Building Skills for a Successful PhD

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January 31, 2023
1:00-4:00 p.m.
32-144
Agenda

• Overview, Workshop’s motivation and goals
• Skill-building module on how to give and receive feedback
• Strategies for managing relationships with your advisor
• Briefing on the Riccio Graduate Program in Engineering Leadership and other professional development resources
• Discussion on what other skills would you like to have more training on; wrap up
• Wrap up and post-workshop survey and feedback
Timeline

• 1:00-1:15 p.m. Overview, motivation and goals for our workshop
• 1:15-1:45 p.m. Giving and receiving feedback
• 1:45-2:30 p.m. Practice skills in feedback conversations
• 2:30-2:50 p.m. Managing relationship with your advisor/PI
• 2:50-3:15 p.m. Group exercise on three scenarios
• 3:15-3:55 p.m. Resources for building skills including Certificate in Technical Leadership, Graduate Program Offerings; what other skills would you like to have more training on; wrap up
• 3:55-4:00 p.m. Post-workshop survey and feedback
Motivation and Goals of Workshop

• Important to build both technical and non-technical skills during PhD

• Many non-technical skills taught in leadership program are applicable to everyone, even if not in formal leadership position

• Just like existing research/literature can help address technical challenges, existing research/literature can also help address non-technical challenges

  – you are not the first or only one encountering these challenges

• Goal of this workshop is to briefly cover some of those key non-technical skills, show you how they connect to challenges countered during PhD, and point you to resources to help you learn and build these skills when you need them
Have you ever received a feedback message that you’ll probably never forget?
Feedback Conversations

- One of the most impactful and important pathways to skill development and performance improvement
- How positive working relationships are formed and maintained over time
- How teams or work groups build positive relationships over time
- How leaders and academics develop others
- Yet – is difficult, often avoided, or sometimes dreaded
Ineffective Feedback Consequences

- Poor Message Choice
- Poor Message Delivery
- Harmed Relationship
- Difficult Communications

Sources of Feedback in Industry and Academia

In Industry:
- You
- Boss
- Boss's Boss
- Direct Reports
- Customers
- Peers
- Team Members
- Self

In Academia:
- You
- Advisors
- UROP
- Funding Agencies
- Peers
- Lab Members
- Paper Reviewers
- Self
Forms of Feedback Conversations

Coaching

• Giving advice, direction or information to improve performance

• “I can help you do something better”

Use when

• Lack of skill or competence

Counseling

• Helping someone understand and resolve a problem (usually emotional)

• “I can help you understand a problem or issue more clearly”

Use when

• Problematic attitudes, emotions, or personality clashes

Strategies for Delivering Effective Feedback

1. **Problem oriented, not people oriented** – Focuses on problems or issues that can be changed

2. **Validating, not invalidating** – Messages communicate respect, collaboration, areas of mutual agreement

3. **Specific, not global** – Focuses on specific events or behaviors

4. **Owned, not disowned** – Take responsibility for your words

5. **Active listening, not one way talking** – Asking questions and learning
A Descriptive/Problem Solving Approach

1. Describe objectively - the event, behavior, or circumstance
   - Avoid accusations and describe objective facts

2. Discuss the behavior, your reaction, and impact or consequences
   - Avoid focusing on personality
   - Describe consequences, especially your reactions/feelings

3. Focus on solutions
   - Suggest acceptable alternatives and be open to others
   - Avoid debate

Defensiveness

- Individual feels threatened or attacked
- Self-protection becomes paramount
  - Energy is spent on defending rather than listening
- Results in anger, competitiveness, and/or avoidance

Disconfirmation

- Individual feels incompetent or put down. Self-doubt may be part of an imposter syndrome
- Reestablishing self-worth becomes paramount
  - Energy is spent demonstrating self-importance rather than listening
- Results in self-centered behaviors, withdrawal, or demotivation
Skills in Receiving Feedback

1. Build awareness of your “triggers” that get in the way of listening to feedback (ex., why you might get defensive or feel invalidated)
2. Disentangle the “what” from the “who”
3. Search for the helpful “coaching” in the feedback
4. Avoid snap judgements and take time to “unpack” the feedback
5. Ask for “just one thing” – find ways to get bite-sized pieces of feedback
6. Experiment with the feedback to see if it was helpful and practical

Skill Practice – Role Play

1. **5 minutes** - Formulate your feedback based on the role you have been assigned. Start with forming a goal for the conversation and some of your concerns of how the feedback might be received.

2. **3 minutes** – The person in the role of receiver of the feedback should prepare briefly on how to respond to the anticipated feedback. Reflect on possible emotional reactions that could hinder listening and learning (see below).

