

Working with large classes (PART II)

Active Learning in Large Classes

In large classes, some students do not get involved with the class and remain anonymous throughout the course. There are few questions from the group and little feedback to the instructor. What can be done to promote active learning in these large classes? Followings are some strategies to stimulate students' thinking and to promote active learning.

Basic principles

1. Use a variety of teaching methods to accommodate different learning styles and attend to shifting attention span of students. In other words, keep the material coming at a rate which matches closely students' ability to absorb it.
2. Use visual reinforcements such as handouts, images or overhead transparencies to focus attention and provide clarity to what is said.
3. Make sure that there are spaces in the contents being developed or explained on any given day which students must fill in with their own insights or analyses.

Hints

Use questions

It is desirable to use open-ended questions and put them to the whole class. Wait for students' answer with patience. Alternatively, put a question to the class, ask pairs or trios of students to discuss it for five minutes, then call for answers.

Prof. Nelson Cue (Physics) has applied the same strategy in his class at LT. E with the help of some hand-held graphics calculators and a commercial software package linked up with a PC screen. During his lecture, he stops periodically to assess students' grasp of concepts by posing a question. The students, who are paired off to encourage discussion, consult their partners and enter the answer into the calculators, which are connected to a PC. A software package will immediately tabulate the answers and display the percentage of right and wrong answers on the PC screen for all to see. (Source: Genesis, Vol. 7 No. 12)

A more low-ended way is to give each student a large square card with the letters A, B, C, and D printed on it so that one of the letters is visible at the top when each edge of the card is held up. The instructor can inject multiple-choice questions into his/her lecture orally or in written form and then asks students to answer all at once by raising their cards. This enables the instructor to get student participation and feedback on whether his/her points are understood.

Solicit questions from students

One way is to ask students to form trios or quartets and generate one important question about the topic covered. Questions are then re-distributed randomly to the trios or quartets to come up with an answer and report to the large group.

Frederick (1987) suggested using a press conference to conclude a unit. Students are invited, as investigative reporters, to ask questions of their instructor about the topic they have been studying. They may seek to clarify confusing materials, to find out new information, or press their instructor's position on an issue, etc. The instructor can also make use of the chance to provide mini-lectures on various topics.

To encourage preparation for class, instructor can ask students ahead of time to prepare one or two questions about their reading and bring them to class, verbally or in writing. Alternatively, the instructor can ask students to raise one or two questions they want answered in the next class and submit them before they leave.

One reminder. During the question and answer exercise, some students may pose difficult questions or hold strong opinions towards certain issues which you do not agree with. Do not confront with students in large class since it is much easier to lose control of the group and takes much longer to get them to follow the instruction again. Thanks the students for the question raised and discuss with the student(s) after class.

Use One-minute paper in class to check understanding

At an appropriate point in the lecture, the instructor can ask students to summarize the major point or points made so far by writing a one-minute paper. When time is up, the class can be broken up into pairs or subgroups to review and discuss one another's paper or the instructor can collect all papers and comment on them. This gives the instructor a fairly good idea of how much of his/her content has been understood.

Half-sheet response is an alternative of the one-minute paper which allows more comprehensive disclosure of students' learning of a topic. Typical questions used to generate responses include: "Give an example of this concept or principle"; "Explain this concept in your own words"; "How does this idea relate to your own experience?"; "How could you use this idea in your own life?"; "What are some of your feelings as you listen to these ideas?".

Use different ways to introduce new topics

At the beginning of the class, students are requested to call out "everything you know or think you know about XXX". As recorded on an overhead transparency or whiteboard, a list of specific names, dates, and events; descriptions of natural phenomenon and human experience, feelings and prejudices, and even interpretative judgments will unfold for further clarification, discussion or debate.

An alternative is to ask students to call out one concrete visual image of an event. All suggestions are recorded without screening. Later, the instructor can ask the class: "What themes seem to emerge from these items? What connects these images? Is there a pattern there? What is missing?" This approach to learning (with facts before analysis) helps to reinforce learning.

For fairly complex and controversial issues, students can suggest statements they think are true about the particular issue and have all ideas recorded for discussion, debate and clarification.

Organize small groups in large classes

If the room permits, the class can be broken up into small groups to provide opportunities for interaction among students. Task instructions should be clear and simple. Ask each group to select a person to record and find a way of reporting back. Groups need to know how much time they have to work on the task.

Use Interactive handouts to involve students

Instead of providing students a written play-back of all the material covered in the lecture, students are urged to do something with the information within the given framework of a normal lecture period. There are some pre-set blank spaces in the handout that students have to work on. They can be questions which ask for an independent answer, or exercises/activities that help students to get involved with what they are learning, a graph sheet for students to plot some data, or a review question to help students review the earlier part of the lecture.

A common format of interactive handouts includes four components:

- Lecture content (key points and supplementary details)
- A briefing for students regarding what exactly they should do. They can be questions to be answered or activities to be carried out by students
- Blank spaces – students' response area
- Signposting of instructor's intervention to process answers from students or related instruction (e.g. Stop here until I provide the solution; Check your answer on page x before you proceed on.)

Provision of a clear set of objectives for each lecture at the start of each handout is a must to give students direction of what they are going to learn.

Final remarks

It is definitely not an easy job to work with large class effectively. It is a real challenge to instructors but the satisfaction of getting a difficult job done well will pay off. Can you imagine of having 200 students saying to you at the same time that "You are a great teacher!"?

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