

STEM Case Study: “Tweaking the Data”

Step 1: Read your assigned case:

- STEM odd numbered groups: “Tweaking the Data”
- STEM even numbered groups: “Plagiarism”

Step 2: Discuss your case.

Step 3: Be ready to share one key insight of your own.

LEARNING OBJECTIVES:

- Establish a framework for creating psychological safety.
- Clarify roles as teacher and role model in education mentees about ethics.
- Manage the power dynamic inherent in the mentoring relationship.
- Articulate ethical issues that need to be discussed with mentees.

CASE NARRATIVE:

Frances has assigned a mentee, Glenn, to collect data for an experiment. When the dataset is complete, Frances sits down to analyze it and finds predictions completely disconfirmed. Dismayed, Frances calls Glenn into the office and asks Glenn to describe, in great detail, how the data was collected. Frances wants to make sure these anomalous results can't be more easily explained by mistakes in the lab. Their conversation lasts quite a while, but at the end Frances is still frustrated and puzzled by the data, and sends Glenn home so Frances can think about it some more.

Later, Frances is eating lunch in the cafeteria and overhears Glenn talking to a friend. Sounding very upset, Glenn tells the friend, “I think Frances is mad at me,” and describes their recent meeting. Frances is surprised to realize Glenn took the questioning very personally. When Glenn finishes venting, the friend replies, “If Frances is so mad, you probably did make a mistake somewhere. After all, Frances is the expert. Maybe you should tweak the data a little next time to keep Frances happy.”

GUIDING QUESTIONS FOR DISCUSSION:

- What courses of action are possible? Which ones are preferable? Why?
- What, if anything, could have been done to prevent the situation?
- How can a mentor's reaction to unexpected news motivate or influence a mentee to make good or bad ethical choices?