

Mentor-mentee relationships

RMAIS Module

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What is a mentor?

- Experienced individual passing knowledge, advice, and guidance to novice
- Often seen as top-down one way flow
- Involves personal relationship with mentee
 - Personal understanding of career goals



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Why mentor?

- “benefits to the protégé can be so valuable that identification with a mentor should be considered a major developmental task of the early career” (Russell and Adams 1997)
- Mentees:
 - Professional development
 - Support and encouragement
 - Increased confidence
 - Enjoyment and satisfaction (in employment)
 - Networking
- Mentors:
 - Accelerated research
 - Networking
 - Recognition from mentee success
 - Career satisfaction
 - Generativity



Think of the best mentor you've had

Write down some of the things you like about that mentor

What makes a good mentor?

What makes a good mentee?

Identifying the right mentor

- Mentor “gurus” are unrealistic
- Network of mentors
 - Mentor map
- Informal (unassigned) mentoring relationships more successful
- Think about what role this mentor fills



Making a successful mentoring relationship

Trust and communication

- **How can you establish trust?**
 - Get to know each other
- **Learn about each others background**
 - Previous education
 - Research experience
 - Cultural background
- **How do you communicate?**
 - Clear expectations
 - Appropriate feedback

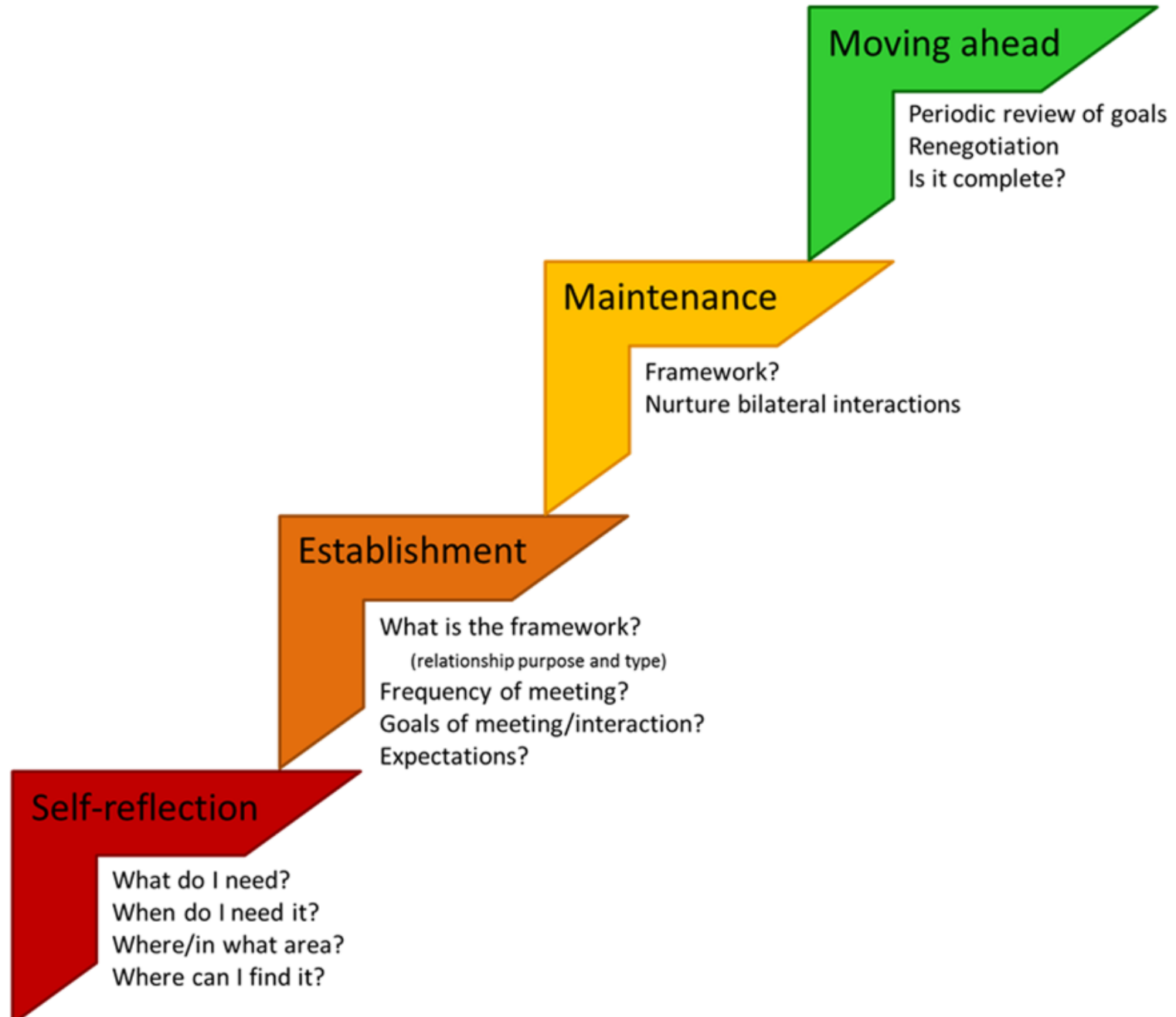


Case Study: Trust 2

“ As a graduate student, I supervised an undergraduate in a summer research program. At the end of the summer, my adviser said we should publish a paper that included some of the work done by the undergraduate. I got nervous because I thought I could trust the undergraduate, but I wasn't totally sure. He seemed very eager to get a particular answer and I worried that he might have somehow biased his collection of data. I didn't think he was dishonest, just overeager. My question is: should I repeat all of the student's experiments before we publish? Ultimately, where do we draw the line between being trusting and not knowing what goes into papers with our names on them? ”

Backwards design in mentoring

- **Define goals**
 - Where do you want to improve understanding?
 - Set of knowledge and skills to be gained
- **What will mentees *know*?**
 - Ex. Fitness effects of plant defense on herbivores, ways carbon is recycled in soil
- **What will mentees be *able to do*?**
 - Ex. Micropipetting, experimental design, make chemical solutions, analyze LC graphs
