Overview of this session

In this session, learners will consider issues related to mentorship in research environments. Learners will view a brief case study video and participate in a group discussion and answer ethics-based reflection questions related to the presented scenario.

Learning objectives

Through this case, learners will:
1) Consider ethical approaches to mentoring.
2) Learn about resources related to the presented scenario.

Lesson description

Instructional Event	Action		Time	Technology
	Instructor	**Learner**		
1. Introduce learning objectives	− Give an overview of this session − State learning objectives	− Listen and react to instructions − Recognize the necessity of this session	5 min	
2. Observe the case study	− Present the case study and review discussion questions with audience	− Watch the presentation and review discussion questions	2 minutes 7 seconds	Internet capability
3. Talk about discussion questions	− Ask learners for feedback and discuss questions/topic − Facilitate discussion and provide answers	− Ask questions related to the case study − Share ideas or experiences related to discussion questions/ topic	~11 min	
4. Explain essential concepts that learners should know	− Summarize discussion points − Reiterate core concepts of session	− Listen	5 min	
5. Provide feedback	− Ask for feedback and address any remaining questions	− Ask anything related to this session	5 min	
6. Enhancing retention and transfer	− Provide additional materials including links to other resources	− Review additional materials as needed	2 min	

Case study overview

Marty is a graduate student working in Dr. Smith's research group and has just returned from a long summer vacation where he made plans to defend his Ph.D. by the end of the upcoming semester. Marty has even started the process of searching for and applying to jobs post-graduation. Everything seems to be going well until Marty speaks with his mentor, Dr. Smith about his plans. Dr. Smith seems surprised by the news and comments that this timeline was unknown to them. Dr. Smith informs Marty that he needs to conduct extensive follow-up studies because their results are not good enough to contribute to a manuscript Dr. Smith is drafting. Dr. Smith tells Marty to hold off on any plans to graduate or apply to new positions. Marty is shocked by this response and leaves the meeting to confide to their colleague who is also a graduate student. Marty thinks the demands Dr. Smith are placing on him are rooted in their own research interests and could delay his defense for months or even years. The students are left pondering who they could speak with about the situation.

Discussion questions

1. **Who could the graduate students speak with about their issue? Do you know of any university resources that may help in this situation?**
   - The student could try to have a follow up conversation with their mentor. If they are at an impasse, including a neutral third party might be helpful.
   - Trusted faculty member or committee member
   - Ombud Office
   - Graduate School

2. **Is there anything that could have been done to prevent the situation from arising? What could be done to prevent any future disruptions to the graduate student's progress?**
   - Marty and Dr. Smith may have both benefited from a conversation prior to beginning their research together outlining working expectations, authorship considerations, project timelines, etc. Some researchers may wish to document this and establish a working agreement that each member signs off on.
   - Establishing regular meetings or check-ins probably would have helped both parties stay more organized and address any project-related delays or concerns in a timely manner.
   - If the group is generating data, it is beneficial to establish how and where data will be stored as well as relevant safeguards before beginning your research. Some storage options allow for easier access for researchers which may improve sharing and making project-related decisions.

   You can ask the audience follow up questions such as the following:
   - It can be beneficial to establish mentor-mentee expectations and responsibilities prior to beginning working together. Ask the audience how many individuals did this before starting their graduate work or an appointment at a new position. What are things you would want to establish in this conversation?
   - Ask audience to share how often they meet with their mentor or mentees.
   - What could Dr. Smith do differently in their approach to mentorship? What about Marty?

3. **What are the responsibilities for both the mentor and mentee in developing a respectful and productive working relationship?**
   Mentor responsibilities:
   - Provides supervision and guidance on research methods and developing the student into an independent researcher.
   - Provide guidance and training on all research activities (including the development of the project, data review, aid with problem-solving, and providing funding and resources to complete the project).

- Assists with manuscript development, presentation training, literature reviews, and intellectual development of trainee.
- Provides a review of student's work performance and monitors progress/goals.
- Aid with advising on a future career path and employment opportunities (this could be as simple as writing a recommendation letter or helping a student transition to a new career path).

Trainee responsibilities:
- Do the work set forth by their mentor and be proactive and consistent in work and attendance.
- Follow all regulations and protocols. Be accountable for all project-related work and follow all guidelines set by the institution.
- Communicate effectively with mentor especially if things are not working/questions arise.
- Compile project information and prepare work for publication and presentations as deemed appropriate by the mentor.

Ask the audience for any other responsibilities they can think of for each party.

Additional discussion prompts
- What are some important topics a mentee should discuss with their mentor before beginning their work?
- What are characteristics you would/should look for in a mentor? What are characteristics you would/should look for in a mentee?
- Do you think Marty is acting selfishly or is he being proactive in preparing his career for the next step?
- If you were the mentor, what would you tell Marty? How do you handle differences of opinion?
- Have you ever worked under someone with a mentoring or supervisory style you struggled with? How did you handle this? What advice would you offer to other mentors or staff working in these conditions?

Additional resources
- UK ORI resources:
  o Webpage: https://www.research.uky.edu/office-research-integrity
  o UK Responsible Conduct of Research & Scholarly Activity webpage: https://www.research.uky.edu/responsible-conduct-research
  o Research misconduct webpage: https://www.research.uky.edu/research-misconduct
  o Research misconduct policies: https://www.research.uky.edu/research-misconduct/policies
  o Authorship considerations resource: https://www.research.uky.edu/research-misconduct/authorship-and-collaboration
  o Faculty Advisor responsibilities video (for IRB protocols): Faculty advisor responsibilities_01242022 (uky.edu)
- UK Electronic Research Notebook (LabArchives) webpage (provides information on LabArchives including setting up a new account, logging in, and benefits):
  o https://www.research.uky.edu/ERN
  o LabArchives@uky.edu
- UK Good Research Practice Resource Center: https://www.research.uky.edu/good-research-practice-resource-center
- UK Faculty mentoring resources (Provides links to mentorship books, articles, podcasts and examples of mentorship programs and policies): https://www.uky.edu/ofa/faculty-mentoring-resources
- UK Ombud webpage (Addresses Student Academic Rights and problems concerning the commission of academic offenses): https://ombud.uky.edu/

- UK Graduate School webpage (Provides information on student funding, faculty and staff resources and graduate student information): https://gradschool.uky.edu/
- UK Graduate School Office of Postdoctoral Affairs webpage (Includes postdoc events and educational resources): https://www.uky.edu/postdoc/
- UK Office for Student Success Disability Resource Center (Provides support and accommodations to students with documented disabilities): https://www.uky.edu/DisabilityResourceCenter/
- UK Center for Support and Intervention webpage (Provides a central point of entry for concerns regarding students and employees and connecting individuals to resources.): https://www.uky.edu/concern/
- U.S. Department of Health and Human Services (DHHS) Office of Research Integrity website (provides information and resources on RCR research and misconduct as well as general research information):
  - Webpage: https://ori.hhs.gov/
  - DHHS ORI's *Introduction to the Responsible Conduct of Research*: https://ori.hhs.gov/sites/default/files/2018-04/rcrintro.pdf
    - *Introduction to the Responsible Conduct of Research*- Chapter 7. Mentor and Trainee Responsibilities: Introduction | ORI - The Office of Research Integrity (hhs.gov)

References
Case study adapted from:
Institute of Medicine. 2009. On Being a Scientist: A Guide to Responsible
Conduct in Research: Third Edition. Washington, DC: The National Academies
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