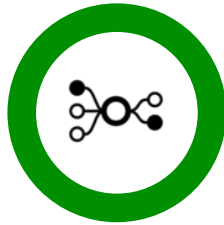


**MENU**



Overview classroom activities t.b.v.  
CEG Inspiration Day 2014

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OC Focus

## Classroom activities:

### Discussions



#### What:

Organized discussion activities are frequently used in flipped learning environments to facilitate peer-to-peer exchanges.

#### How?

Many effective discussion activities:

- Begin with thoughtful questions, anecdotes, illustrative quotes, current events, or controversial statements about the lecture videos and/or readings viewed outside of class
- Are well-structured and organized beforehand
- Set clear expectations for participation and civility

#### Why?

- Making course concepts more meaningful and relevant
- Helping students to explore diverse perspectives
- Testing student assumptions
- Improving student communication skills
- Developing a better understanding of your students' perspectives

More information?

<http://www.cmu.edu/teaching/design/teach/instructionalstrategies/discussions.html>

## Classroom activities:

### Applications



#### What:

Application activities give students the opportunity to use what they've learned to solve problems and grapple with learned concepts in novel ways.

#### How?

- Physics: You already taught your students how to lift a helicopter. In class, tell them the specifications of a specific helicopter and let them calculate how fast this helicopter can lift.
- Let students calculate the swing time of a pendulum test setting after deriving the formula.

Business class and differentiation strategy: After teaching students about the different variables that must be true in order for a differentiation strategy to succeed (e.g. customer not price sensitive, market is competitive, some customers have narrow needs, company has unique resources which are hard to duplicate, etc.), take one or more real-life companies and evaluate whether a differentiation strategy might succeed in the business.

- Foreign language class: After teaching simple past tense, encourage students to tell one of their classmates a simple story from their childhood.

## Classroom activities: Extensions



### What?

Extension activities require students to derive properties or theoretical extensions of what they've learned. (or as some say: the concepts or skills you would've taught if there been more time) These activities deepen students' understanding of the material by encouraging them to apply learned concepts to a novel domain. The goal is that by thinking through the extensions you deepen the understanding of the other material.

### Examples:

Fitting a straight line to a data set: If you have a plot with  $m$  data points, how long does the software take to run as  $m$  increases? This is an extension of the material where students are deriving a property of a piece of software that they just learned how to write.

[https://d396gusza40orc.cloudfront.net/mooc%2Frecoded\\_videos/%2FLecture3.51cdf51d86e10.mp4](https://d396gusza40orc.cloudfront.net/mooc%2Frecoded_videos/%2FLecture3.51cdf51d86e10.mp4)

## Classroom activities: Sequence of Questions



### What?

By using a sequence of questions, complex problems are broken into smaller parts and then solved systematically with the students.  
>> Pick the right problem: Pick a problem that you'd like students to get to be able to solve, but is too hard to offer all at once. This problem should have a significant and challenging end result that would be very difficult to solve if not tackled incrementally.

### How?

- Break it down: Break down the problem into as many pieces as possible
- Solve incrementally: Have students solve incrementally, repeatedly layering on complexity
- Let students grapple with the question: Research has shown that by increasing the amount of "wait time" after asking a question, teachers foster increased student discourse and more student-to-student interaction (Fowler, 1975).

## Classroom activities: Student-generated content



### What?

Incorporate student-generated content into a course to increase engagement and allow students to become more active participants in the learning process. Showing mastery of the topic is a real motivator for students. Teacher also have to opportunity to give feedback on the results.

### How?

- Students curate course learning materials in a public, online space. This could include defining terms, creating assessment questions, compiling relevant resources, etc.
- Students create blogs, videos, podcast, poems, quizzes, etc. relevant to the lesson.
- Students share their work with the rest of the class, making their products central to the trajectory of the class.
- Students comment on (and possibly evaluate) one another's work.

## Classroom activities: Experiential learning



### What?

In experiential learning activities, students learn through immersive, hands-on learning experiences. These may differ from **application** activities in that students are learning new concepts from experiences, rather than reinforcing previously learned activities through novel applications.