- **Identify how you will achieve and assess these goals**
 - Check progress throughout



Case Study: Projects

“ I mentored an undergraduate student who came from another university for the summer. I explained the project to him and taught him how to make media and grow bacteria. Because my professor and I did not think he had sufficient genetics background for a molecular project, we gave him a microbiology project.

He was very quiet for the first ten days of the project and then he went to my adviser and complained about the project. He said he wanted a project “like Mark’s.” Mark was a student with a strong genetics background and his project was to clone and sequence a gene. My adviser insisted that my mentee keep the project I had designed for him, but the student became sulky. As the summer went on and he didn’t get any of his experiments to work, I began to wonder if he understood what we were doing or even cared about it. ”

What skills/techniques do mentees need? (prior knowledge)

- **Laboratory skills**
 - Make solutions
 - Pipetting
 - Digging
 - Counting
 - Dissection
- **Organizational skills**
- **Cleanliness**
- **General lab safety**
- **Literature research**
- **Data organization; create graphs and tables**



Share expectations with each
other

Conflicts in mentoring

Ethics in science and mentoring

- **Scientific integrity**
- **Avoid conflict by establishing ethic standards early**
- **Will the project be published?**
 - **Who will be the authors on the paper?**
 - **What work is expected for the publication?**



"You are completely free to carry out whatever research you want, so long as you come to these conclusions."

Power relationships

- **Influenced by managerial relationships**
 - **Being a boss to the mentees can enhance progression but often limits mentee openness**
- **Knowledge can be power**
 - **Expert appears more “powerful” in relationship**
 - **Don’t assume mentees are knowledgeable**
 - **Power gaps often decrease with closing of knowledge gap**
- **Bilateral communication diminishes power issues**
 - **Mentors should not make assumptions of mentees**
 - **Interests and knowledge should be exchanged from both sides**

Diversity in mentoring

- **Mentors and mentees are very different**
- **Embrace diversity of mentees!**
- **Everyone has implicit bias**
 - **Be aware and don't let it pervade interactions**
- **Communication is key**
 - **Establish clear expectations from both sides**
- **Avoid stereotypes**
- **Mentors should learn about mentees**
- **Avoid the “one size fits all” pitfall**

Role playing!

References

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