



WORKBOOK

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INTRODUCTION



About the Leadership and Management in Action Program (L-MAP)

The Leadership and Management in Action Program (L-MAP) introduces bioscience graduate students and postdocs to the interpersonal and psychological foundations of leading teams and managing people. It responds to the unique position of these trainees, who may be practicing leadership for the first time and who typically lack formal authority within the research environment.

This training program was developed based on real-world research on the leadership and team dynamics challenges that graduate students and postdocs regularly encounter in the scientific research environment. Using real-world scenarios and current research on leadership and team dynamics, L-MAP highlights professional behaviors and communication strategies that can be used in a variety of leadership and management scenarios.

The L-MAP training program uses an active-learning format based on discussion of authentic case studies drawn from the experiences of graduate students and postdocs from diverse backgrounds. Case study training facilitates learning through active problem-solving and allows participants to change attitudes, behaviors, and decisions related to conflict management, communication strategies and navigating organizational hierarchies.



Program Objectives

Research-intensive institutions increasingly recognize the importance of team science and collaborations, both between research teams and with industry partners to develop new knowledge, products, and technology. Trainees in this program will learn skills to participate in and develop functional teams that respect diversity and foster inclusion. Through active learning in teams, biomedical graduate students and postdocs develop applicable leadership and management skills that will transfer to any career in the biomedical sciences.



Program Structure

There are 6 units in the L-MAP training program:

1. **Professionalism and Professional Identity**
2. **Leading Without Authority**
3. **Negotiation**
4. **Working in Teams**
5. **Inclusive Organizational Cultures**
6. **Writing your Leadership Statement**

Each unit builds on interpersonal and communication skills presented in previous units. Participants begin by practicing discrete skills early in the program and move toward analyzing increasingly complex leadership scenarios toward the end.

Unit 7 provides supplemental materials on career exploration and strategies for marketing yourself on the job market and preparing for job interviews.

How to Use the L-MAP Workbook

Each L-MAP unit consists of **1 Pre-Work** to be completed before the workshop session, **2 Workshop & Case Studies** to be analyzed during the workshop session, and **3 Reflection & Practice exercises** to be completed after the workshop.

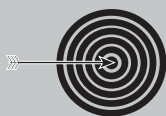
On the unit introduction page, you will see a checklist like the one below:

- 1 Pre-Work:**
 - ☐ Read article
 - ☐ Respond to questions before workshop
- 2 Workshop:**
 - ☐ Case Studies & Workshop activities
- 3 Reflection & Practice:**
 - ☐ Leadership Journal
 - ☐ Practice

Use the unit checklists to stay on track as you move through the units and activities.

Key Concepts and Tools

Throughout the L-MAP workbook, you will see bolded arrows that indicate key concepts and tools:



Understand the purpose of your work.

These are leadership and management strategies for you to develop and practice. The L-MAP exercises will guide you through structured practice of these strategies. You will set additional practice goals and keep track of your progress between workshop sessions.

Leadership Journal

Self-awareness is a key part of leadership development. We develop self-awareness through reflection and practice. Throughout this program, you will keep a Leadership Journal. At the end of the program, you will begin to compose a Leadership Statement that incorporates a vision and mission statement. The purpose of this short statement is to be a guide-post, a mantra, or a “North Star” for you as you continue to develop during your doctoral and postdoctoral work.

UNIT 1

Professionalism and Professional Identity



Introduction

Working in a research group is a professional endeavor. Successful science requires a professional attitude toward conducting research. These skills are not necessarily taught; graduate students often go on to postdoc roles, faculty roles, or further along their career path without ever having thoughtfully reflected on their role as a professional.

Understanding professionalism at work—both in and beyond your research group—requires an understanding of how one thinks about professional identity, workplace culture, and the norms and expectations built by the social fabric of the workplace. Professionalism also requires examining behavior, including the effects of one's behavior on others in the workplace.

In this unit, participants will be introduced to the concepts of professional identity and professional behavior. They will understand the role of workplace culture and the social norms that derive from it. They will be exposed to communication strategies for co-creating professional norms within a work-group and addressing unprofessional behavior (between peers or between an authority figure and non-authority figure). They will also begin to formulate what it means to be a leader in a professional setting, even without a formal title.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Define professional identity, professional behavior, and workplace culture.**
- **Identify professional vs. unprofessional behavior.**
- **Identify the effects of professional and unprofessional behavior on others in the workplace.**
- **Identify communication strategies for addressing unprofessional behavior.**
- **Apply stress and conflict management strategies.**

1

Pre-Work:

- ☐ Read Professionalism article
- ☐ Respond to questions before workshop

2

Workshop:

- ☐ Case Studies & Workshop activities

3

Reflection & Practice:

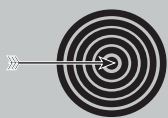
- ☐ Leadership Journal
- ☐ Professionalism Practice

1 Professionalism Pre-Work

Read the article below on professionalism, and respond to the following questions before the workshop.

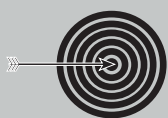
Graduate school and postdoctoral training are times when trainees learn the backbone of their field. During this period, students and postdocs are immersed in learning the fundamental science behind their work and defining questions that will motivate their research career trajectory. What is often missing from this experience is the discussion of how their career trajectory and professional identity may emerge and evolve. Whether trainees go on to a scientific research or other career path, at some point, they will manage others and become professionals in a field of work. Developing field-specific skills and knowledge is necessary but not sufficient for transitioning out of graduate and postdoc training into the professional world. Understanding one's own identity as a professional, regardless of the field, can help to enhance graduate student employability (Jackson, 2016).

Professional identity is a mental model that a person holds related to how they view themselves as a professional (Slay and Smith, 2011). Professional identities are crafted from the values, culture, skill sets, and meaning that one attaches to their work and their career path (Dutton et al., 2010). Crafting a mental model of who an individual is as a professional can enhance the meaning one finds in their work as well as their psychological well-being (Caza and Creary, 2016). There are three key factors in developing a professional identity: connecting work to purpose, understanding professional norms, and knowing how to correct behavior that violates professional norms.



Understand the purpose of your work.

Connecting work to purpose is important. Understanding the *why* behind your work can influence how the work you are doing today is connected to the potential work you will do over the course of your career. Identifying the purpose behind the work will help you begin to craft your professional identity and can influence how closely you follow professional standards.



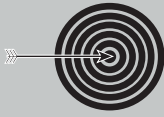
Understand the professional norms of your field.

A well-crafted professional identity provides guidance on how to behave at work and is tightly connected with the professional norms of the environment (Ibarra, 1999). An important step toward crafting a professional identity is to examine the social and professional norms of the workplace and understand why those norms exist. Professional norms cover a range of behaviors including how we communicate, dress, use resources, and collaborate or compete in the workplace. While some norms are codified in workplace policies, others are communicated implicitly through social interactions among colleagues.

In examining the professional norms of your field, keep in mind that they are subjective, culturally determined, and in most cases have been established by members of majority groups. Women and people of color are underrepresented in the scientific research enterprise and standards of professionalism in science have historically centered the white male experience (NSF, 2015). Therefore, the professional norms of science could, intentionally or unintentionally, structurally exclude marginalized and underrepresented individuals. Aysa Gray (2019) encourages taking a critical and analytical perspective toward professional norms to decenter white supremacy culture. As a leader, you can redefine professionalism and create an inclusive work culture that values diversity and makes space for individual experience and expression (Frost and Regehr, 20213). Learning about and questioning professional norms is the first step in this process.

1 Professionalism Pre-Work

continued

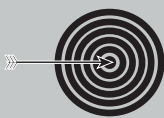


Build professional relationships.

A professional environment is a social enterprise that requires colleagues to help one another and to maintain professional interpersonal relationships. Individuals and groups need to follow the parameters of acceptable and unacceptable workplace behaviors defined by workplace norms. When you or a colleague behave in a way that runs counter to the professional norms, that behavior creates conflict that affects others in the work environment. You must be able to communicate norms for acceptable professional behavior, recognize unprofessional behavior in yourself and others, and discuss instances of unprofessional behavior without damaging professional relationships between colleagues.

As a leader, it is important that you acknowledge and correct unacceptable behavior that threatens the cohesion of your team, otherwise it can cycle out of control. At the same time, it is important to consider the perspective and experience of others and question your own assumptions about the situation. What constitutes a professional norm violation to one person may represent an essential expression of identity and culture to another. A trauma-informed understanding of behavior and restorative practices can also be helpful (National Center for PTSD, 2013; Boulder County DA, 2019). We know that past experiences can shape current behaviors. It is important to recognize that it may be challenging to change longstanding behavior patterns. As a result, it might be necessary to make sure proper supports are in place when needing to correct or adjust behaviors.

When addressing unprofessional behavior, emotions can run high. It is important to manage your own emotional response to the conflict and create a safe space for your colleagues to discuss shared professional norms. Before beginning a behavior-correction conversation, analyze your own emotions toward the situation. Are you angry? Saddened? Afraid? To maintain professionalism while managing conflicts, develop strategies for regulating your emotions. Consider deep breathing, mindfulness practice, or simply a short walk before engaging in a difficult conversation with colleagues.



Focus on behavior.

Professional identity and professional norms give us a guidebook for how to behave in the workplace. When correcting unprofessional behavior, it is important to keep the conversation focused on the behavior rather than the person. Avoid making “you” statements, which can feel accusatory and lead to defensive postures. Instead, identify the unprofessional behaviors that have been observed and note how the behaviors affect others in the workplace. Graduate and postdoctoral training is meant to be transformative; you should expect to change as you construct your professional identity in the context of professional norms. However, professional identity formation should also be a process that allows everyone to retain and leverage their individuality and perspectives. Therefore, invite your colleague to help resolve the conflict by co-creating shared professional norms (Aeder, et al., 2018). Ask open-ended questions and practice active listening to understand their perspective.



1 Professionalism Pre-Work

Reading Comprehension & Analysis Questions

To begin developing your professionalism skills toolkit, respond to the following questions. Be prepared to discuss your answers and apply these concepts to case studies during the workshop session.