3. **15 minutes** – Each person will have up to 5 minutes to deliver your feedback conversation.
   - The feedback giver should start the conversation and work through planned messages.
   - The receiver should improvise as would reasonably be expected given the scenario.
   - The observer should take notes on the conversation on what went well and not so well.

4. **10 minutes** – Debrief the experiences once your group completes all three scenarios. Reflect on what went well, what could have been improved, and practical takeaway lessons.
<table>
<thead>
<tr>
<th>Round</th>
<th>Feedback</th>
<th>Giver</th>
<th>Receiver</th>
<th>Observer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>From Mary Griffin to direct report</td>
<td>Student A</td>
<td>Student B</td>
<td>Student C</td>
</tr>
<tr>
<td>2</td>
<td>From Danielle Marcoux to supervisor</td>
<td>Student B</td>
<td>Student C</td>
<td>Student A</td>
</tr>
<tr>
<td>3</td>
<td>From Ramesh Patel to peer</td>
<td>Student C</td>
<td>Student A</td>
<td>Student B</td>
</tr>
</tbody>
</table>
How to Get Feedback from Your Advisor

• Acknowledge feedback – important to receive and make sure you understand (document and confirm)
  – Need to let the person giving the feedback know you heard it to encourage more feedback in the future

• Try not to view feedback as a negative
  – Opportunity to grow
  – “..feedback was not a right. You're not entitled to it. So whenever you get it, it's a gift and you had to treat it that way.” — Mellody Hobbson

(Source: https://www.ted.com/podcasts/mellody-hobson-on-taking-tough-feedback-transcript)
Relationships with Advisors

• Of all workplace relationships, few are as important as that with your immediate supervisor
  – They are sources of engagement and support but also evaluation
  – People join organizations but they leave bosses and jobs
• Recognize that both parties are mutually dependent, although power is imbalanced
• Some of us may bring a lifetime of how we “cope with authority” to these relationships
  – Self-awareness is therefore critical
**Career Stages and What Individuals Tend to Need**

<table>
<thead>
<tr>
<th>Early career</th>
<th>Mid career</th>
<th>Late career</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment</td>
<td>Advancement</td>
<td>Maintenance</td>
</tr>
<tr>
<td>Guidance</td>
<td>Independence</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Coaching</td>
<td>Exposure</td>
<td>with achievements</td>
</tr>
<tr>
<td>Feedback</td>
<td>Challenging</td>
<td>Autonomy</td>
</tr>
<tr>
<td>Training</td>
<td>Work</td>
<td>Opportunities</td>
</tr>
<tr>
<td>Role-modeling</td>
<td>Sponsorship</td>
<td>to develop others</td>
</tr>
<tr>
<td>Acceptance</td>
<td>Counseling</td>
<td></td>
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<tr>
<td>Protection</td>
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</tbody>
</table>

### What Advisors Tend to Need from Students

<table>
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<tr>
<th>Advisor Needs</th>
<th>Establishment</th>
<th>Advancement</th>
<th>Maintenance</th>
<th>Withdrawal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Technical and psychological support to learn the role and establish a reputation</td>
<td>Loyal and talented followership who reliably delivers on expectations and results</td>
<td>Opportunities to mentor and develop others</td>
<td>Opportunities demonstrate value through consultation, sponsorship, exposure, and coaching</td>
</tr>
</tbody>
</table>

*Career Stage Alignments and Misalignments

*Career Stage Alignments and Misalignments

Questions to Ask in Assessing Relationships

1. Are you meeting your advisor’s expectations?
2. Does your advisor trust you?
3. Do you see and understand your advisor as a person?
4. Do you understand your advisor in the context of their own role?
5. Can you identify your advisor’s strengths? And areas you can complement?
6. Are you clear about what you need and expect (for now and future)?
7. Have you discussed your own growth, development, and aspirations?
8. Do you and your advisor come from different backgrounds?
9. Have you figured out how to work with multiple advisors?

Example Scenarios

• Scenario 1
  – Advisee prefers to do things on own schedule and is frustrated by advisor’s micro-managing style.
  – Advisor prefers that things be done ahead of time and increases check-ins with student to ensure project stays on track.

• Scenario 2
  – Advisee is finding task more difficult than expected and doesn’t want to give update until something works.
  – Advisor is frustrated with advisee’s lack of communication and updates.

