthew spends the next few months conducting his own version of Megan's study with great support from his mentor who provides him with timely feedback. Matthew then publishes an important paper on this work while Megan's paper is still under review. Megan had no idea about this until she sees the article appear in a high-impact journal. Megan proceeds to report this plagiarism to Matthew's mentor.

---

Adapted from the case, *Mum's the Word*, CTSPedia.org, Clinical Research Ethics Educational Materials (John Banja, PhD, Emory University)

**Guiding Questions for Discussion:**

1. What are the responsibilities of mentors to educate their mentees about the ethics of research collaboration and authorship?
2. How can a mentor model these behaviors?
3. As Matthew's mentor how would you follow up with Matthew? Should there also be follow up with Megan and her mentor?

**Objective 2; Activity #7:**

Ask mentors to revise the draft compact they created in the *Aligning Expectations* session to include more specifics about professional development expectations. Encourage them to incorporate goals and ideas generated from mentees' individual development plans (see note under Objective #3 on page 140).

**Objective 3; Activity #8:**

Have mentors use the revised expectations compact created in the *Aligning Expectations* session as a guide to conversation with their mentee about professional development. Ask mentors to make certain their expectations are in alignment with those of their mentee after this conversation.

**Objective 4; Activity #9:*****Advising Mentees on Work-Life Balance Issues***

What are some challenges you've faced as a mentor when a mentee has struggled with the impact of life events on his/her productivity as a scholar?

Guiding Questions for Discussion:

1. How have you as a mentor dealt with these challenges?
2. Can you recall advice you were given by a mentor that helped you navigate the demands of busy personal and professional lives?
3. To what extent should mentors have a role in helping mentees with work/life balance

**Objective 4; Activity #10:*****Case #3: Looking for Balance***

Dr. Feinstein is a 32-year-old assistant professor on the tenure track who joined the faculty five years ago and received a NIH Career Development Award two years ago. Dr. Feinstein's wife is expecting their first child and he would like to request a three-month parental leave. However, Dr. Feinstein has not raised this issue with his mentor, a 60-year-old professor who rarely ever takes time off. In addition, Dr. Feinstein has heard that a newly hired assistant professor is a real "go-getter" working 70-80 hours a week. Dr. Feinstein fears this new mentee will make him look as if he is not serious enough about his research career.

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Adapted from the University of California, San Francisco, Clinical Translational Science Institute (CTSI), Mentor Development Program. Accessed on 5/14/10 at <http://ctsi.ucsf.edu/training/mdp-cases>

Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. Discuss the role of the mentee's gender. How is maternity leave treated differently than paternity leave?
3. How can the concept of workforce flexibility be translated for faculty in clinical and behavioral research?
4. As a mentor how do you address generational differences (with respect to work ethic, work-life balance, or other areas) that arise with your younger mentees?



## **Articulating Your Mentoring Philosophy and Plan**



## **Articulating Your Mentoring Philosophy and Plan**

### **Introduction**

Reflecting upon your mentoring relationships is a vital part of becoming a more effective mentor. This is especially important immediately following a mentor-training session 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 strongly encouraged.

### **Learning Objectives**

Mentors will:

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

**Overview of Activities for the Mentoring Philosophy and Plan Session:** Please note that only core activities are included for this final training session.

|   | Learning Objectives                                                                           | Core Activities                                                                                                                                             |
|---|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Reflect on the mentor-training experience                                                     | Mentors engage in an open discussion of the knowledge and skills they have learned from the mentor-training sessions (Activity #1)                          |
| 2 | Reflect on any intended behavioral or philosophical changes across the mentoring competencies | Mentors reflect on each of the mentoring competencies and write about their mentoring practices before and after the mentor-training sessions (Activity #2) |
| 3 | Articulate an approach for working with mentees in the future                                 | Mentors discuss approaches for working with a new mentee (Activity #3)                                                                                      |