1. Why does professionalism matter in science?

2. What are the professional norms of the scientific research enterprise? Do you agree with them?

3. What is your professional identity?

4. What workplace culture (social norms and expectations) would you create as the leader of your own work group?

5. How could you influence others to follow the workplace culture?

20 Professionalism Workshop & Case Studies

Case Study: The Cooper Lab

The Cooper lab is a prominent lab on campus. The lab researches why children develop leukemia, developmental differences, and outcomes for children compared to adults. The Primary Investigator (PI) is Sasha Cooper, MD, PhD. Dr. Cooper has been conducting research in pediatric cancer throughout her graduate and postdoc experiences and has published extensively in her field. She has been at the university for a decade and is in the third year of running her own laboratory. She has established a reputation of being a demanding professional with high expectations for her lab members.

Other members of the laboratory include a lab manager, two postdocs, and 5 doctoral students.

Dr. Cooper believes that part of her job as a PI is to engage in professional development for her team. She also travels extensively because she is high profile and well known in the field. This also means that there are many high profile people visiting the lab.



Situation 1: The Postdoc Perspective

You are a postdoc in the Cooper lab. There is one other postdoc who works really hard, but does not really engage much with the group because she is focused on a particular project that is being conducted by herself and the PI. The graduate students all started within a couple years of each other and really seem to have formed a solid bond with each other – to the point where they spend all of their time together, both inside and outside the lab. On the one hand, this is great because there is little conflict between them. They work collaboratively on problems and even spend some of their off-work time thinking about work and their careers.

At the same time, they often seem like they do not really know that they are at work. They will talk loudly about personal issues that happened to them outside of work. They will watch Netflix shows together while working (this often leads to further loud discussion). When someone visits the lab, they tend to turn inward (they are shy) and do not engage in conversation with these professionals.

Your PI has made it clear that she has quite high professional standards. However, the students don't really seem to know what that means.

Your PI is returning today and you feel that you need to address these unprofessional behaviors before her return.

1. What are the professionalism conflicts in this scenario?

20 Professionalism Workshop & Case Studies

continued

Case Study: The Cooper Lab

Situation 1: The Postdoc Perspective

2. What are the ideal professional norms for this work environment?

3. In this situation, how could you balance setting professional norms with building inclusive community?

20 Professionalism Workshop & Case Studies

Case Study: The Cooper Lab

Situation 2: The Graduate Student Perspective

You are a graduate student in this lab. One of your primary responsibilities is to work with a mouse animal model to understand certain cell mutations. Because a lot of your time is spent in performing surgery on mice, you often have medical fellows rotating through the lab and working with you. Your experience has been that the medical fellows are often not that engaged because they are there for a short time and trying to develop a particular skill, not trying to be a part of the lab.

The other day, when you were conducting a surgery with one of the fellows, that fellow put his hand out in your direction and said: "Forceps." No please or thank you, and didn't even acknowledge it was you that was the object of the request. You were rather shocked, so you did not say anything about it in the moment, just handed over the forceps and went about your business. But it has been bothering you – and this isn't the first time something like this has happened.

1. What are the professionalism conflicts in this scenario?

2. What are the ideal professional norms for this work environment?

3. What would you do in this situation?



3 Professionalism Reflection & Practice

Leadership Journal: Professionalism

Write a short journal entry on the topic of professionalism. This journal entry should answer the following questions (although you are free to write on whatever feels relevant and answer or ask your own questions as well).

- What key ideas resonated with me most strongly during this unit?
- How do these ideas relate to my daily work? How can I begin to put some of these ideas into practice?
Create 1 or 2 small experiments for yourself to practice before the next workshop session.
- What questions do I still have?



3 Professionalism Reflection & Practice

Practice - Professionalism

Identify one professional habit presented in this unit or identified in your leadership journal that you would like to practice. Write your goal or experiment below. Practice every day until the next workshop session. Track your progress and note what you learn.

My Goal/Experiment:

Date	Situation	Your response	What did you learn?

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 1.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 1.

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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UNIT 2

Leading Without Authority



Introduction

Leadership is fundamental to career success, whether in an academic research group or another economic sector. Understanding leadership begins with understanding different perceptions of power. One definition of leadership is “using social influence to motivate others to achieve a goal” (Kruse, 2013). This means that anyone can exercise leadership, and moreover everyone should exercise leadership, especially when working in teams. Leadership therefore is not about having formal authority, but about exercising influence in various ways.

The more negative side is that power can corrupt, and understanding when and how power goes wrong can be the first step to both intervening in corrupt power displays and ensuring that you do not allow power to negatively influence your own behavior. Learning about the different ways in which power can be wielded, people can use power as social influence even when they are not in formal positions of authority.

This unit examines leadership and its relationship to power. Participants will learn about different bases of power and the outcomes of exercising these different powers. Further, learners will learn communication strategies to effectively use influence, even when they don’t have formal authority.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Define leadership and power.**
- **Identify the five bases of power and their outcomes.**
- **Analyze situations for leadership opportunities.**
- **Explain the abuse of power (coercion).**
- **Discern influence from two perspectives: relationships and motivation.**

1

Pre-Work:

- ☐ Read Leading Without Authority article
- ☐ Respond to questions before workshop

2

Workshop:

- ☐ Case Studies & Workshop activities

3

Reflection & Practice:

- ☐ Leadership Journal
- ☐ Leading Without Authority Practice

10 Leading Without Authority Pre-Work

Read the article below on leading without authority, and respond to the following questions before the workshop.

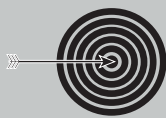
Leadership and Power

If you ask a small child what a leader is, they will describe someone with authority over them: teachers, parents, coaches, etc. As children mature and gain some experience, you might hear them describe the proverbial “Boss CEO,” wearing a suit and wielding decision-making authority over others.

This idea that leadership stems from decision-making authority is deeply ingrained in our culture and it is a lesson we learn from an early age (Schyns and Meindl, 2005). However, leadership is not simply a title or position, it is a behavior, and moreover, it is accessible to anyone with the desire to motivate others to achieve some sort of goal.

Leadership is not about control, nor is it necessarily about decision-making authority. Rather leadership is about influence (Haslam, Reicher, and Platow, 2010). Influence comes from different sources of power and can be utilized in various ways.

Leadership – Behavior that motivates others to achieve a goal



Understand bases of power.

Classic research on power that has been used for decades to understand influence and leadership starts with the assumption that power is the influence that one person has over another (French and Raven, 1959). The research suggests that there are five sources of power:

Formal Authority Required	Coercive – power derived from the use of force or threats to get someone to follow a direction or order
	Legitimate – power derived from a particular title or role
	Reward – power derived from control over resources, the ability to reward others for particular behaviors
Formal Authority Not Required	Expert – power derived from unique knowledge or expertise
	Referent – power derived from respect and trust that is earned

Coercive power is based on inciting fear. Fear-based decision-making can lead to resistance, or worse, behaving in one way and presenting in another (i.e., sweeping problems under the rug). Legitimate and reward power are closely related and include formal authority and control over resources. These types of power are what people often typically think of when they think of leadership, and have demonstrated that they may lead to compliance.

Expert power and referent power are more likely to lead to commitment – intrinsically motivated desire to follow a behavior. Those with expert power have unique knowledge that is valuable to others, and those with referent power build trust and respect with their peers through their integrity and relationship-building skills. Expert and referent power are both examples of bases of power that do not require formal titles or control over resources – they do not require authority.

10 Leading Without Authority Pre-Work

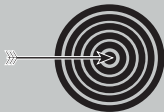
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Leading without authority

As a doctoral student or postdoc in a research group, you may not have any legitimate or reward power, but you do have the ability to influence and lead others through expert and referent power. Your ability to exercise these types of power stems from understanding what motivates people and building meaningful relationships (Cialdini, 1987). To understand your own power, ask yourself: A) What unique value do I provide (expert power)? and B) How do I develop trusting relationships with my colleagues and supervisors (referent power)? Knowing your unique value requires listening to and understanding others and then building trust and respect between yourself and others.

How to enact influence

The following are techniques for enacting your bases of power that are not based on authority, but rather on your unique contributions and your relationships with others. Fundamental to exercising your expert and referent power is building meaningful relationships with others.



Understand human motivation.

Leaders with formal authority and control over resources often use extrinsic motivators to encourage people to comply with their desires. Leading without authority requires understanding the concept of intrinsic motivation, or the desire to achieve goals based on one's internal purpose – and is driven by curiosity and the desire to try new things and learn. Self-determination theory (Deci and Ryan, 2010), suggests that there are three fundamental components that influence intrinsic motivation:

- 1. Autonomy – a sense of ownership and control over outcomes**
- 2. Competence – a feeling of confidence in one's own abilities**
- 3. Relatedness – a sense of belonging, that this work provides value to others**

The research suggests that if a task contains these components, that it is more likely to lead someone to be intrinsically motivated (Ryan and Deci, 2017). As someone without formal or legitimate authority, understanding what motivates others can help you to lead others toward achieving their goals.



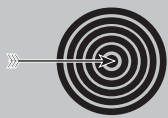
Use active listening.

Active listening is a technique in which an individual suspends judgment and engages in listening to another without providing reactive thinking or advice (Jones, Bodie, and Hughes, 2016). Active listening requires turning off the stream of thinking and evaluation that we all tend to engage in when we are hearing others, and also requires paying attention to the non-verbal cues we display when we are listening. Helping others feel “heard” and ensuring that you have truly understood what they are saying or asking for helps to establish trust in the relationship.

1 Leading Without Authority Pre-Work

continued

Research has shown that there are a variety of factors that may inhibit active listening. Distraction is particularly prominent – perhaps you are already thinking about the next thing you are going to say, or perhaps you are worrying about a disagreement you had with your friend earlier. Active listening can also be impacted by unconscious social biases that cause us to inadvertently stereotype individuals, which can influence how we listen to them (Sumner 2013). Active listening requires us to devote full attention to the conversation to understand the other’s perspective, and become aware of (and curb) intrinsic biases that may warp that understanding. It is our responsibility to come to work as focused as we possibly can be. This might take different preparation for different people. For example, some folks may find use in scheduling 5 minutes between meetings to practice a mindfulness exercise so that they are prepared to bring their full attention to each interaction.



