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Resource: The Torch or the Firehose
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Before You Walk In...

Lack of interaction may be the number one problem. However, if you run a silent recitation, you can at least console yourself with the thought that it's not all your fault—the students share some of the blame—and anyway, they still probably learn something. These comforting thoughts are not available to the teachers of recitations afflicted with the number two problem: poor preparation. Listen to another unhappy undergraduate.

Monday morning, 10 am. My recitation teacher walks into class with the homework assignment for next week. He is not sure exactly what the lecturer has covered so far, but hopes that he will be able to rely on his knowledge of the basics to get him by. He guardedly asks us if there are any questions. After a while, someone finally speaks up, asking about a point made in lecture. The instructor, not too sure of himself, gives a hand-waving, hot-air answer, and refers people to the textbook. Another student offers an explanation, using examples from lecture. Mumbling his thanks, the teacher begins to work through the next assignment, using sketchy solutions he has scrawled to on the back of an envelope. Other students are talking amongst themselves or napping.

Towards the end of class, he remembers the graded assignments he was supposed to return. He hands them to a student in the front row, who passes them around. One at a time, the students shuffle through the stack to find their paper, while the instructor continues to work on a problem he is having trouble with. Finally, the class is over. Someone returns the unclaimed papers as the students file out.

Wednesday morning, 9:15 am. The alarm clock rings. I roll over and reset it for 10:15.

The number two problem with recitations is that the teachers don't seem to know what they're doing—either they fumble around, or they come to class with apparently nothing special in mind and end up improvising.

What? Me unprepared? I know the subject cold.

Good, but can you explain it? That needs technique and forethought. Even if you are an experienced teacher, different lecturers have different emphases: the course may not be the same as the one you took as an undergraduate, lectured in yourself three years ago, or even taught in recitation last year.

Before the Term Begins

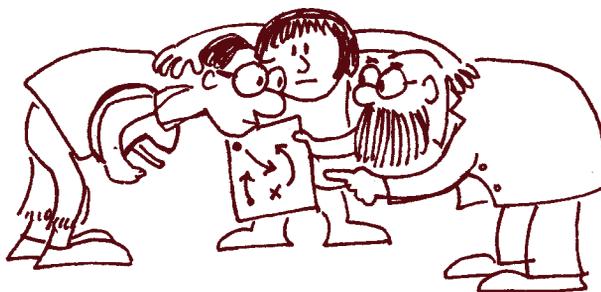
Course Material

You should receive a course outline well before the term starts. Look it over to see what's emphasized and what the course objectives are. Talk to the other recitation instructors, particularly those who have taught the recitations before. Get the textbook and read at least some of it for the flavor, and to judge how much explaining you'll have to do. Can the students read it by themselves?

If you are new to the course, there may be things in it you don't know so well. The earlier you start studying them the better. Later in the term when they come up, you may be at a critical point in your own work and not have as much time to prepare as you would like.

Staff Meetings

Before classes begin there should be a meeting with the lecturer and the other section instructors at which you can discuss the level at which the class is aimed, and what the lecturer will emphasize. In how much detail and how deeply are concepts covered? Will old problem sets and exams be a reliable guide, or will there be changes? Administrative matters should be settled at this meeting, so that you'll have the information for your students at the first class: when exams will be given, when problem sets are due, how the course will be graded, if tutorials will be available. Sometimes the lecturer will suggest what to do the first week to help you get started.



If the course is a new one, it may not be possible to decide everything in advance. In that case, frequent and regular course meetings during the term are essential. You should expect to give the lecturer important input on how things are going, and should expect to influence policy on exams, problem sets, and course material.

Why have sections?

First-time section teachers might want to think a little about what their function is. Observation of classes like the one described before and even worse ones suggest possible answers:

- to supply in advance the solutions to the week's problem set, thereby saving the students a lot of unproductive effort;
- to provide an hour of sleep uninterrupted by cell phone calls;
- to keep the profession small by discouraging potential majors.

Getting serious, a reasonable list of your roles might be:

Prodding — Provoking discussion; getting the students to think about and interact with the material; motivating them to work and succeed;

Helping — Answering questions; explaining difficult points; smoothing out areas of uncertainty; showing them how to get started; what's important;

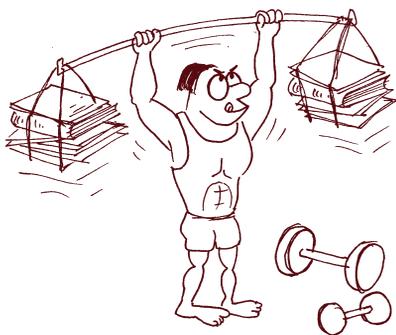
Catching — Acting as a safety net; watching out for students in trouble; giving them extra help when possible; alerting others when necessary.

These are things which can only be done in smaller groups, where the teacher sees the students as individuals. So we need sections.

Preparing for the section meeting

Even experienced hands have to do some preparation before each section meeting if they don't want to run into trouble.

- Look over the problems that students are likely to ask about; for those problems that won't be graded, work out in advance those that you are not absolutely sure you can do off the top of your head; just as important, think about how you will explain them.
- For problems that students are to hand in later for grading, help usually consists of discussing an analogous problem, or one that presents similar difficulties. Don't give things away, however: if you regularly do, your section will get larger, but it's bad for the students and they will not respect you. They have to struggle by themselves first before they can profit from your hints.
- You should know how far the lectures have gotten, and be ready to explain what you think are difficult or important points. For this, talk to other instructors, read suggestion sheets put out by the lecturers, and best of all, go to the lectures yourself (this is often required by larger courses). Failing that, you should at least have the lecture notes (if the lecturer doesn't provide them, perhaps a student's can be regularly copied). If you don't know if something has been covered in lecture, it's better to ask your students than to guess. They won't be happy that you don't know, but at least they see you care enough to ask them.



- Have material ready to prod the students with in case there are no questions: non-assigned problems, materials from other textbooks, or your own experiences that are relevant and interesting. These days in almost every field, there are journals oriented toward teaching and they have material you can use for the classroom. Again, consult with other instructors or the lecturer.
- An important point is hitting the right level: here you have to feel your way. You want something for everyone --- most of the time at a level where everyone can follow without difficulty (some teachers recommend aiming a bit below the average); now and then something that stretches your students a little. The problems they are asked to do are a good guide to the level expected, if not to the one you actually see.

Planning the Hour

Deciding how to divide up the recitation time isn't easy. Possible activities include: solving homework problems, reviewing the week's lectures with your own commentaries and explanations, working together on new problems, giving brief quizzes, digressing to related material not in the syllabus, telling jokes... Different recitations do different things.

At least do some advance planning—have some modest objectives in mind that you can head for; they will give you an internal compass that your students will sense and appreciate. Have some alternatives in mind if you aren't sure what your class will need that day. Do what you do best and enjoy doing, what your class seems to appreciate, what they need. Keep it varied and keep experimenting.

Remember, though, to start things off with some warm-up exercises. Some teachers like to start with an outline of what went on in lecture — this can serve the same purpose, if done briefly and interactively.