## Facilitation Guide

### Recommended Session for Articulating Your Mentoring Philosophy and Plan (30 minutes)

#### ❖ Materials Needed for the Session:

- Table tents and markers
- Chalkboard, whiteboard, or flip chart
- Handouts:
  - Copies of description and learning objectives for *Articulating Your Mentoring Philosophy and Plan* (page 159)
  - Copies of the *Mentoring Competencies Reflection Worksheet* (page 162)
  - Copies of the *Mentor Self-Reflection Template* (page 163)

#### ❖ Objective 1: Reflect on the mentor-training experience (10 min)

- ACTIVITY #1: Group Discussion of Lessons Learned from Mentor Training (10 min)
  - ASK: Please share with the group one or two ideas that stand out from the mentor-training sessions. These can include lessons learned, ideas that did or did not resonate with you, etc. Once everyone has a chance to share, we can share additional comments.
  - You may want to record ideas generated in this discussion on a white board or flip chart.

#### ❖ Objective 2: Reflect on behavioral or philosophical changes across the mentoring competencies (10 min)

- ACTIVITY #2: Individual Written Reflection Across the Competencies (10 min)
  - Have each participant individually complete the Mentoring Competencies Reflection Worksheet.
  - If there is not enough time to complete the writing activity, they may finish later.



- NOTE: Encourage mentors to edit their compact (if applicable) with these ideas. They can use the *Mentor Self-Reflection Template* to aid this process as well. Another similar tool can be found in “Nature’s Guide for Mentors.”<sup>4</sup>

❖ **Objective 3: Articulate an approach for working with new mentees in the future (10 min)**

- **ACTIVITY #3: Discussion of Ways to Begin a New Mentoring Relationship (10 min)**
  - **TELL:** You will soon begin formally mentoring a new junior faculty member in your department. The two of you have talked by phone several times over the past year to discuss project ideas and you have met a few times since her arrival at your institution.
  - **DISCUSS** (8 min) with entire group. You may want to record the ideas generated in this discussion on a white board or flip chart. Guide the discussion using the following questions:
    1. Specifically, what steps would you take to prepare for meeting with the new mentee in three weeks?
    2. What will you do before the mentee arrives?
    3. What will you do within the first month of the mentee’s arrival?
    4. What do you think is the most important thing you can do to start this new mentoring relationship off on the right foot?

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<sup>4</sup> Lee, Adrian, Carina Dennis and Philip Campbell. 2007. Nature’s Guide for Mentors. *Nature* 447: 791-797.

## Mentoring Competencies Reflection Worksheet

For each mentoring competency, please list one or two specific approaches you have taken in the past and plan to take in the future.

| Competency                                 | Approaches you have used in the past | Approaches you intend to try in the future |
|--------------------------------------------|--------------------------------------|--------------------------------------------|
| <b>Maintaining Effective Communication</b> |                                      |                                            |
| <b>Aligning Expectations</b>               |                                      |                                            |
| <b>Assessing Understanding</b>             |                                      |                                            |
| <b>Addressing Equity and Inclusion</b>     |                                      |                                            |
| <b>Fostering Independence</b>              |                                      |                                            |
| <b>Promoting Professional Development</b>  |                                      |                                            |

| <b>Mentor Self-Reflection Template*</b>                                                                                                                                                                                                                    |                                                                              |                            |                                              |                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|----------------------------|----------------------------------------------|--------------------------------------|
|                                                                                                                                                                                                                                                            | <b>What were the unique challenges and opportunities from the past year?</b> | <b>What was your role?</b> | <b>What happened? What were the results?</b> | <b>Was there any further action?</b> |
| <b>Meetings &amp; Communication</b><br>+<br>–                                                                                                                                                                                                              |                                                                              |                            |                                              |                                      |
| <b>Expectations &amp; Feedback</b><br>+<br>–                                                                                                                                                                                                               |                                                                              |                            |                                              |                                      |
| <b>Career Development</b><br>+<br>–                                                                                                                                                                                                                        |                                                                              |                            |                                              |                                      |
| <b>Research Support</b><br>+<br>–                                                                                                                                                                                                                          |                                                                              |                            |                                              |                                      |
| <b>Psychosocial Support</b><br>+<br>–                                                                                                                                                                                                                      |                                                                              |                            |                                              |                                      |
| <b>Upcoming Year</b>                                                                                                                                                                                                                                       |                                                                              |                            |                                              |                                      |
| <ul style="list-style-type: none"> <li>• What do you want to keep doing?</li> <li>• What would you like to try differently with mentee in upcoming year?</li> <li>• What different resources or training would be helpful to you as the mentor?</li> </ul> |                                                                              |                            |                                              |                                      |