Ask the right questions.

Equally important to active listening is asking questions that stimulate valuable responses. Asking questions, rather than dictating solutions, creates opportunities for your team members to feel autonomy, competence, and relatedness that influence their intrinsic motivation. Different question types send different messages to the responder and can also have an effect on how they choose to respond. There are four types of questions, each with implications to consider (Schein, 2013):

- 1. Diagnostic inquiry** – evaluative questions, designed to steer the other person’s thinking in a particular direction and to evaluate the content of the answer
- 2. Confrontational inquiry** – inserting one’s own perspective into the question, when the person asking their question inserts their own opinion into the question itself
- 3. Process-oriented inquiry** – shifting the conversation to the conversation itself, an opportunity to ask if this conversation is the right type of conversation for this particular issue and including both parties in the process of deciding this
- 4. Humble inquiry** – questions based in pure curiosity, accessing one’s own ignorance and actively removing bias from the question to gather as much knowledge from the other person as possible.

At the heart of leading without authority is recognizing the importance of building meaningful relationships. Meaningful relations start with a foundation of trust and recognition of the value that each individual provides to the overall dyad or group. Knowing your own value, or unique expertise, and earning the respect of others, can help you to exact influence – leading others to be motivated to achieve particular goals.



1 Leading Without Authority Pre-Work

Reading Comprehension & Analysis Questions

To begin developing your leadership skills toolkit, respond to the following questions. Be prepared to discuss your answers and apply these concepts to case studies during the workshop session.

1. What are the different types of power and how can they be used effectively?

2. How can abuse of power (coercion) lead to unethical outcomes?

3. What unique value do you provide (expert power)?

4. How can you develop trusting relationships with colleagues and supervisors (referent power)?

5. How can you enact influence as a graduate student or postdoc?

1 Leading Without Authority Pre-Work

Reading Comprehension & Analysis Questions

To begin developing your leadership skills toolkit, respond to the following questions. Be prepared to discuss your answers and apply these concepts to case studies during the workshop session.

6. As a leader, how can you express authentic identity and challenge leadership stereotypes?



20 Leading Without Authority Workshop & Case Studies

The following two scenarios describe two different types of leaders with decision-making authority, leaders who have legitimate power.

The labs described work on similar but distinct research under the shared umbrella of drug addiction and neuroscience. Both examine addictive drugs and the science behind them: one examines the effects of addiction on human behavior and the other examines the pharmacology of addictive drugs to understand how they affect the brain.

Case Study 1: The “Doc Ada” Lab

Dr. Adamina Fowler, or “Doc Ada” as she is often called, is a PI for a lab that examines the effect of opioid addiction on people with chronic pain. She is known for her caring nature, and even volunteers outside of her research with addicts both to get a qualitative feel for their experiences which helps to inform her work and also to act as a counselor (in addition to her research credentials, she earned a licensed certification in counseling).

Howie Walker is the lab manager and has been working with Doc Ada for about 15 years. He started out as her personal assistant when she hired him through an online add to do some odd jobs for her early in her lab. They formed a tight bond and have been together ever since, he was the first (and only) lab manager she hired when she started her lab 8 years ago. Howie is smart, organized, and charismatic. His hobby is magic, and he often brings and practices magic tricks in the lab. He is arguably around more often than Doc Ada, and he is known as her “gatekeeper.” All decisions are effectively made by him (and supported by Doc Ada).



Situation 1: The Postdoc Perspective

You are a postdoc in Doc Ada’s lab. You’ve decided that as much as you love the research, you really want to go into clinical counseling work. Watching Doc Ada has inspired you. Even though Doc Ada does this work herself, she does not necessarily support her research team in doing it, and you think that she will not be supportive of your decision.

1. Identify the power dynamics, conflict, and ideal outcome in this situation.

20 Leading Without Authority Workshop & Case Studies

continued

Case Study 1: The “Doc Ada” Lab

Situation 1: The Postdoc Perspective

2. How could you use active listening or asking the right questions to understand another person’s perspective?

3. How could you enact influence through expert or referent power to achieve the ideal outcome?

20 Leading Without Authority Workshop & Case Studies

Case Study 1: The “Doc Ada” Lab

Situation 2: The Graduate Student Perspective

You are part of a group of graduate students working in Doc Ada’s lab, and you’ve been making progress on writing a grant for a randomized outpatient study to determine if individual drug counseling increased the effectiveness of a drug used for individuals dependent on prescription opioids. There is a particular postdoc who keeps interfering in the work. It’s not her area of expertise, but she is extroverted and confident, and she often steamrolls the conversations of the graduate students in the group. You respect her thinking, but you really think it would be better if she let you all do the work you are doing.

1. Identify the power dynamics, conflict, and ideal outcome in this situation.

2. How could you use active listening or asking the right questions to understand another person’s perspective?

3. How could you enact influence through expert or referent power to achieve the ideal outcome?

20 Leading Without Authority Workshop & Case Studies

Case Study 2: The Kripke Lab

Dr. Noah Kripke's lab is focused on molecular pharmacology, specifically examining addictive drugs and how the chemical make-up of abused drugs interacts with the physiology of the brain to become addictive substances. Dr. Kripke is a fairly new PI, and has been the head of his lab for three years. In that short time, he has developed quite a reputation.

Dr. Kripke is known to be competitive, and because the research he is doing is so interesting, many students are motivated to work in his lab. This competitive nature extends beyond the value of his work. Graduate students in his lab know that his vetting method is to put two or more different students on a particular project, and then pit them against each other. Whichever student completes the experiments - and finds the expected results - first, gets to stay in his lab.



Situation 1: The Graduate Student Perspective, Part 1

You are a graduate student who recently joined Dr. Kripke's lab. While you do not like the competitive nature of his lab structure (i.e., weeding people out through competition), it's worth it to you because his research aligns exactly with your interests. You've decided that you want to encourage the other graduate student who has been assigned to the same project as you to work together – to collaborate on the experimental design, execution, and analysis, and to present your work in tandem so that it becomes impossible for Dr. Kripke to select one of you over the other.

1. Identify the power dynamics, conflict, and ideal outcome in this situation.

2. How could you use active listening or asking the right questions to understand another person's perspective?

20 Leading Without Authority Workshop & Case Studies

continued

Case Study 2: The Kripke Lab

Situation 1: The Graduate Student Perspective, Part 1

3. How could you enact influence through expert or referent power to achieve the ideal outcome?

20 Leading Without Authority Workshop & Case Studies

Case Study 2: The Kripke Lab

Situation 2: The Graduate Student Perspective, Part 2

You and one other graduate student, both in Dr. Kripke's lab, have been tasked with replicating the result of an experiment initially run by one of the postdocs in the lab. The other graduate student found the exact same result as the postdoc, but no matter how careful and thoughtful you have been, you could not replicate the results. You are concerned because you just don't see how the postdoc and other graduate student could have found the results they did. You followed the protocol to the letter, you used exactly the same materials, yet nothing. To add to this, the other day, you saw the postdoc and the graduate student talking in hushed tones outside, tucked away in a corner of the building next to where the garbage bins are. You couldn't hear the whole conversation, but you overheard your name and the phrase "can't know."

You just got word that Dr. Kripke wants to see you. Historically, meetings with Dr. Kripke end with the other person in tears.

1. Identify the power dynamics, conflict, and ideal outcome in this situation.

2. How could you use active listening or asking the right questions to understand another person's perspective?

3. How could you enact influence through expert or referent power to achieve the ideal outcome?

30 Leading Without Authority Reflection & Practice

Leadership Journal: Leading Without Authority

Write a short journal entry on the topic of leading without authority. This journal entry should answer the following questions (although you are free to write on whatever feels relevant and answer or ask your own questions as well).

- What key ideas resonated with me most strongly during this unit?
- How do these ideas relate to my daily work? How can I begin to put some of these ideas into practice?
Create 1 or 2 small experiments for yourself to practice before the next workshop session.
- What questions do I still have?



30 Leading Without Authority Reflection & Practice

Practice - Leading Without Authority

Identify one leadership habit presented in this unit or identified in your leadership journal that you would like to practice. Write your goal or experiment below. Practice every day until the next workshop session. Track your progress and note what you learn.

My Goal/Experiment:

Date	Situation	Your response	What did you learn?

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 2.

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Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 2.

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UNIT 3

Negotiation



Introduction

The word “negotiation” often induces stress and fear; however when we think about negotiation as a lens for problem-solving, we open up ourselves to opportunities to solve problems with others more effectively. Working with others inevitably requires negotiation skills. The purpose of this unit is to introduce key negotiation lessons and provide opportunities for practice through research group-based situations.

Negotiation is problem-solving with others, and typically involves more than just a one-off exchange. Remembering that negotiations happen inside long-term relationships is important. Research has shown that people who take future vision or long-term perspectives are more likely to act ethically and to build better relationships because they are considering the long-term consequences (Rogers & Bazerman, 2008). Ruining a relationship with a peer in your research group over one negotiation is going to cause a lot of pain in the long run. Remembering that your relationship with your peers may go on in perpetuity (even after you leave the research group) will help you to increase transparency, focus on building trust, and negotiate ethically and effectively.

Participants will learn fundamental negotiation concepts and communication strategies for problem-solving. Learners will also be introduced to skills for establishing transparency and building trusting relationships that can be practiced and applied to any problem-solving situation in a research group.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Define negotiation.**
- **Differentiate integrative and distributive negotiation.**
- **Analyze opportunities for negotiation in the research environment.**

1

Pre-Work:

- ☐ Read Negotiation article
- ☐ Respond to questions before workshop

2

Workshop:

- ☐ Case Studies & Workshop activities

3

Reflection & Practice:

- ☐ Leadership Journal
- ☐ Negotiation Practice

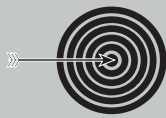
1 Negotiation Pre-Work

Read the article below on negotiation, and respond to the following questions before the workshop.

What do you think when you hear the word “negotiation?” Maybe a stereotypical image of men in suits hashing out a deal on the golf course. Maybe two people arguing over the last slice of pizza. Maybe a recruiter and a hiring manager, trying to nail down a salary that satisfies both parties. While stereotypical, these images are just one of the proverbial “slices” of the world of negotiation.

