Effective Recitations: The Power of Being Prepared

Paul Kempler, Chemical Engineering G4

Tal Einav, Physics G6

Outcomes: To go from good to great, a TA should…

- Be prepared, add pizzazz, incorporate questions, and use summary sheets
- Come up with great material and present it effectively
- Engage and challenge students with interesting practice problems

What is a Recitation Session?

Most of the required (core) classes that undergraduates take in their first two years have recitation sessions, two 1-hour lectures led by a graduate student where students work through problems and bridge the gap between the lecture material and the concepts they will need for their problem sets. What material you cover and how you present it is up to you. It is a serious responsibility but extremely rewarding – be worthy of it!

Think Pair Share activities are italicized

Preparation is Key

1. Add pizzazz
    a. Use models/demos/technology to spice things up
    b. Trying to teach difficult concepts in multiple ways
2. Questions
    a. *Do you have any questions…?* Love the pause, live in the moment
    b. Students need time to absorb the material and formulate questions
    c. Some questions come after class
    d. The Postmortem: The best tool for self-improvement
3. Notes and Summary Sheets
    a. Do onto others…
    b. Nothing beats a compact, beautiful summary sheet

Materials for an Effective Recitation

4. Selecting topics for recitation
    a. How you select your material for your recitation depends on your option, the class, the professor, and co-TA's. **Communication** is key! Try to find and fill in knowledge gaps.
    b. Many options do not expect TA's to attend lecture, but it can be an extremely valuable way of determining what students need more work on.
    c. It helps to go through things more than once, so reinforce difficult concepts until they stick. Finding new ways of presenting the same information will keep students engaged.
    d. Make an itinerary and stay on schedule. You have a lot to cover and it's easy to get tield up on a single topic. Give students the opportunity to follow up later, and then move on.

5. Methods for designing effective problems for recitation
    a. *Think of a time you were given a particularly challenging problem with a rewarding solution. What made that problem memorable?*
    b. Compare multiple ways of solving the same problem when possible. Avoid "right-wrong" and "plug and chug" solutions.
    c. Relate course material to things the students care about! The more you can engage with a funny or interesting problem statement the more sticking power it will have.
    d. Walking through your solution without skipping any steps is extremely valuable to students during this time. Recitation is an excellent opportunity for you to model your thought process ("Thinking about thinking") and coach students through problem solving.
    e. Give students the chance to work through problems themselves and share their solutions with each other.

Reference:

Hodges, L. C. (2015). Teaching Undergraduate Science : A Guide to Overcoming Obstacles to Student Learning. Sterling, Virginia: Stylus Publishing.