\* From Anderson L, Silet K, Fleming M. 2011. Evaluating and Giving Feedback to Mentors: New Evidence-Based Approaches. *Clinical and Translational Science* 5(1) 71-77.



## Case Study Appendix

*Below are all the case studies included in the Mentor Training for Clinical and Behavioral curriculum, listed by mentoring competency.*

### Maintaining Effective Communication

#### Case #1: Giving Constructive Feedback

As he leaves the crowded conference room, Dr. Tariq (the mentor) tells Dr. Timms (the mentee) he'll see her in a few minutes. Dr. Timms was the last speaker in the practice presentation. Back in his office Dr. Tariq sits looking distractedly out the window and releases a heavy sigh. He shifts his attention back to his notes for a last review of his written comments on Dr. Timms' talk: reading slides...too fast...too long...text too small...too much text...color contrast...meandering....

A few moments later he hears a knock on the door and beckons Dr. Timms to come in. She plops into a chair across from him and looks up expectantly. He meets her gaze, smiles, and then says in 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 in clinic all day tomorrow—and then I'm out of town." 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," continues Dr. Tariq. "I think this conference will be a great opportunity for you to meet some key colleagues in this field." Dr. Timms 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, adding a quick "Thanks."

### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. How could this situation have been handled differently? What should the mentor do now?
3. How do you interpret silence or a minimalist perspective? Does your interpretation of this kind of response differ depending on who the speaker is (e.g., mentee, peer, or supervisor)?

## Maintaining Effective Communication

### Case #2: *Saying No*

Dr. Yin is a clinical faculty member in Psychiatry and a recent recipient of an NIH Career Development Award. Dr. Yin found his first year on this grant very challenging, as he struggled to balance his clinical responsibilities with his research productivity. However, in just the last few months, Dr. Yin has figured out a schedule and an organizational system that is working well for him. He is finally feeling that his research program is moving forward and he is meeting his clinical responsibilities. His research mentor is very pleased with Dr. Yin's progress. However, last week Dr. Yin's department chair asked Dr. Yin to serve on a committee to develop a new anxiety-treatment program that will require committee members to take on specific tasks outside of the meeting time. Dr. Yin cannot imagine finding time for this committee without his research productivity suffering. Dr. Yin feels he must say no to his department chair, but fears the repercussions both in terms of their relationship and the opinion his chair holds of him.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. What advice could you give the mentee for framing a conversation with his department chair?
4. What strategies have you used to assure that your mentee's time is adequately protected?
5. How do you advise a mentee who is receiving conflicting career advice?

## Maintaining Effective Communication

### **Case #3: *Establishing Relationship Boundaries***

Susan really likes working with her mentee, Cynthia. She is inquisitive, a hard worker, and a great problem-solver. Susan really enjoyed going over to Cynthia's house for dinner and meeting her husband and family. Since the dinner at Cynthia's house, Susan asks Cynthia to join her for dinner at a restaurant about once a week. Susan appreciates these opportunities to blow off steam and talk about how her department chair is unethical and how her former collaborator treated her poorly. Cynthia appreciates all that she has learned from Susan, but finds that they are spending increasing time talking about Susan's gripes and personal problems, rather than discussing their joint research. She also doesn't like spending that much time away from her family for dinner with her mentor. Cynthia is wondering how she can get Susan back on-track to talk about work. Cynthia is planning to submit a grant application in the next six months with Susan as her mentor, but is wondering if she made a mistake choosing her as a mentor. Susan is wondering if Cynthia is avoiding her because Cynthia has not written up a draft of an article she promised Susan last month.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. How much is appropriate to share of your personal life with your mentee? What are the boundaries of what you should ask your mentee about their lives?
4. What are the advantages and disadvantages of becoming "friends" with your mentee?