Negotiations do not have to be limited to two parties. Negotiations are not simply about dividing up a finite amount of resources. Broaden your understanding of negotiation by thinking about it as a lens through which to view social interaction and problem-solving. One definition describing the act of negotiation is “to confer with another so as to arrive at the settlement of some matter” (Merriam-Webster Online, 2019). Another is “an interactive communication process that may take place whenever we want something from someone else or another person wants something from us” (Shell, 2006). When we think about negotiation as discussions among two or more parties about solving a particular problem or communicating about our wants, we now have a way to think about negotiation that applies to broadly different situations. More importantly, these definitions begin to break down the tension and fear often associated with “haggling” to get something you want at the expense of another.

Broadening the definition helps us to identify the different types of issues that are present in situations where negotiations are taking place.



Understand what is at stake in the negotiation

Distributive Issues

Imagine you and your friend order a pizza. There are eight pieces. You have had four and she has had three. An equity argument would determine that she should get the last one because that way you each had half a pizza. But maybe you did not eat breakfast, or maybe she really loves the toppings you have chosen. Either way, the two of you have to determine who is going to eat that last slice. A second pizza is not going to magically appear.

When finite resources are involved (a particular amount of money to be divided or hours available to use research equipment) the negotiation issues are considered distributive. Distributive issues are those where there is a finite amount of the resource and the resource must be divided between or among the parties in a specific way. Distributive issues are typically the first ones we think about in negotiation. At some point, distributive issues will be on the table, but it would be a mistake to assume that a negotiation consists solely of distributive issues.

Integrative Issues

There is a well-known story in the world of negotiations about two sisters fighting over a single orange. Each sister wants the orange and they argue about it until their mother suggests that they simply cut it in half. Each sister then walks away with a half an orange. One sister takes her half and throws away the rind because she just wanted the pulp to make some orange juice. The other sister throws away the pulp because she just wanted the rind to make a pie (Follett, 1940).

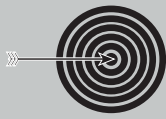
If the sisters had discussed why they wanted the orange – if they had discussed their interests – then the sisters could have each walked away with a full rind or a full pulp. This story highlights the nature of integrative issues in negotiation.

1 Negotiation Pre-Work

continued

Integrative issues are those where two or more parties can get the full value out of a finite resource because they have different underlying interests in the resource. Looking for integrative issues should be one of the first steps in any negotiation process. Integrative issues allow you to grow the size of the pie, so to speak.

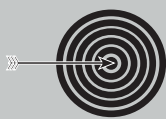
Consider a negotiation around desk space in the office, use of research group resources, or time with peers or advisors. Each of these is technically a finite resource, but when bundled together, they can be traded off, and therefore provide more overall value in the negotiation.



Identify shared interests.

Not all negotiations include different preferences, often there are issues on which both or all sides agree. However, research has shown that people often miss these issues because they approach negotiation with a “win at all costs” approach. They are so focused on getting what they want out of the negotiation, they completely miss the opportunity to see that the other side shares certain perspectives (Larrick and Wu, 2007).

The goal of negotiation should be to do whatever is possible to “make the pie bigger,” to give you and your counterparts more to select from when it comes down to making the final decisions. This may be finding more issues to put on the table, looking for how you value different aspects of the negotiation, and making sure that all issues are being discussed openly – a need for transparency.



Create transparency.

Evidence suggests that perspective-taking – the capacity to consider the world from another person’s viewpoint – is crucial to increasing transparency in negotiation (Galinsky, Maddux, Gilin, and White, 2008). Related, but distinct – trust is important to ensuring transparency and feeling confident that the other person or party will not take advantage of you (Lewicki and Polin, 2013). Being able to get all of the relevant issues out on the table and discussing them in a way that allows you to share and know the other party’s interest and values is critical to successfully negotiating issues while maintaining positive relationships. Getting to know the other party’s perspective, and feeling confident enough to share your own can be accomplished through active listening and asking questions effectively.



1 Negotiation Pre-Work

Reading Comprehension & Analysis Questions

To begin developing your negotiation skills toolkit, respond to the following questions. Be prepared to discuss your answers and apply these concepts to case studies during the workshop session.

1. What is negotiation?

2. Why might you use integrative vs. distributive tactics?

3. When could you use negotiation in your lab or research group?

4. How can you best prepare yourself to negotiate with your advisor and/or other research group members?

20 Negotiation Workshop & Case Studies

Case Study: The Winkle Lab

Dr. Louis Winkle is an infectious disease specialist whose lab is currently focused on researching developing improved diagnostic tests for parasitic infections. Specifically, the lab is focused on research around *naegleria fowleri*, or the “brain-eating amoeba,” which is a single-celled organism that thrives in warm bodies of water. The parasite typically enters through the nose, and can then impact the brain, leading to nearly certain death. Winkle’s lab is developing interventions that may diagnose the infection as soon as the parasite enters the system, therefore giving doctors more time to try to kill the parasite before brain infection sets in.



Situation 1: The Graduate Student Perspective

You are a graduate student, interested in learning as much as you can about infectious disease. Being a part of this research has been interesting and provides you the opportunity to learn a great deal about basic scientific research on parasites and infection prevention.

You are in your second year and you feel like you have proven yourself as a hard worker with a clear path during your time in the program. You have seized every opportunity to learn, including going to on-campus talks, reading everything you can get your hands on, and even assisting your PI in writing your first grant proposal.

Now you are focused on presenting your work at a conference. The Decennial International Conference on Healthcare Associated Infections is coming up and you have been working with one of the postdocs on a project that is ready to go to the conference. The postdoc is not interested in attending, so you think you should have a good chance. However, the PI has never sent a student earlier than the fourth year to a conference. Further, you know that this year’s funding is a bit tight. You believe you can make a good case for the mutual benefits of sending you to the conference.

1. Identify your interests and your PI’s interests in this situation.

2. What are the distributive and integrative issues?

20 Negotiation Workshop & Case Studies

continued

Situation 1: The Graduate Student Perspective

3. How will you start the conversation?

20 Negotiation Workshop & Case Studies

Case Study: The Winkle Lab

Situation 2: The Postdoc Perspective

You are one of two postdocs in the research group and your PI has given you a project to work on together – an important and complicated project using new equipment that was recently purchased for the research group. Moreover, he has told you that the two of you have to decide who is going to take the lead. Obviously it would be beneficial for a postdoc to be lead on a project like this, so both of you want the lead. You also like each other – you actually knew each other in graduate school and have been friends for years. Given that this is a colleague and a friend, you do not want to ruin the relationship.

You are particularly excited about this project because of the new equipment that you get to use. You want to learn how to use this equipment because it allows you to extend your dissertation work – and hopefully make a solid case for starting your own research group one day. The other postdoc is going on the job market this year and is going to be sending out job applications in a couple of months.

You have a meeting scheduled tomorrow to talk about this project and who will take the lead.

1. Identify your interests and your PI's interests in this situation.

2. What are the distributive and integrative issues?

3. How will you start the conversation?

20 Negotiation Workshop & Case Studies

Case Study: The Winkle Lab

Situation 3: The Researcher Perspective

Your research group has just won a grant specifically for professional development programming for graduate students and postdocs. The grant is \$6,000 and was issued as a one-time grant to provide professional development programming for anyone in the group who wants or needs leadership, negotiation skills, career planning, and networking support and development. Some of the group members do not seem interested (although in your opinion, they may need it the most).

Four of you are extremely interested in taking advantage of this grant for a particular program run by the Infectious Disease Society of America, arguably the most significant professional organization in your field. They hold a summer program for professional development that has proven to not only improve professional development skills, but also to be a significant network building opportunity for people who attend. The total costs for attendance, travel, accommodations and food is \$3,000, so only two of you can attend on this grant.

1. Identify your interests and your PI's interests in this situation.

2. What are the distributive and integrative issues?

3. How will you start the conversation?



3 Negotiation Reflection & Practice

Leadership Journal: Negotiation

Write a short journal entry on the topic of negotiation. This journal entry should answer the following questions (although you are free to write on whatever feels relevant and answer or ask your own questions as well).

- What key ideas resonated with me most strongly during this unit?
- How do these ideas relate to my daily work? How can I begin to put some of these ideas into practice?
Create 1 or 2 small experiments for yourself to practice before the next workshop session.
- What questions do I still have?



3 Negotiation Reflection & Practice

Practice - Negotiation

Identify one negotiation habit presented in this unit or identified in your leadership journal that you would like to practice. Write your goal or experiment below. Practice every day until the next workshop session. Track your progress and note what you learn.

My Goal/Experiment:

Date	Situation	Your response	What did you learn?

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 3.

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UNIT 4

Working in Teams



Introduction

A fundamental aspect of organizational life is working with other people. Groups of people create their own dynamic and bring different values, beliefs, and abilities to the overall effort. Teams are groups of people that are working toward a common goal. Groups of people working together in a particular research group can be considered teams, since they are working toward a common goal of conducting research in a particular field. Teams can also be smaller groups within that research group that work on particular experiments or particular projects.

Understanding team dynamics is important because no matter what type of work you end up doing, you are likely to work in teams. Individuals in teams work together to solve particular problems, and when different individuals come together, this has the potential to lead to conflict. Conflict can be good, but needs to be appropriately managed to ensure effectiveness of team decision-making.

Effective teamwork requires understanding how to navigate conflict. There are different types of conflict that can arise in teams, and different methods for dealing with conflict. Conflict is good, it is what leads to innovation and change; however conflict must be effectively managed otherwise it can become toxic. A challenge for diverse teams is to create an environment where good conflict is utilized to promote creative thinking while ineffective conflict is minimized.

