

## Are Discussion Sections Actually Useful?

Graham Krahn  
Department of Physics and Astronomy  
University of California, Riverside



If you had asked me this question when I first started as a discussion TA, I would probably have said, “no.” It appeared to me that many students were not benefitting from discussion sections and had no interest in being there. I also quickly realized that every discussion TA taught their section differently; some lectured for the entire time, some supervised group work and problem-solving sessions, while others opened up the class to Q&A. So naturally I asked myself, if all the course material is covered in lecture and students are free to interact with each other and the professor outside of class, are discussion sections actually useful? Well to my surprise, I have found through student comments and evaluations that discussion sections are very important to students and can be extremely useful. In this article I will briefly outline the challenges, purpose, and strategies

which enable effective leadership of a discussion section in the natural sciences.

### Challenges

The challenges of being a discussion TA are numerous. There can be issues related to lack of student participation and responsiveness. How do we motivate students and is that even our job? To complicate matters further, many graduate students end up TAing an undergraduate class that they took at another institution, and are unaware of the expectations both on them and the students they teach. Sometimes TAs can feel overwhelmed by the breadth of material to be covered. It is always challenging to balance the time between class discussion and covering course material. Is it more effective to spend class time answering a lot of student questions or by working through problems?

### Purpose

Many of these challenges can be overcome by understanding the purpose of discussion sections. The first thing to realize is that you are not a lecturer. The goal of the discussion TA is to maximize student understanding and learning of the material presented in lecture. It is the TA’s job to help facilitate the learning process and solidify the concepts taught in lecture. It is important to lead students to a deeper understanding of course material by promoting collaborative and active learning. As the key link between the professor and students, the discussion TA needs to be the facilitator who maximizes student learning.

### Strategies

Now that the purpose of a discussion section and the role of the TA are clear, I will list and briefly describe some of the strategies and techniques I have found useful in



engaging students and effectively leading a discussion section.

**Preparation** – The key to useful discussion sections is to be prepared. Before coming to class prepare notes, generate problems to solve, develop group questions, and review any other material you might use. More often than not students will come to discussion without any questions of their own, and in order to facilitate discussion and promote student learning, TAs need to have questions and material prepared ahead of time if the session is to benefit the students.

**Knowledgeability** – It is important to be comfortable and knowledgeable about the discussion topics. Students need to be able to see that you clearly understand the course material and are able to answer their questions in an intelligent manner. If a question is raised that you can't answer, don't pretend that you know the answer. Instead, thank the questioner, discuss how you would approach the problem, and then find the solution before coming to the next class (better yet, nominate the student who asked the question to find the answer). This allows you to retain your credibility as a teacher, and students will respect you for it.

**Organization** – It is important to stay organized in order to keep your class on track and to the point. As a discussion TA, you are responsible to set the agenda, clarify class concepts, promote discussion, and keep students engaged. It is very important to set the agenda for each class by preparing

a class plan ahead of time. Discussions will be most useful to students if you set clear goals and give them (and yourself) enough time to complete these goals each session.

**Communication Skills** – Be energetic and enthusiastic. Effective communication not only imparts factual information, but also imparts passion to the student. Keep each class interesting by mixing it up. Maybe start by reviewing some course material, then solve a problem for the class, then ask questions to students they should be able to answer, and then provide some problems for the students to solve interactively. A TA with good communication skills (which is not just speaking) has the ability to interact with students in a way that helps them better understand the material from lecture and reach new insights both independently and collectively.

### Summary

Discussion sections are very important for student learning and growth. The role of the discussion TA is to be the facilitator. Students often have questions about concepts from lectures or readings, but they are unwilling to vocalize these concerns. It is the job of the TA to bring these questions to the surface during discussion and answer them within the context of an interactive learning environment. Remember that discussion sections are designed to serve the student, and so TAs need to be able to identify and cater to the greatest learning needs of the students.