## Aligning Expectations

### Case #1: *The Second-Year Blues*

Dr. Allen is beginning the second year of her faculty appointment in Population Health at a large academic health center. She has a mentor and is working towards establishing an independent research program investigating changes related to obesity, eating behavior, and physical activity in the treatment and prevention of diabetes. However, she is concerned that her mentor never has enough time for a focused discussion about Dr. Allen's research aims for the preparation of a major grant proposal. This situation is becoming frustrating for Dr. Allen. She likes her mentor, whom she understands has been extremely busy the past few months adapting to economic budget constraints, preparing applications for the NIH, and adopting a new family member. Being a politically astute assistant professor, Dr. Allen is reluctant to make a misstep with her well-established, senior mentor, yet she knows how important it is to her academic development to get this grant proposal submitted and funded. Dr. Allen is also concerned that her strong interests in intervention-based research are too divergent from her mentor's more theoretical approach. She wants to start making tangible progress.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. Dr. Allen is relying on having her needs met by one mentor. Do you advise your mentees to have more than one mentor and how can you help a mentee navigate the different expectations articulated by multiple mentors?

## Aligning Expectations

### Case #2: *Misaligned Expectations*

Dr. Wadsworth is a practicing psychologist who has been on the clinical faculty for three years. She is highly motivated to expand her psycho-social research to patients with breast cancer and has discussed this exciting line of investigation with her new mentor, Dr. Sandstone, a senior research faculty member in the Cancer Center with a well-established interdisciplinary research team. Dr. Sandstone was very enthusiastic about Dr. Wadsworth's proposed intervention to improve psychological outcomes of breast cancer patients after surgery. After a few discussions, Dr. Sandstone invited Dr. Wadsworth to join his research team. He introduced Dr. Wadsworth to the research nurse coordinator, Ms. Anderson, and instructed them to work together to develop a research subject recruitment plan. Ms. Anderson has previously been very frustrated with Dr. Sandstone bringing on new investigators who have major clinical responsibilities. However, Ms. Anderson did not feel comfortable expressing any of these concerns directly to Dr. Wadsworth or Dr. Sandstone because of the hierarchy between faculty and research program staff. After about two months, Ms. Anderson finally spoke to Dr. Sandstone, informing him that Dr. Wadsworth's recruitment plan will not yield an adequate number of subjects to power the analysis she wants to conduct. However, Dr. Wadsworth has a heavy clinic schedule and whenever Ms. Anderson tries to set up a meeting to review the plan, Dr. Wadsworth is distracted and in a hurry to leave. Ms. Anderson also advised Dr. Wadsworth to meet with a statistician, but her response was she doesn't think this is a worthwhile investment of her time.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now?
3. What are the questions to consider for a research mentor when establishing an interdisciplinary research team that includes clinician scientists?
4. How might Dr. Sandstone's research team work together more effectively in the future?
5. What could Dr. Wadsworth learn from this situation?

## Assessing Understanding

### **Case #1: *I Thought He Knew These Things***

You are mentoring Dr. Johnson, a primary care physician who is in the second year of a fellowship training program in community health. He is designing a study to investigate the prevalence and health impact of adolescent obesity in the low income multi-cultural urban community served by the clinic where he recently began seeing patients. Dr. Johnson has been drafting an interview protocol for both parents and teens to better understand the role of family stress on food consumption and physical activity. In reviewing the protocols with Dr. Johnson, it becomes apparent that the protocol has not been written to accommodate participants who may not be fluent in English. Moreover, the overall project design seems unrealistic in terms of the number of participants Dr. Johnson can recruit. You realize that although Dr. Johnson genuinely wants to help underserved communities, you assumed that his previous completion of research methods coursework had adequately prepared him to understand the unique needs of this community population.

Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now?
3. How can mentors balance promoting independence with confirming understanding?