Through this unit, participants will be exposed to the concept of team dynamics and the idea of psychological safety. Participants will have the opportunity to learn to identify individual differences among team members, strategies for navigating different types of conflict, and communicating for a more inclusive team dynamic.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Define team dynamics and psychological safety.**
- **Identify types of conflict in teams.**
- **Discern among roles that individuals play within teams.**
- **Interpret different conflict behaviors and their impact on team processes.**

1

Pre-Work:

- ☐ Read Working in Teams article
- ☐ Respond to questions before workshop

2

Workshop:

- ☐ Case Studies & Workshop activities

3

Reflection & Practice:

- ☐ Leadership Journal
- ☐ Working in Teams Practice

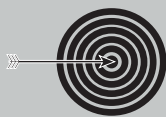
10 Working in Teams Pre-Work

Read the article below on working in teams, and respond to the following questions before the workshop.

Working in teams is a fundamental part of organizational life, especially in the collaborative environment of research (Hall et al., 2018). Whether you pursue research in an academic environment or transition into a role in industry or policy, you will be working with some arrangement of a group of people working toward a common goal: a team.

Team – A group of people working toward a common goal

How you work with your team has a direct impact on your performance and outcomes (Hackman, 2002). Many people assume that teams are the best way to get a job done, without really understanding the criteria for effective teamwork. Working effectively in teams requires understanding the structure of team dynamics and how to communicate effectively with your teammates.



Understand team structure and dynamics

Teams can be hierarchical or flat. Clear hierarchy, in which an individual is specifically “in charge” with decision-making authority can facilitate efficient action. However, powerful people can also influence decision-making because their formal authority may make it less likely for others in the group to express their perspectives during the decision-making process (Greer, 2014). This can lead to what is known as “groupthink,” in which agreement forms around a particular opinion, typically that of the person who has legitimate power over others in the group (Janis, 1971, 2008).

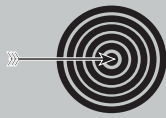
In addition to the overall structure of the hierarchy of the group, different people can play different roles in team processes. Identifying each of these different roles, and people who might be more inclined to fill them, can help facilitate team decision-making. Consider the following roles that people might enact in a group setting (Winsborough and Chamorro-Premuzic, 2017):

- 1. Results-oriented** – team members who are aware of and focused on the goal defined for the team and who facilitate the organization of team processes to accomplish that goal.
- 2. Relationship-oriented** – team members who are focused on the interpersonal dynamics among the team members, who know and understand the different types of people and their strengths and weaknesses, and who can motivate and encourage teamwork among them.
- 3. Process and rule followers** – team members who focus on the steps needed to achieve the goal and can bring the team members back to the structure and rules in order to move toward the goal.
- 4. Innovative thinkers** – team members who are thinking creatively and who are not bound by the rules, therefore are able to offer creative solutions to problems.
- 5. Pragmatists** – team members who are aware of the constraints and limitations that inevitably face any group decision-making task and can help to keep the group on track.

These different orientations can help teams to leverage the strengths of the individuals in order to reach the goal.

10 Working in Teams Pre-Work

continued



Manage conflict.

Conflict in teams is inevitable. Conflict can be task-based, relationship-based, or values-based (De Dreu and Weingart, 2003). Task-based conflict refers to different perspectives on functional or process issues in the group. Disagreement over how to approach problem-solving may be an example of task-based conflicts. Relationship-based conflict refers to differences in personalities or relationships. Values-based conflict is rooted in differences of fundamental beliefs or values. This type of conflict can be much more difficult to navigate because the differences in opinion are much more deeply ingrained and may be fundamentally un-changeable.

To resolve conflict successfully, individuals in teams should exercise leadership to motivate others to achieve a shared goal (Northouse, 2018). Influencing others requires listening to their perspectives, having something of value to offer, and building respect. Conflict must be addressed to be resolved; in other words, failing to address conflict will not make it go away.

People generally have different styles of managing conflict. One framework for thinking about this is the dual concern model (Pruitt and Rubin, 1986). In this model, conflict is conceptualized along two dimensions: the concern for self versus the concern for others (Pruitt and Carnevale, 1993). These two dimensions create five different conflict styles. Note that these types are not “personality” types but rather are styles of conflict management that may be present at any given time. These are described below:

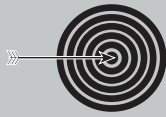
- 1. Competing** – one party only seeks to achieve their own interests, regardless of impact to others.
- 2. Collaborating** – parties are equally concerned about self and others; they search for shared interests.
- 3. Compromising** – parties are equally concerned about self and others; they are thinking more distributively, such that one party may give something up for the other.
- 4. Avoiding** – parties show equally low concern for self and other, and therefore wish to suppress the conflict.
- 5. Accommodating** – one party is more concerned with other than self, and may give up more than the other party.

Being aware of different types of conflict and different approaches to managing conflict can facilitate effective conflict resolution in teams. Knowing when certain styles may be more appropriate and which styles are more comfortable for certain people provides a starting place for approaching another person to discuss conflict when necessary.

Conflict can be productive. An important advantage to working on teams with diverse backgrounds and perspectives is that team members can challenge each others’ assumptions and the group will often produce more innovative outcomes as a result. Creating a safe team environment of mutual respect and psychological safety is key to fostering a dynamic of inclusion.

10 Working in Teams Pre-Work

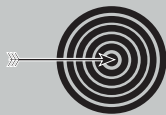
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Create a safe team environment.

Teams work best when there are high levels of psychological safety. Psychological safety is defined as a shared belief that the team members trust each other and therefore the team environment is open to risk-taking (Edmondson and Lei, 2014). High levels of psychological safety facilitate trust and lead to more sharing of diverse ideas and more effective problem-solving. Today's team environments include more individuals with different identities, experiences, and backgrounds. With higher psychological safety, people are more likely to confront both values and task-based conflict in a healthy and productive way.

One way to facilitate trust that leads to psychological safety is through an enhanced understanding of conversational intelligence (Glaser, 2016). Conversational intelligence refers to the quality of discussion among individuals. In teams, personal goals and team goals can conflict, and often, individuals are focused on preserving their own perspectives and opinions. When one person confronts another, and the perspectives clash, this can lead to a rise in cortisol, a stress hormone related to the flight-or-fight response. To reduce cortisol and to have more productive discussions that are inclusive of diverse perspectives, it is important to build skills for “dialoguing” (Bohm and Weinburg, 2004). Dialogue is a form of free-flowing conversation in which individuals seek to understand other points of view, instead of focusing on defending their own position. Being in a debate or dictatorial mode of conversation means defending points of view, while dialogue, or open inquiry, allows diverse points of view to emerge.



Understand phases of team development.

When establishing a new team, whether it be a new research group, a project team, or a collaboration, there are typical phases in team development that lead to coordination and productivity (Truman 2017). Psychologist Bruce Tuckman (1965) describes four main phases of growing pains and realignment:

- 1. Forming Phase** – This is the stage when teams form and get to know each other. Team members set goals, learn about each other's personalities and working styles, and organize plans. During this phase, leaders assign tasks and responsibilities, and ideally, solicit feedback from the group.
- 2. Storming Phase** – During the storming phase, interpersonal challenges arise and conflicts occur. When teams do not fully know how to work together, miscommunications happen, and unforeseen personality misalignments can occur. Team members are also discovering their differences and can feel ostracized through subtle acts of exclusion, such as through microaggressions (Hu-Chan 2020). Conflicts can also occur from misaligned expectations, or setting unrealistic goals that impact performance. Team performance usually takes a dip during this phase until these issues get addressed.

10 Working in Teams Pre-Work

continued

- 3. Norming Phase** – The norming phase is a time for reflection and recalibration. The team welcomes feedback from each other. They establish more realistic goals, set boundaries and expectations, and establish behavioral norms for inclusivity. It is important during this phase to make space for team feedback.
- 4. Performing Phase** – During the performing phase, teams are aligned, meeting their goals and working well together. Teams set manageable milestones, and celebrate successes. Conflicts can still occur, but team members welcome differences of perspective, and provide each other with constructive and respectful feedback. Team members also understand each other's strengths and weaknesses, and can complement each other skills. This is an opportunity for team members to learn from each other, and to grow personally and professionally.

Teams are fundamental to the scientific endeavor and to effective work in all organizational contexts. Functioning as an effective team is not simply a product of bringing a group of people together and giving them a goal. Rather, it is important to understand the dynamics and structure of the team, and to understand conflict so as to create an environment that is psychologically safe, where innovative thinking can occur, and diverse viewpoints can be included.



1 Working in Teams Pre-Work

Reading Comprehension & Analysis Questions

To begin developing your team dynamics skills toolkit, respond to the following questions. Be prepared to discuss your answers and apply these concepts to case studies during the workshop session.

1. What is psychological safety?

2. What are the elements that contribute to team problem-solving?

3. Which team roles do you gravitate toward?

4. Which conflict styles do you typically use?

5. How can you create diverse and inclusive teams?

10 Working in Teams Pre-Work

continued

6. What is the value of conflict on scientific research teams?



20 Working in Teams Workshop & Case Studies

Case Study: The Koothrapali Lab

The Koothrapali lab produces research on biomarker development in particular diseases. More specifically, the team follows patients who have Alzheimer's over the course of the development of their disease. Over this time, the researchers collect a variety of data on the patients, including PET scans, cerebrospinal fluid, and blood samples. They analyze this data for the presence of certain antigens or proteins, with the ultimate goal of defining a profile for the disease.

Professor Aarav Koothrapali is a senior, tenured professor and the primary investigator (PI) of the lab. Also working in the lab are a postdoc, a lab manager, and five graduate students.



Situation 1: The Graduate Student Perspective: The Lab

You are one of a group of graduate students conducting research on an NIH grant along with your PI. You and the three other graduate students meet on a weekly basis to update each other on your progress and to identify the next steps for the subsequent week. All of you are in the same program of neuroscience and have largely had the same training and experience. You all are either in your third or fourth year, and have completed your qualifying exams. You were born and raised in California, and two of the other graduate students, Jake and Sarah, are from the east coast (Boston, MA and Washington, DC). The fourth graduate student, Wang Jin, is a Chinese native, and came to the United States for doctoral training.

During your meetings, Wang Jin is often quiet, which you have always just assumed is part of his personality and his cultural background. When he does speak, sometimes his English is a bit broken and you have to work hard to understand him. He often repeats what has just been said before adding his own perspective.

