

Part I: General Tips and Instruction

What does it mean to be a professional in this setting?

Teaching Assistants who teach lab sections are faced with a unique teaching situation. They are often tasked with leading practical exercises that expand on material from the primary course. This material is frequently prepared by the primary course instructor, with the TA having little control over content. Additionally, many lab sections are practical exercises expanding on material that was already taught, meaning the TA is not teaching new material. This can be challenging for teachers since it may feel like the job is to supervise as opposed to teach. That said, lab instruction is a form of teaching and there are ways to increase its effectiveness for student learning. The question that drives effective teaching in the lab is the same as in a traditional classroom: how can I enhance student learning?

General Tips for Running and Effective Lab

It is the University's policy that all student information, including grades, be kept confidential (i.e., is not to be shared with any persons other than the student and the course instructor). It is important that student information is kept private and grades are not seen even by other students in the class.

Refer to the instructor's syllabus or speak with the course instructor about any additional

Make sure all students wear safety equipment and are familiar with safety procedures for the lab in general and the specific lab activities.

A good way to demonstrate lab safety is to be an example of good safety practices yourself (e.g., practice safety in lab procedures, wear appropriate safety gear).

Although it is important for TAs to maintain professionalism in their roles as lab instructors, it is also beneficial to cultivate an “instructor personae” that incorporates yourself as an “instructor” but also includes aspects of your personality that may help to build rapport with your students.

In the pedagogical literature, many researchers have demonstrated that being authentic in your instructor personae is important for building rapport with students. However, the “right” balance between professionalism and authenticity will likely need to be developed over time and may change depending on the students, the course, and what is required of you as an instructor or TA.

Follow the dress code of the department and keep in mind that research has found that teaching assistants that dress professionally have fewer student conflicts and receive higher evaluations.

How can TAs enhance learning in the lab?

Articulate the goals and objectives for student learning

< Context

- o Upper-level (3000-4000 level) labs will look different and have different goals when compared to lower-level (1000-2000 level) labs. Lower-level labs often focus more on foundational knowledge while upper-level labs usually focus more on preparing students to become more independent researchers.

< Derive goals/objectives from lab exercises

- < An exercise may include various standardized procedures (e.g., stir until reaction is complete).

mistakes, the TA can help add nuance to the procedure while helping students avoid those mistakes.

- < Provide context for exercises
 - What is the real-world use/application of the procedure? What new questions/follow-up procedures relate to what students will have completed?
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- When grading students' work, be sure to provide students with grading criteria so they don't keep making the same mistakes.

References

McKeachie, W. & Svinicki, M. (2013). *McKeachie's teaching tips*. Cengage Learning