## Assessing Understanding

### Case #2: *Should I Know That?*

Dr. Saldaña, MD, PhD, is a new assistant professor in Population Health with a focus on pediatric asthma treatment. He recently made contacts within the local Hmong community who would like to work with him to improve treatment adherence in Hmong children with asthma. Dr. Saldaña is very excited about this potential partnership and wants to apply for an NIH Career Development Award to pursue a community-based participatory research (CBPR) project. He approaches Dr. Hunter, a senior member of his department and asthma expert who has studied treatment adherence, as a potential mentor on the award. However, Dr. Hunter is very reluctant to accept, letting Dr. Saldaña know that she has no experience with CBPR and doesn't know whether she could adequately guide him. Dr. Saldaña assures her that this experience is not necessary because he has identified a mentor in another university with CBPR expertise who can fill that role. He further points out that there is no one in the department who has this expertise and reminds her that his community contacts will be able to help guide and mentor him in this area. Dr. Hunter is still uncertain how well she can assess his study design and progress and wonders how well this other mentor can fill that role at a distance. She is also feeling uncomfortable because she has no experience treating Hmong asthma patients.

### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What types of guidance could Dr. Hunter have offered even though he was not a CBPR investigator? What should Dr. Hunter's next steps be? Where could she send Dr. Saldaña for help?
3. What can mentors do to improve their ability to work with mentees whose professional background and research do not fully match their own?

## Addressing Equity and Inclusion

### Case #1: *Is it Okay to Ask?*

Last year I worked with a scholar who has since left to work at another institution. She was a great member of the team and generated a fair amount of data. I think that she had a positive experience working with our research team, but there are a few questions that 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 woman in our 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?
2. What might the mentor's intent have been in asking the question, and what might the impact be on the mentee?
3. How might you react to this case differently if the mentee was the only openly gay man in the department? How do you engage in such conversations based on interest without feeling or expressing a sense of judgment about differences? How do you ask without raising issues of tokenism? Can you generate questions or approaches to broaching this subject with the mentee?

*From Handelsman, J., Pfund, C., Miller Lauffer, S., and Pribbenow, C.M. 2005. Entering Mentoring: A Seminar to Train a New Generation of Scientists. Madison, WI: University of Wisconsin Press.*

## Addressing Equity and Inclusion

### Case #2: *Communication Challenges*

Dr. Hlavek recently joined the faculty as an assistant professor in the School of Public Health. She has an excellent training record and has had strong research mentoring in health services research. Although her knowledge of the science and research methodology is sound, she struggles with oral presentations as English is not her first language. Recently while giving an important presentation on her research at a professional meeting, someone in the audience commented that she needed to speak slower because he couldn't understand her. Dr. Hlavek was embarrassed and became very self-conscious. Her Slavic accent became more apparent and she started speaking even faster. She also wondered afterwards if her headscarf influenced the public criticism she received.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. Dr. Hlavek calls you after this presentation. She is very upset about what transpired at the conference and shares her concerns about why she may have been singled out. As her mentor how do you advise her?
3. What are the challenges for a mentor when a mentee's second language skills present a barrier to effective communication of his/her research?

## Addressing Equity and Inclusion

### Case #3: *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 descent, Dr. Biswas, who has an interest in the underlying sociocultural factors affecting the prevalence and treatment of Type 2 diabetes. It was agreed that Dr. Biswas 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.

However, Dr. Roust dismisses the feasibility of the idea almost immediately; he doesn't understand how what he considers to be anecdotal historical data could be used in a convincing way: he is concerned how the added work will impact the current project effort and that it will be far too time consuming for Dr. Biswas to stay on track with his fellowship; he also doubts the NIH would be supportive of the endeavor. He lets Dr. Biswas know his feelings and tells him he can't take such risks so early in his career, especially in a tight funding environment. He also wonders privately how well Dr. Biswas will be received by community members and how well equipped he is for this kind of research, especially given Biswas's own limited cultural knowledge and language barrier.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. 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, and if so, how?
3. 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?