You're currently working on a particular experiment that involves reading fMRI scans. Wang Jin has had more experience in working with scans than you or the other two graduate students. Because his expertise is necessary to the project, he has to be involved in the conversations. However, he seems hesitant to contribute, and you have noticed that when he does share something, one of the other graduate students often ignores it.

1. Identify the team goal and the conflict in this situation.

20 Working in Teams Workshop & Case Studies

continued

Case Study: The Koothrapali Lab

Situation 1: The Graduate Student Perspective: The Lab

2. Which team role (or roles) should you play to reach the goal?

3. Which conflict style should you use?

4. How will you start the conversation?

20 Working in Teams Workshop & Case Studies

Case Study: The Koothrapali Lab

Situation 2: The Graduate Student Perspective: Socializing, Part 1

You have joined the graduate student social experience group, which consists of graduate students across various programs and at various stages of their doctoral training. The group meets to plan events for graduate students – from professional events (i.e., how to do your taxes as a graduate student) to social engagements (i.e., ice-cream Fridays). You are currently planning the social calendar for the year. One of the graduate students speaks up and says “I think we should plan ice cream socials for Friday afternoons because that’s when other students are most likely to be free.” Another student says “I think we should plan ice cream socials for Wednesday nights because people need a break in the middle of the week.” Two of the other representatives are having a separate discussion.

1. Identify the team goal and the conflict in this situation.

2. Which team role (or roles) should you play to reach the goal?

3. Which conflict style should you use?

20 Working in Teams Workshop & Case Studies

continued

Case Study: The Koothrapali Lab

Situation 2: The Graduate Student Perspective: Socializing, Part 1

4. How will you start the conversation?

20 Working in Teams Workshop & Case Studies

Case Study: The Koothrapali Lab

Situation 2: The Graduate Student Perspective: Socializing, Part 2

You've met four times as a group so far and nothing has really been accomplished. Each meeting consists of representatives throwing out lots of ideas, but they either go off and try to implement those ideas on their own or the idea just never gets implemented. You want to help, and you're not sure where to start – there is a board chair role, but that role is currently filled by a second-year graduate student, and you notice that the more senior graduate students don't really pay attention to the chair at all.

1. Identify the team goal and the conflict in this situation.

2. Which team role (or roles) should you play to reach the goal?

3. Which conflict style should you use?

20 Working in Teams Workshop & Case Studies

continued

Case Study: The Koothrapali Lab

Situation 2: The Graduate Student Perspective: Socializing, Part 2

4. How will you start the conversation?



3 Working in Teams Reflection & Practice

Leadership Journal: Working in Teams

Write a short journal entry on the topic of team dynamics. This journal entry should answer the following questions (although you are free to write on whatever feels relevant and answer or ask your own questions as well).

- What key ideas resonated with me most strongly during this unit?
- How do these ideas relate to my daily work? How can I begin to put some of these ideas into practice?
Create 1 or 2 small experiments for yourself to practice before the next workshop session.
- What questions do I still have?



3 Working in Teams Reflection & Practice

Practice - Working in Teams

Identify one team dynamics habit presented in this unit or identified in your leadership journal that you would like to practice. Write your goal or experiment below. Practice every day until the next workshop session. Track your progress and note what you learn.

My Goal/Experiment:

Date	Situation	Your response	What did you learn?

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 4.

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Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 4.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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UNIT 5

Inclusive Organizational Cultures



Introduction

Organizational culture comprises the values, assumptions, and beliefs that motivate behavior and cognition in work groups. While culture is often described as “the way we do things around here,” the concept is more complex than that and learning to identify the different elements of organizational culture and how they influence group functioning is the first step to creating a healthy group culture.

In this unit, learners will diagnose negative organizational cultures and devise leadership strategies for creating healthy, inclusive cultures. A key element of organizational culture is creating a space where people feel safe to share their ideas, take risks, and alert others to problems or mistakes. The case studies in this unit present a basic understanding of organizational culture and the downstream effect of organizational culture on work life. They highlight two particular types of cultures that are common in the scientific research environment: the shaming culture and the culture that celebrates stress.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Define organizational culture and the elements that comprise it.**
- **Identify warning signs of negative organizational cultures.**
- **Identify the role of formal leaders in organizational culture.**
- **Analyze the effect of organizational culture on the experience of work.**
- **Apply strategies for navigating and avoiding toxic cultures**

1

Pre-Work:

- ☐ Read Inclusive Organizational Cultures article
- ☐ Respond to questions before workshop

2

Workshop:

- ☐ Case Studies & Workshop activities

3

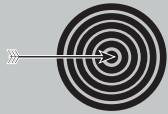
Reflection & Practice:

- ☐ Leadership Journal: Ideal State vs. Current State Lab Cultures

10 Inclusive Organizational Cultures Pre-Work

Read the article below on inclusive organizational cultures, and respond to the following questions before the workshop.

Organizational culture comprises the underlying beliefs, values, and assumptions that affect behavior and interpersonal relationships in a work unit (Schein, 2010). Culture is often described as “the way things are done around here” and includes behavior and communication patterns as well as unspoken assumptions about social and work norms.

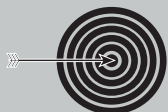


Understand organizational culture.

Understanding organizational culture, and being prepared to identify and analyze the elements of organizational culture, are important because of their impact on work life. In addition to influencing behaviors and group dynamics, organizational culture also plays a significant role in defining the motivation and well-being of the members of the group. Toxic cultures create an environment of stress and fear, while healthy cultures cultivate engagement and pride in the work being done.

Individual aspects that contribute to organizational culture include individual differences in work style, prior work group experiences, regional and national culture. Group dynamics that contribute to organizational culture include conflict styles and professional norms. These individual and group dynamics work together to define the overall culture of the group.

Leaders cannot control the organizational culture, but they do set the tone and have significant influence on it. Because leaders wield considerable influence due to their legitimate power, the rest of the group often looks to their example. The leader’s tendencies can flow through the group, therefore giving the leader considerable influence over the group culture.



Understand the professional norms of your field.

The two case studies presented in this unit are examples of cultures that are problematic. They oppress rather than encourage transparency. In these examples, this oppression can lead to unethical behaviors and lowered well-being. By understanding and identifying these cultures, participants can begin to weave together strategies for combatting these negative cultures.

Culture of Shame

The first case study describes a culture of shame (i.e., Baldwin, 2001). Shaming others for their mistakes is a key indicator of the values, beliefs, and assumptions that comprise the culture. More specifically, throwing someone “under the bus” because they made a mistake indicates that there is no value on learning or curiosity, that people are assumed to be wrong until proven right, and that growth is not a value shared by the group. Looking at the behaviors in a group can indicate the values and assumptions that are operating in the culture.

Shaming is fairly common. As a society, we generally do not “celebrate” mistakes, but rather we shame people when they do something wrong. This leads to hiding mistakes and failing to take risks. This is particularly problematic in the context of scientific research groups, because research is an endeavor that “fails” a substantial proportion of the time. It is important to cultivate a culture where mistakes are not only tolerated but appreciated because they are learning that contributes to the overall goal of producing effective research and building knowledge.

1 Inclusive Organizational Cultures Pre-Work

continued

Creating a culture where mistakes are celebrated is closely related to the idea of psychological safety (Edmondson and Lei, 2014). When someone makes a mistake in a culture of shame, the immediate reaction is to hide the behavior. They do not trust in the relationships with other people – the leader or research group members. When people experience shame, they turn inward and hide the information that is the source of shame (Daniels and Robinson, 2019). The down-stream effects of this include miscommunication, further eroding of relationships, and an increase in fear among the members of the group. These values, assumptions, and behaviors then define the organizational culture – which supports unethical behaviors (Murphy and Kiffin-Peterson, 2017) like smoothing data, hiding errors, and negative relationship actions.

These shaming cultures can also widen disparities for marginalized groups in science where mistakes could be internalized as stemming from a negative stereotype associated with identities or sociocultural backgrounds of an individual (McGee, Griffith, and Houston 2019). When people feel that they might confirm the stereotype by performing poorly, their fear can inadvertently become self-fulfilling and impact future performance (Steele and Aronson 1995).

A culture that celebrates stress

The second scenario describes how groups can celebrate the “burning the candle at both ends” culture (i.e., Woo, 2019). High pressure work environments, like scientific research groups, thrive on the idea that being busy is a sign of success. The more an individual can demonstrate that they have given up other parts of their lives (e.g., sleep, friends, hobbies) for the sake of their work, the more status they achieve in the group.

The problem with this type of culture is that it is not sustainable. High pressure work environments lead to physical and mental health problems, departure from the industry, and even suicide (Hernandez, 2018; Sansone and Sansone, 2015). Research demonstrates that maintaining a healthy balance of work, healthy eating, sufficient sleep, and engaging in social networks with people outside of work are beneficial to workplace productivity (Seppala and Cameron, 2015).



1 Inclusive Organizational Cultures Pre-Work

Reading Comprehension & Analysis Questions

To begin developing your inclusive cultures skills toolkit, respond to the following questions. Be prepared to discuss your answers and apply these concepts to case studies during the workshop session.

1. What is organizational culture and what influences it?

2. What is the relationship between organizational culture and psychological safety?

3. How do leaders influence organizational culture?

4. What is the ideal organizational culture for scientific inquiry?

20 Inclusive Organizational Cultures Workshop & Case Studies

Case Study: The Hofstadter Lab

The OpRad lab is an interdisciplinary research group conducting research in optical radiology, and focuses on translating that research to clinical practice. Multiple PIs comprise this research group, each one running a different program of research dedicated to the overall mission.

Dr. Jann Hofstadter is the PI for a project focused on creating light-based diagnostics to find ways to remove tumors during surgery. Because the research requires expertise from different disciplines, engineers, biologists, and chemists comprise the research group. One of the particular challenges for the research group is communicating important data findings across disciplines.



Situation 1: The Graduate Student Perspective: Part 1

You are a doctoral student studying biology. You work primarily on understanding the molecular structure of different tumors. You are working on a project that tests the effects of lasers on tumors, identifying which lasers can destroy tumors without compromising the surrounding tissue. Also on the project is a postdoc who is trained in chemistry, two graduate students who are trained in biomedical engineering, and a postdoc who is a physicist who works with lasers.