### Examples:

role-playing, experimentation demonstrations, trips, labs, computer simulations, competitions, debates, and trips

### Take in mind:

- Are students actively involved?
- Can students collaborate and cooperate with their peers?
- Do students time to reflect on the experience after it's completed?
- Do students possesses the knowledge base and analytical skills to conceptualize the experience, and realize desired educational outcomes?
- Do students have the ability and opportunity to use the new ideas gained from the experience (perhaps in subsequent in-class activities such as applications or extensions)?

## Classroom activities:

### Modified lectures



#### What?

Modified lectures can be used to introduce new topics or individuals into the classroom.

#### Examples:

- guest lectures
- advanced lectures
- lectures on current events.

#### Take in mind!

When possible, try to engage learners in these guest lectures as much as possible and avoid the passive-lecture paradigm, possibly by incorporating complementary engaged learning activities.

## Classroom activities:

### Service learning



#### What?

Service learning activities allow students to engage with course content through community-based service projects.

In Community-Based Learning, students learn how to apply ideas, theories, and models to social issues in a practical context while gaining insights from practitioners in community-based organizations.

Service-Learning, a type of Community-Based Learning, is a pedagogical method that enables students to apply course concepts to a “real life” experience that meets a community need and to reflect upon all aspects. It involves student work generally with disadvantaged and under-served individuals or groups.

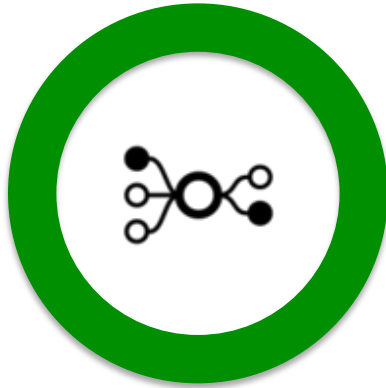
#### Why?

The basic aim of Service-Learning is two-fold:

- first, that students’ service will heighten the understanding of central academic themes, goals, or subject matter in their courses;
- second, that the academic course content will facilitate students’ ability to reflect in deep and meaningful ways on their experiences as agents of social justice.

## Classroom assessment techniques:

### Concept map



#### What?

Classroom Assessment Techniques (CATs) are ongoing formative assessments that facilitate learning and provide both student and professors with valuable feedback.

**Concept maps** are a common CAT that involve asking students to produce drawings and diagrams that illustrate the connections between learned concepts. Research has shown that presenting information graphically as well as symbolically reinforces vocabulary learning and supports reading skills (Brookbank Grover, Kullberg, & Strawser, 1999; Moore & Readence 1984).

#### Why?

Students learn to:

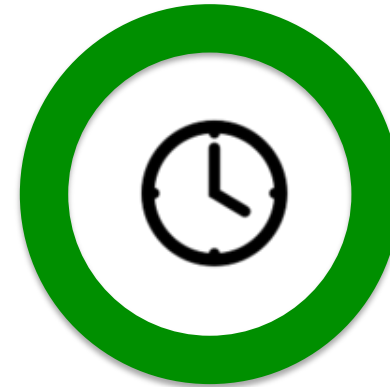
- Synthesize and integrate information and ideas
- Think holistically by seeing the whole as well as the parts, and the relationships among them
- Think creatively about a subject
- Improve memory and comprehension of learned content
- Develop higher-level thinking skills, strategies, and habits

Video example:

<http://pandora.cii.wvu.edu/cii/resources/modules/concept/default.asp>

## Classroom assessment techniques:

### 1 minute paper



#### What?

Classroom Assessment Techniques (CATs) are ongoing formative assessments that facilitate learning and provide both student and professors with valuable feedback.

**The minute paper** is a short informal writing assignment that typically occurs at the end of a lecture that is straightforward, requires relatively little time and can be easily assessed easily.