## Addressing Equity and Inclusion

### Case #4: *Cultural Sensitivity*

You just finished your master's degree in Public Health and a residency in Pediatrics. To further your research training, you join an established research team studying the impact of free clinics on public health in economically-depressed urban areas. Your project will be to examine the effect of a new, free pediatric clinic on children's health in an African-American community. There are many research questions you could ask, but your mentor insists you use the research questions used in his other studies, so he can compare the data across studies. Most of those previous studies were developed and used in Latino communities. After visiting the community you will study and noting several cultural differences, you believe that the questions should be revised for your study. Your mentor disagrees and tells you to use the standard questions.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do now?
3. What assumptions about the study population and the research is the mentor making? What might be the impact of those assumptions?



## Fostering Independence

### Case #1: *Independent Research?*

Dr. Klein is very excited about the grant proposal she is writing to the NIH. The proposal builds upon research she has been conducting as an early-stage investigator in Dr. Janco's research group. Dr. Klein feels strongly that the proposal clearly describes the logical next steps in the project and relates the proposed research to her previous clinical work. When Dr. Klein meets with Dr. Janco to discuss the proposal, she is surprised to discover that Dr. Janco is less than enthusiastic. Dr. Janco informs Dr. Klein 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, 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?
2. What could have been done to avoid this situation? What should the mentor do now? What should the mentee do?
3. How is independence redefined in a restricted funding climate and an era of collaborative research?

\*Note: This case is taken from the mentee's perspective, providing mentors a slightly different lens.

## Fostering Independence

### *Case #2: How Much to Help?*

Dr. Richardson is a clinician who is nearing the end of his fellowship, but wishes to continue his research training in his mentor's research group. Thus, he is independently applying for a Career Development award from the NIH. His mentor believes that Dr. Richardson is a very valuable asset to the team and is highly supportive of Dr. Richardson continuing his training, but does not have funding to support Dr. Richardson's salary. The mentor has agreed to advise Dr. Richardson in the preparation of the application, although noting that it should represent Dr. Richardson's independent work.

When Dr. Richardson provides his mentor with a draft of the application, his mentor becomes concerned about the quality of the writing. The research ideas are fairly solid, but the research plan has some minor flaws and the proposal is very poorly written.

Dr. Richardson's mentor believes that the proposal in its current form would not be a strong contender for funding. Although the application should reflect Dr. Richardson's work, the mentor has a vested interest in the proposal succeeding so that he can retain one of his program's most productive researchers. The mentor is unsure how to improve Dr. Richardson's proposal while still preserving it as Dr. Richardson's independent work. Moreover, Dr. Richardson has invested more than a month in preparing this application so the mentor is concerned that Dr. Richardson's defensiveness may create a further obstacle to improving the proposal.

Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What could have been done to avoid this situation? What should the mentor do now?
3. How would independent research be defined in this case?

## Fostering Independence

### **Case #3: *Granting Independence: How Much and When?***

Dr. Lindstrom, junior faculty member in my research group, has just had a manuscript accepted for publication in a major journal that reports the results of a project that was supported by a R21 grant of which he was Principal Investigator. I was his mentor during his fellowship and K23 award. The topic is related to work that we originally did together, though he took the lead on the project. I encouraged him to submit the manuscript without my name on it, but I wonder if that was the right thing. After all, this research was all built on a foundation of work that originally was mine. In addition, one of my big grants is about to end and I need to apply for a new grant. At this point, I am not sure whether it is appropriate for me to submit a grant proposal that would be the logical next step after my former mentee's published project. I am very proud of Dr. Lindstrom, but I am not sure that I am really ready to have him be completely independent working in an area so closely related to my own work.

Guiding Questions for Discussion:

1. What are the main issues that are raised in this case study?
2. What advice would you give the mentor on how best to proceed? Is it too late for him to have second thoughts about his mentee's independence?
3. What is an alternative perspective Dr. Lindstrom's mentor might take?