In the past, when you have expressed concern that you do not understand the physicist's work, the other students and postdocs in the research group have been dismissive. You assume that this is because they all feel comfortable with the principles of the laser that the physicist has been manipulating for the experiments.

However, in a private conversation with one of your fellow graduate students, you learn that no one is comfortable with the laser technology. Your colleagues don't understand the results, they are just glossing over them, or worse, misinterpreting them. You all have been working on this project for almost a year. You don't feel comfortable admitting that you need retraining on the physicist's work in order to be able to interpret the results properly.

1. What is the organizational culture problem in this situation?

20 Inclusive Organizational Cultures Workshop & Case Studies

continued

Case Study: The Hofstadter Lab

Situation 1: The Graduate Student Perspective: Part 1

2. How could you influence and motivate others to improve the culture?

3. What would you do in this situation?

20 Inclusive Organizational Cultures Workshop & Case Studies

Case Study: The Hofstadter Lab

Situation 1: The Graduate Student Perspective: Part 2

You have been working in this laboratory for two years. You love the work and you really like the people in your laboratory, including your PI who is enthusiastic and motivational.

However, you are exhausted and it's starting to interfere with your work. Everyone in the lab, including the PI, works in the lab from 8 am to 8 pm every day, except Sunday where you all leave around noon. Even though it's never been explicitly stated as a rule, no one ever leaves before the PI and everyone works to show up before her.

The adage around the office is "your work is done when you fall down," indicating that the only reason to stop work is when you are so tired you physically can't complete it. No one would ever admit to reaching this point, although you know you're not the only one that feels this way. One of the common topics in the lab is how overworked everyone is, and there seems to be an unstated competition among the lab members to see who has the highest work load and the most stress. The PI is part of these conversations and says that she made her way by burning the candle at both ends – that's how you succeed in science.

You recently learned that one of your fellow graduate students is suffering quite a bit. You don't know exactly why he is suffering but you can tell from some of the comments he has made that he is not doing well, like "I should never have joined this program, I'm worthless." And "No one cares about our work. It's useless." You suggested that he go to the doctor to see if they can maybe help him physically or help him find a therapist. He laughed when you suggested this, saying "Yeah – that'll happen!" This concerns you because he is obviously in need of help.

1. What is the organizational culture problem in this situation?

2. How could you influence and motivate others to improve the culture?

20 Inclusive Organizational Cultures Workshop & Case Studies

continued

Case Study: The Hofstедder Lab

Situation 1: The Graduate Student Perspective: Part 2

3. What would you do in this situation?

3 Inclusive Organizational Cultures Reflection & Practice

Leadership Journal: Ideal State vs. Current State Lab Cultures

Write a short journal entry on the topic of organizational cultures using the prompts below. What would be your ideal lab culture? How would you describe your current lab culture?

- I. Ideal Lab Culture Statement:** Articulate your definition of ideal lab culture. What professional norms and team dynamics would research group members demonstrate? How would the PI exercise leadership?

- II. Current Lab Culture Statement:** Observe your research group and describe your current lab culture. Make a list of behaviors that you regularly observe.

3 Inclusive Organizational Cultures Reflection & Practice

Leadership Journal: Ideal State vs. Current State Lab Cultures

continued

III. Self-Care Plan: How do you maintain your physical, mental, emotional, and spiritual health as a leader? Use the following worksheets to help you reflect on your needs and develop a self-care plan.

Lifestyle Behavior Stress Assessment

The way you live your life can have a big impact on your health, well-being, and how well or poorly you handle stress. Below are lifestyle behaviors that affect stress levels. Please check the boxes that apply to you. Doing an honest assessment of how well or poorly you take care of yourself can help you manage your stress in the future.

Lifestyle Behaviors					
When you are under stress, do you:	YES	NO	When you are under stress, do you:	YES	NO
Smoke/use tobacco			Engage in physical activity at least three times a week for 30 minutes each day		
Drink a lot of coffee or caffeinated drinks (<i>more than 2-3 cups per day</i>)			Get six to eight hours of sleep every night		
Drink alcohol (<i>more than recommended levels of 1-2 drinks per day</i>)			Maintain good eating habits		
Overuse over-the-counter medications			Make time to relax		
Overeat or under eat			Maintain a sense of humor		
Spend too much money (<i>e.g., do you have a lot of credit card debt and have trouble making payments?</i>)			Play		
Abuse/overuse tranquilizers or other over-the-counter medications			Maintain healthy rituals and routines		
Watch too much television (<i>more than 3-4 hours per day</i>)			Be optimistic. Engage in positive thinking		
Have angry outbursts			Spend time with family		
Take illegal drugs			Spend time with friends		
Withdraw from people			Make plans for the future		
Ignore or deny stress symptoms			Figure out ways to manage stress		
Engage in self-destructive relationships			Reward yourself for your accomplishments		
These are negative self-care behaviors.			These are positive self-care behaviors.		

3 Inclusive Organizational Cultures Reflection & Practice

Leadership Journal: Ideal State vs. Current State Lab Cultures

III. Self-Care Plan

continued

Maintenance Self-Care Plan Worksheet

Consider what you do now for self-care and list those activities within each dimension of self-care on this worksheet. Identify new strategies that you will begin to incorporate as part of your ongoing maintenance self-care plan.

Mind	Body
Current practice:	Current practice:
New practice:	New practice:
Emotions	Spirit
Current practice:	Current practice:
New practice:	New practice:
Work	Relationships
Current practice:	Current practice:
New practice:	New practice:
Other	Other
Current practice:	Current practice:
New practice:	New practice:

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 5.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 5.

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper has a slight shadow on the right side, suggesting it's part of a bound notebook. There is no handwriting or other markings on the page.

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UNIT 6

Writing Your Leadership Statement



Introduction

The L-MAP behaviors and communication strategies presented in units 1-5 are tools that leaders can use to establish a safe and productive organizational culture. Each of these elements plays an important role in your development as a leader and your ability to build a team: Professionalism, Leadership, Negotiation, Team Dynamics, and Inclusive Organizational Cultures. To put these concepts into action, learners will craft a personal Leadership Statement and SMART goals to guide their actions beyond L-MAP.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Articulate your leadership vision**
- **Articulate your leadership mission**
- **Set SMART goals achieve your goals as a leader**

1

Pre-Work:

- ☐ Leadership Statement Review
- ☐ Draft Your Leadership Statement

2

Workshop:

- ☐ Leadership Statement Workshop
- ☐ Next Steps on Your Journey: SMART Leadership Goals

1 Leadership Statement Pre-Work

Leadership Journal Review

Throughout units 1-5 of this program, you have been keeping a Leadership Journal. The reflections and observations noted in your Leadership Journal will help you compose a Leadership Statement to guide your ongoing leadership skill development. Answer the following questions to review your Leadership Journal. You will refer back to these pages to draft your Leadership Statement prior to the workshop session.

1. Which aspects of the training program were most important to you?

2. What themes and ideas do you notice in your journal entries?

3. What does leadership mean to you?

1 Leadership Statement Pre-Work

continued

4. Which behaviors and communication strategies are most important to you as a leader?

5. Which relationships are most important to you as a leader?

6. How will you continue to grow and develop as a leader in the future?



1 Leadership Statement Pre-Work

Draft your Leadership Statement

Throughout L-MAP, you have been developing leadership skills through research-based content, group practice, and individual reflection. As a capstone to the program, you will now write a Leadership Statement: your personal definition of leadership as it pertains to your experience and career goals. The purpose of this short statement is to be a guide-post, a mantra, or a “North Star” for you as you continue to develop during your doctoral and postdoctoral work.

Your Leadership Statement consists of two parts: the Vision Statement and the Mission Statement. Follow the prompts below to draft each part.

I. Leadership Vision Statement: State your current and future goals as a leader. What does leadership success look like for you in 5-10 years? This is the version of yourself that you aspire to be in the future. Your Leadership Vision Statement should be clear, concise, inspiring, and have a time frame.

II. Leadership Mission Statement: State your concrete strategy or framework to guide you toward your vision. This is your personal brand of leadership that you will exercise day-to-day. In writing your Leadership Mission Statement, be clear and concrete; use active verbs and inspiring language to articulate what you will do, how you will do it, and for whom you will do it.

20 Leadership Statement Workshop & Goal-Setting

Leadership Statement Workshop & Revision

Use the prompts below to review and revise your Leadership Statement. It is a good idea to share your statement with others to get feedback and suggestions. You may have to edit your statement more than once – good! The revision process is an opportunity to think deeply about yourself as a leader, commit to a long-term leadership vision, and articulate your goals in concrete language.

I. Leadership Vision Statement: Review the Vision Statement and respond to each question below. Suggest revision strategies to make the Statement more clear, concise, inspiring, and timely.

A. What are the leader's current and future goals?

B. What is the definition of leadership success in 5-10 years?

C. How could the Vision Statement better illustrate the version of self that the leader aspire to be in the future?

D. Suggestions for improvement:

20 Leadership Statement Workshop & Goal-Setting

Leadership Statement Workshop & Revision

Use the prompts below to review and revise your Leadership Statement. It is a good idea to share your statement with others to get feedback and suggestions. You may have to edit your statement more than once – good! The revision process is an opportunity to think deeply about yourself as a leader, commit to a long-term leadership vision, and articulate your goals in concrete language.

II. Leadership Mission Statement: Review the Mission Statement and respond to each question below. Suggest revision strategies to ensure the Statement uses clear, concrete, inspiring language to articulate what the leader will do, how they will do it, and for whom they will do it.

A. What is the concrete framework to guide the leader toward the vision?

B. What is the personal brand of leadership articulated in the Mission Statement?

C. How will this leader exercise leadership day-to-day?

D. Suggestions for improvement:

20 Leadership Statement Workshop & Goal-Setting

Next Steps on Your Journey – SMART Leadership Goal

Record the revised version of your Vision and Mission Statements here and set a SMART goal to guide your continuing leadership development. Going forward, recite your Leadership Statement to yourself, or review it weekly, to see if the decisions you are making are in alignment with your goals. Continue to review and revise your Leadership Statement and SMART goals every six months to ensure that they grow and evolve along with your leadership skills.

