

## Principles for activity design Part I: Practical tips to create and implement in-class activities

Over the course of this project there has been much discussion about designing activities to engage students during class time. In the next two EOS-SEI Times editions we discuss designing activities. Here, in Part 1 we will go over some basics that will help you get started. Look for more advanced considerations next month in Part 2.

### 1) Choose a goal or topic to focus the activity

Look closely at your material and ask yourself some of the following questions:

- What is the most important content or learning goal?
- Is there an important framework to reinforce?
- What is most difficult? What gives students trouble? Are there exam questions students do poorly on?
- Is there a controversy in the material? Is there material that would make a good discussion?
- What could students work out on their own?
- Does something connect to a good real world example? Something they will do in their future careers?

### 2) Decide how students will engage with the material

The next step is to look at the material you've selected and decide how the students will interact with it. This is the key with developing activities. Try to design so all of the students engage and struggle with the content, not just a few. This is much more useful than watching instructors engage with content or having only one student answer a question. There are staggering amounts of activities to use. A quick google search on active learning yields over 200 million hits. Look for activities that complement what you want to teach. If you have trouble, discuss it with a colleague or ask an STLF for help. Here are a few simple ideas that work well with a variety of topics:

- a) Think/Pair/Share – This type of short activity is designed to let everyone engage with the material without being influenced by others. First the instructor poses a question, then students spend one minute thinking or writing silently about the idea on their own (you may have to enforce silence, some students will likely try to talk). Then students form groups of 2, each partner takes a minute or so describing their thoughts. Finally the instructor facilitates a discussion with the whole class. If you have trouble getting students to answer questions in class, this activity will likely increase responses.
- b) Worksheets – Write a few questions that lead students through the content in a structured way and photocopy enough for everyone (but see #3 below). Encourage them to work in groups or pairs. This can be as simple or difficult as you like, but should be challenging for the students in your class. Adjust the difficulty after running it the first time so it is sufficiently difficult, but not too hard.
- c) Case Study Discussion – In a case study students engage with the content in a real world context. Many people present cases or examples to students in lectures, however it is much more useful to give the students material and handouts (maps or data) that describe the conditions of the case and let them make decisions about it. Choose a case that is compelling and requires the students to both analyze the situation and come to a decision or series of decisions and then justify their choices (examples: how to proceed with a project, what to recommend to clients, where to drill, where to expect a change in a pattern, etc.).

### 3) Logistics and facilitation

- Decide how large your groups will be. In a large lecture hall with fixed seats, keep it to 2-3 unless you insist that they talk with rows in front/behind them. Four-in-a-row doesn't work because the people on the ends get left out. 4-5 can work well if they can all see and hear one another.
- For longer activities, assign roles such as discussion leader, note-taker, or reporter based on arbitrary criteria (pets, commuting time, nicest pen...)
- Make it very clear what students are expected to do. Ask: "does everybody know what to do?"
- Decide how many copies of the activity you will hand out (if you're handing something out). For a group activity, hand out only one sheet per group, or else groups may devolve into individuals. If students are using their own paper, make it clear if you expect only one submission per group.
- During the activity, CIRCULATE and listen to what students are talking about. Look for examples from groups that you could show to the rest of the class for discussion (the doc cam works well in large classes – cover up names).
- Plant questions, if someone asks you a question, tell them it is a good one and ask them to ask it when you return to the front of the class.
- Collect something from the students (a completed worksheet, clicker answers...) so there is clear accountability for doing the work. You don't need to mark them, but check off for participation and look for useful examples to help you learn more about student thinking and difficulties.
- Be sure to wrap up the activity effectively. Have a few groups explain their answers. It is more interesting if their answers could be different and spark discussion.

### 4) Assessing the activity

After you've run your activity you should consider how it effective it was.

- Did anything surprise you?
- Did the students understand what was required?
- Did they engage the way you thought they would?
- Did they learn what you were trying to teach them (and how can you tell)?
- Did they enjoy it or find it frustrating?
- Do you need to modify any of your learning goals based on how this went?

### 5) Other considerations

There are a few other considerations that might help developing activities:

- Create checkpoints (e.g. a clicker question, or a brief full-class discussion) within longer activities so you can help groups finish together
- If you know you will have fast groups add a "bonus" or extra consideration to the end of the activity. One you expect only a few groups will get to.
- Save time by giving preparation or homework for the activity, have them do readings or answer some questions prior to class.
- Remember feedback! How are you going to communicate how they've done?

### 6) Integrating activities into your course structure

- Aim to make activities a normal, regular part of in-class time.
- If you're transitioning from dominantly lecture delivery, a good goal is to incorporate at least one 5-minute activity into each 50-minute lecture period. This might seem like a lot, but chances are there's something in each one of your lectures that could be a good activity.
- Ask an STLF for help.

<sup>1</sup> CWSEI: <http://www.cwsei.ubc.ca/resources/index.html> EOS-SEI: <http://www.eos.ubc.ca/research/cwsei/>

<sup>2</sup> Questions? Comments? Talk to B. Gilley ([bgilley@eos.ubc.ca](mailto:bgilley@eos.ubc.ca)) or S. Harris ([sharris@eos.ubc.ca](mailto:sharris@eos.ubc.ca)). Visit EOS-S. rm361.