## Fostering Independence

### Case #4: *The Slow Writer*

A young investigator in my research group is adept at analysis of large data sets, but is a very slow writer. Last fall, I set multiple deadlines that this scholar missed, while another post-doc in my group wrote a grant proposal, submitted a paper, and recruited subjects for a clinical trial. Over the holidays, the slow writer had a breakthrough and produced an outline of a manuscript. To avoid delays in publications, I have now taken the lead in writing the manuscript based on this investigator's work. However, to become an independent investigator, I know this mentee must be able to write independently. Setting deadlines for detailed outlines, manuscript sections, figures, etc. hasn't worked. Trying to communicate the importance of manuscripts to the scientific endeavor hasn't worked either. Neither has encouragement. Veiled threats don't seem professional. Other than being patient, what should I do?

Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. How do you convey the level of independence you expect from your mentee?
3. What is the mentor's responsibility in this case?

## Promoting Professional Development

### Case #1: *Choosing a Different Path*

You are currently mentoring two post-doctoral scholars in your research group. Both are very talented and hardworking; however, one has made it clear that once completing his fellowship, he would like to work for a private non-profit research institute. The other scholar has her heart set on applying for tenure track positions at large academic medical centers. Lately, you find yourself spending more time giving professional development advice to the post-doc who intends to apply for faculty positions. 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 neglecting the other scholar, believing that he is not worth your time and advice if he is pursuing a research career outside of academia.

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. What should the mentor do now? What value judgments are being made by the mentor?
3. How might non-academic career interests and personal goals or obligations play into a mentee's decision of career path? How might the mentor draw these factors out in discussion?
4. What may have motivated the mentee to pursue a career path outside of academic medicine? Does he feel he belongs?
5. What other career paths are possible and how do they fit into the overall pursuit of improving human health?

## Promoting Professional Development

### Case #2: *Teaching Ethical Behaviors*

Megan and Matthew are doctoral students in Clinical Investigation, working at the same university, but in different research groups. They are in a few classes together and frequently discuss the progress of their research projects, both of which focus on the implications of patient trust in health care providers. At a graduate student research seminar, Megan presents her study design and preliminary findings. After the seminar, Megan shares with Matthew how excited she is to get this work published, but is frustrated that her mentor, who is co-author on the paper, has been working on a grant and hasn't had the time to review her draft and provide feedback. Without telling Megan, Matthew spends the next few months conducting his own version of Megan's study with great support from his mentor who provides him with timely feedback. Matthew then publishes an important paper on this work while Megan's paper is still under review. Megan had no idea about this until she sees the article appear in a high-impact journal. Megan proceeds to report this plagiarism to Matthew's mentor.

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Adapted from the case, *Mum's the Word*, CTSPedia.org, Clinical Research Ethics Educational Materials (John Banja, PhD, Emory University)

#### Guiding Questions for Discussion:

1. What are the responsibilities of mentors to educate their mentees about the ethics of research collaboration and authorship?
2. How can a mentor model these behaviors?
3. As Matthew's mentor how would you follow up with Matthew? Should there also be follow up with Megan and her mentor?

## Promoting Professional Development

### **Case #3: *Looking for Balance***

Dr. Feinstein is a 32-year-old Assistant Professor on the tenure track who joined the faculty five years ago and received a NIH Career Development Award two years ago. Dr. Feinstein's wife is expecting their first child and he would like to request a three-month 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 and is considering mentoring a new faculty member this spring. Dr. Feinstein has heard that this new assistant professor is a real "go-getter" working 70-80 hours a week. Dr. Feinstein fears this new mentee will make him look as if he is less serious about his research career.

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Adapted from the University of California, San Francisco, Clinical Translational Science Institute (CTSI), Mentor Development Program. Accessed on 5/14/10 at <http://ctsi.ucsf.edu/training/mdp-cases>

#### Guiding Questions for Discussion:

1. What are the main themes raised in this case study?
2. Discuss the role of the mentee's gender. How is maternity leave treated differently than paternity leave?
3. How can the concept of workforce flexibility be translated for faculty in clinical and behavioral research?
4. As a mentor how do you address generational differences (with respect to work ethic, work-life balance, or other areas) that arise with your younger mentees?