I. Leadership Vision Statement

II. Leadership Mission Statement

2 Leadership Statement Workshop & Goal-Setting

Next Steps on Your Journey – SMART Leadership Goal

Record the revised version of your Vision and Mission Statements here and set a SMART goal to guide your continuing leadership development. Going forward, recite your Leadership Statement to yourself, or review it weekly, to see if the decisions you are making are in alignment with your goals. Continue to review and revise your Leadership Statement and SMART goals every six months to ensure that they grow and evolve along with your leadership skills.

III. Leadership SMART Goal: Set a goal to continue developing your leadership skills in the future. For example, you might want to continue practicing one of the L-MAP tools and techniques from units 1-5; enroll in another formal leadership training program; regularly read blogs, books or listen to podcasts from prominent leaders; or take on a leadership role in your organization or community. Write a goal that is **SMART: S**pecific, **M**easurable, **A**chievable, **R**ealistic, and **T**ime-bound.



Use these pages for additional notes and ideas you'd like to jot down about the concepts expressed in Unit 6.

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UNIT 7 - Supplemental

Marketing Yourself



Introduction

Whether you go on to work in an academic research group or transition to a different job in academia, a job in industry, or any other field, you have to learn how to tell your story about the skills you've learned to this point in your career. Convincing another person of the value you can provide for the job they have to offer is critical to success in securing a job for yourself.

It is important to spend some time defining your career goals and strengths throughout graduate and postdoctoral training. This case-study is designed to encourage your personal reflection on your journey and your destination. You may find it helpful to return to these materials multiple times throughout your training to check in with your career goals and update your strengths.

This case study sets up a series of scenarios that can be used to spark conversations about career choice and career preparation. The resources included in this case study will help participants think about what motivates their curiosity and will help them to define how they can contribute value – both key questions to define in the course of a career journey.



Learning Objectives

After completing the workshop and activities, you will be able to:

- **Reflect on your experience through the lens of a specific career field.**
- **Identify how you can provide value in a specific organizational context.**
- **Prepare for behavioral interviews using the STAR method.**
- **Reflect on the things that make you curious.**

1

Pre-Work:

- ☐ Reading: Know your purpose

2

Worksheets:

- ☐ Worksheet 1: Where is my curiosity?
- ☐ Worksheet 2: What value do I bring?
- ☐ Worksheet 3: The STAR Method of Behavioral Interviewing

3

Career Exploration Resources

- ☐ Navigating the Scientific Career
- ☐ Transitioning Beyond the Academic Career
- ☐ Choosing a Career That Fits
- ☐ General Professional Development
- ☐ Resources at Your Institutions

4

Case Studies

- ☐ Explore career path decision-making scenarios

1 Know Your Purpose Pre-Work

When we think of individual purpose, we often think of the thing about which we are the most passionate. However, passion changes over time, and seeking that thing for which we are passionate may actually lead to disappointment if we do not achieve it. The best way to cultivate a narrative for your next steps are to examine what makes you curious and to know how you can best provide value.

There are two questions you should ask yourself as you transition to your next step in your career:

- 1) ***What am I curious about?***
- 2) ***What value can I provide in that context?***

The worksheets included here are designed to help you to reflect on and think about these topics, and to prepare specific stories that elucidate these concepts. Taken together, these activities will help you to identify and present your “brand” to employers.

Trainees can sometimes have imposter syndrome that causes them to undermine the value of their accomplishments. Imposter syndrome can become particularly insidious when moving through the academic pipeline or applying for non-academic jobs. Imposter fears can be racialized and gendered; you may be more likely to experience them if you identify with an underrepresented group or groups (Clance and Imes, 1978). You will need to debunk those imposter feelings to recognize your value and highlight your accomplishments (Abdelaal 2020). You’ve done great work and potential employers want to learn about it.

This mindset applies to anyone – including those who are seeking out a PI position as well as to those who maybe want a research scientist position or who want to transition to industry or another field.

In addition to these worksheets, you will find specific articles and resources on the web that will be useful in your career evaluation process.

Be curious. Know your value. Live your purpose.



2 Worksheets: Knowing your curiosity, value, and preparing for job interviews

Worksheet 1: Where is my curiosity?

What movies/books/web articles/podcasts do I wish I had time to enjoy?

What movies/books/web articles/podcasts do I find myself watching/reading/listening to repeatedly? What themes do these items share?

If I had a whole day with no responsibilities, what would I choose to do that day?

About which topics am I very opinionated (think about the times that you “get on a soapbox” about a particular topic or issue, what topics or issues are those)?

What do I feel like I “should” be curious about? (What do you often say when other people ask? Does that differ from what you are really curious about?)

What would I choose to do today that my future self would be proud of/would be grateful for?

2 Worksheets: Knowing your curiosity, value, and preparing for job interviews

Worksheet 2: What value do I provide?

What have I been commended for during my graduate / postdoc work (where have you received positive feedback?)

What do I find myself helping others to do that is quite easy and pleasurable for me?

What types of work have I done that makes me feel good/proud/accomplished?

If I started my own company right now, what could I do starting tomorrow that would offer something valuable to other people?

What things do I feel like I do well, but that someone else does better? Why?

What do other people often say that I'm "known for?" Or what things do people come to me most for?

2 Worksheets: Knowing your curiosity, value, and preparing for job interviews

Worksheet 3: The STAR Method of Behavioral Interviewing

The STAR Method for interviewing is a well-known structured reflection designed to help you prepare for behavioral interviews. The point of the STAR interviewing method is to arm you with specific stories and take-aways from your experience that can address the interviewer's questions about you.

Situation – describe a specific event that occurred that is relevant to a particular interview question you may be asked. Be explicit in the details to capture the entire situation.

Task – describe the goal you were working toward in the situation.

Action – describe what actions you took to achieve the goal. Discuss your particular contributions to the overall team achievements, if applicable.

Response – describe the outcome of your actions. What results came about because of your contributions and actions?

3 Career Exploration Resources

Navigating the Scientific Career:

Hotez, P. J. (2018). Crafting your scientist brand. PLoS Biology, 16(10): e3000024. <https://doi.org/10.1371/journal.pbio.3000024>

McDonald, D. A. (2018). Academic careers you may not have considered. Inside Higher Ed Online, <https://www.inside-highered.com/advice/2018/05/21/suggestions-alt-ac-careers-may-be-overlooked-opinion>. Accessed March 3 2020.

Transitioning Beyond the Academic Career:

Polk J. and Wood L. M. (2019). Overcoming the Ph.D. stereotype. Inside Higher Ed Online, <https://www.insidehighered.com/advice/2019/03/27/three-ways-phds-can-rebrand-themselves-alt-ac-career-opinion>. Accessed March 3 2020.

Kelsky, K. (2018). The Professor Is In: Breaking the Alt-Ac News. The Chronicle of Higher Education Online, <https://www.chronicle.com/article/The-Professor-Is-In-Breaking/242518>. Accessed March 3 2020.

Choosing a Career That Fits:

Urban, T. (2018). How To Pick a Career (That Actually Fits You). Wait But Why Online, <https://waitbutwhy.com/2018/04/picking-career.html>. Accessed March 3 2020.

General Professional Development:

Grant, A. (2019). Networking For People Who Hate Networking. WorkLife Podcast (sponsored by TED Talks)

Grant, A. (2019). The Perils of Following Your Career Passion. WorkLife Podcast (sponsored by TED Talks)

Understanding Imposter Syndrome:

Clance, P.R. and Imes, S. (1978). The Imposter Phenomenon in High Achieving Women: Dynamics and Therapeutic Intervention. Psychotherapy: Theory, Research, and Practice 15(3), 241-247. doi: 10.1037/h0086006

Abdelaal, G. (2020). Coping with imposter syndrome in academia and research. Biochem (Lond) 22 June 2020; 42(3), 62–64. doi: <https://doi.org/10.1042/BIO20200033>

List some resources at your institution:



4 Marketing Yourself Case Studies

Read the case study below and outline next steps for each situation. How can identifying curiosity and value help the trainees market themselves in each situation?

Case Study: The Rostenkowski Lab

The Rostenkowski lab researches the social lives of microbes. Microbes engage in a variety of social behaviors, and can cooperate and communicate. The research in the lab examines the evolution of cooperation in social amoebas.

Dr. Ross Rostenkowski is a venerable and tenured professor, and has an endowed chair in the department of Evolution, Ecology, and Biology program at the medical school. He has been a primary investigator of this lab since 1996. He is passionate about his work and seeks graduate students and postdocs who are equally excited about science. He has even converted students who thought they were going to study in other fields because of his enthusiasm for the research that he does.

You are one of the members of Dr. Rostenkowski's lab, which consists of two postdocs and four graduate students.



Situation 1: Grad Student to Postdoc?

You are a graduate student in your sixth year. You have known for a while that you really want to be a PI like Dr. Rostenkowski. A postdoc position has opened up in a lab at a prestigious institution doing research that aligns with your interests.

Situation 2: Postdoc to Researcher?

You are a postdoc who wants to apply for a research position in the same lab where you work. You have decided that you do not necessarily want to pursue a PI position, but you love science, primarily because of Dr. Rostenkowski.

4 Marketing Yourself Case Studies

continued

Case Study: The Rostenkowski Lab

Situation 3: Grad Student to Professor?

You are a fifth-year graduate student with a passion for teaching others. Dr. Rostenkowski has been very supportive of your endeavors, even connecting you with one of his colleagues at a liberal arts school in the area so that you could shadow them during this past year of your graduate program. During your time shadowing other professors in the liberal arts environment, you have decided that a teaching career in higher education science is the right path for you.

Situation 4: Grad Student to Industry?

You are a graduate student in your seventh year who knows that scientific research is just not the right fit for you. You have been talking to the career office in the medical school to determine what opportunities are available for you outside of academia. You are particularly intrigued by consulting opportunities and data analyst jobs at large corporations (you have a very strong skill set in statistical analysis).

4 Marketing Yourself Case Studies

continued

Case Study: The Rostenkowski Lab

Situation 5: Where do YOU want to go next?

You are exactly where you are (fill in the blank here!). Identify the next career step that intrigues you most.



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People

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