#### How?

- Present the topic:** Ask a specific question that involves a key concept from lecture or use a general question such as "What is the most important thing we discussed today?"
- Student reflection:** Either have students work individually or divide the class into informal groups and give them up to few minutes to consider their answer to the question.
- Writing:** Have each group appoint a reporter and have them write a few sentences to answer the question. Collect the writing assignments for later review. Give one minute only for writing.
- Assessment of content:** Review the minute papers following class to determine if there are misconceptions or a gap in comprehension. If yes, it can be addressed at the start of the next lecture.

## Classroom assessment techniques:

### Muddiest point



#### What?

Classroom Assessment Techniques (CATs) are ongoing formative assessments that facilitate learning and provide both student and professors with valuable feedback.

**The Muddiest Point** is just about the simplest technique one can use. It is also remarkably efficient, since it provides a high information return for a very low investment of time and energy.

#### How?

Ask students to jot down a quick response to one question: "What was the muddiest point in \_\_\_\_\_?" The focus of the Muddiest Point assessment might be a lecture, a discussion, a homework assignment, a play, or a film.

Determine what you want feedback on: the entire class session or one self-contained segment? A lecture, a discussion, a presentation?

If you are using the technique in class, reserve a few minutes at the end of the class session. Leave enough time to ask the question, to allow students to respond, and to collect their responses by the usual ending time. Collect the responses as or before students leave. Stationing yourself at the door and collecting "muddy points" as students file out is one way; leaving a "muddy point" collection box by the exit is another. Respond to the students' feedback during the next class meeting or as soon as possible afterward.

<http://www.unl.edu/gradstudies/current/teaching/muddy>

## Collaborative activities:

### Small group problem solving



#### What?

Instructors break up the class into small groups and present any number of problem-solving activities (many of which could be modified version of the other engaged learning activities) for the groups to tackle.

#### Why?

Engage students with each other!

## Collaborative activities

### Mazur's peer instruction model



#### What?

A systematic process for encouraging collaborative learning amongst peers developed by Eric Mazur. This model is easy to implement and applicable to nearly any subject or class.

#### How?

The model in its most basic form typically includes the following steps:

1. Instructor poses question
2. Students reflect on the question
3. Students commit to an answer
4. Instructor reviews student responses
5. Students discuss thinking with peers
6. Students commit again to an individual answer
7. Instructor again reviews responses and moves on to the next concept unless more explanation is needed

Video How to use peer instruction:

[https://www.youtube.com/watch?v=P94U\\_WKsEg&feature=youtu.be](https://www.youtube.com/watch?v=P94U_WKsEg&feature=youtu.be)

Why to use peer instruction:

[https://www.youtube.com/watch?v=j\\_G68MwW8ow&feature=youtu.be](https://www.youtube.com/watch?v=j_G68MwW8ow&feature=youtu.be)

<http://mazur.harvard.edu/research/detailspage.php?rowid=8>

## Collaborative activities:

### Peer feedback



#### What?

In peer feedback activities, students participate in the process of evaluating their peers. This turns every stage of the assessment process into a learning opportunity, from completing the assignment to evaluating the work of others.

#### Why?

Peer feedback activities can increase student self-confidence, build social affective strategies, and allow for deeper engagement with the course material.

#### How?

Most peer feedback activities are comprised of three parts:

- 1) assignment/rubric design: creating the assignment and corresponding rubric
- 2) content creation: allowing students to complete the assignment
- 3) The administration of peer-to-peer feedback: facilitating a peer assessment activity between peers or groups of peers in the class



## Collaborative activities: Facilitated learning



### Description:

Facilitated learning is low-touch instructional approach in which students are heavily involved in every aspect of their own learning. Some considerations of the facilitator when implementing a facilitated learning model include the focus of the session, timing of the session, and characteristics about the learning environment. Scrumming?

## Collaborative activities: Small group problem solving



### Description: Engage students with each other

Instructors break up the class into small groups and present any number of problem-solving activities (many of which could be modified version of the other engaged learning activities) for the groups to tackle.