• Scenario 3
  – Advisee agrees to a deadline even though they are not sure it can be done in time, but doesn’t want to say no. Advisee does not fully understand discussion, but is worried about asking for clarification.
  – Advisor get frustrated with advisee missing deadlines and/or not completing what was discussed.
Small Group Discussion – 15 minutes

• Form small groups to discuss each of the three scenarios
• Explore what you think are some of the core dynamics in the relationship and problems
• Discuss actions steps for moving forward; actionable recommendations from the standpoint of the advisee
  – Consider some of the insights from our overviews of giving and receiving feedback
Skills Learned in 6.9280 Leading Creative Teams

**Organizational**
- Creating and Communicating a Shared Vision
- Building Power & Exercising Influence
- Leading Change · Delegating and Empowering

**Teamwork**
- Designing, Developing, and Adjourning Teams
- Learning in Teams · Group Decision Making
- Fostering Collective Creativity · Enabling Inclusion

**Interpersonal**
- Managing Conflict & Negotiation · Motivating Others
- Giving & Receiving Feedback · Developing Others
- Building Positive Relationships and Networks

**Personal**
- Developing Self-Awareness · Managing Stress and Mindset
- Building Leadership Strengths · Thinking Creatively
- Ethical Decision Making · Managing Your Career
AY 2020-2021 Summary
- 110 Completed our graduate classes
- 317 Attended our workshops
- 37 Graduate Certificates in Technical Leadership awarded

AY 2021-2022 Growth
- 20% Increase in graduate class enrollments

44%
Female graduate certificate recipients (2020-2021)

"I think the biggest gaps are in teamwork and collaboration. The students are talented technically, but often siloed in research." (Employer comment about MIT Ph.D’s, 2018 CAPD Office Survey)

Our Learning Model

Skills Learned in 6,928 Leading Creative Teams

Organizational
- Creating and Communicating a Shared Vision
- Building Power & Exercising Influence
- Developing and Empowering Others

Teamwork
- Forming, Launching, and Developing Teams
- Leading Team Postmortems
- Group Decision Making
- Fostering Collective Creativity
- Enabling Inclusion

Interpersonal
- Managing Conflict & Negotiation
- Motivating Others
- Giving & Receiving Feedback
- Listening
- Building Positive Relationships and Networks

Personal
- Developing Self-Awareness
- Managing Stress
- Identifying & Building Strengths
- Thinking Creatively
- Ethical Decision Making
- Managing Your Career
**Graduate Certificate in Technical Leadership Requirements**

**Academic Classes**
(21 units)

- 6.9280 Leading Creative Teams
- 6.9270 Negotiation and Influence Skills for Technical Leaders
- 6.9260 Multi-Stakeholder Negotiation for Technical Experts

Other MIT graduate leadership-related classes (List here: [https://gelp.mit.edu/grad](https://gelp.mit.edu/grad))

**Workshop Series**
(4 required)

- Four offered per semester (Examples below)
  1. Becoming a Technical Leader: Exploring Your Interests
  2. Investigating Leadership and Engineering through Film and Media
  3. Leadership and Career Paths in Technical Organizations
  4. Effective Mentorship Skills for Grad School and Beyond
  5. Understanding Customer Needs and Market Demands
  6. Engineering Systems Leadership: Seeing the Forest AND the Trees
in demonstrating proficiency in, and commitment to, development as a leader of teams advancing knowledge and using technologies to create products and services that improve the lives of all people impacted.
Recommended Books

THANKS FOR THE FEEDBACK
THE SCIENCE AND ART OF RECEIVING FEEDBACK WELL

THE UNSPOKEN RULES
SECRETS TO STARTING YOUR CAREER OFF RIGHT

Difficult Conversations
HOW TO DISCUSS WHAT MATTERS MOST

STRATEGIC RELATIONSHIPS at WORK
Creating Your Circle of Mentors, Sponsors, and Peers for Success in Business and Life
Recommended Books

- Negotiation Genius
  - How to Overcome Obstacles and Achieve Brilliant Results at the Bargaining Table and Beyond
  - Deepak Malhotra, Max Bazerman
  - Harvard Business School

- Bargaining for Advantage
  - Negotiation Strategies for Reasonable People
  - G. Richard Shell

- The Art of Negotiation
  - How to Improvise Agreement in a Chaotic World
  - Michael Wheeler

- Ask for It
  - How women can use the power of negotiation to get what they really want
  - Linda Babcock and Sara Laschever

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Ricchio Graduate Engineering Leadership Program
What other skills would you be interested in learning during your doctoral learning experience?
Workshop Assessment

Please provide feedback on your experiences with our workshop
https://mit.co1.qualtrics.com/jfe/form/SV_6F5cgiOEUIIL76Bg