Leading an Interactive Discussion: Elective Seminar

"Let students be involved as much as possible during class. They enjoy it and it keeps them on their toes as they never know when they will be asked to solve a problem."
~ Pamela Monaghan, Graduate TA, Sociology

Seminar Description

While all learning requires an active intellect and interest, active learning methods are those which encourage students to take part in verbal or even physical actions and to engage in activities that help them approach information differently. Employing active learning may mean that you will cover less material, but your students should have a deeper understanding of the content covered in class as long as guidelines and goals are set at the beginning of the semester.

Interactive discussions provide ideal opportunities to encourage active learning. Leading discussions requires that TA's create a comfortable classroom community and ask good questions. In this seminar, you will learn some basic strategies for staging active and productive discussions.

Seminar Objectives

- To develop strategies to lead discussions that encourage full student participation in classroom and lab settings
- To develop strategies for posing questions that stimulate student discussion

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Asking Good Questions

In a small classroom setting, assessing students' understanding of the material requires that you ask good questions. A class discussion should not be a free-for-all, unguided session. Instead, you should help to steer its course. Additionally, questions should trigger critical thinking, on which the discovery method is based. Good questions can also assist with classroom assessment to make certain that students understand the material before moving to another topic. The following guidelines should help you to develop effective questions:

- **Determine the objective of the lesson**. Having a few objectives in mind regarding what you want your students to learn from their assignment and lectures should help you to select the types of questions you will use to engage the students.

- **Prepare a list of potential questions you would like to ask your students**. You are not limited to these questions or do not have to ask all of them. But being prepared with questions will help you to be more organized, rather than being completely spontaneous with the questions you pose.

- **Craft questions that might elicit many responses.** Good questions have one characteristic in common: they all have multiple respectable answers. Students might pose various answers, which might spark a productive debate.

- **Consider three types of effective, challenging questions when constructing your own, as defined by McKeachie et al (1994).**

    - **Comparative** – These questions ask students to compare and contrast various aspects and examples of the material. This is similar to the Hegelian model of thesis + antithesis = synthesis, meaning that when concepts are defined by their similarities and differences, their definition becomes more complete.

    - **Connective** – These questions encourage students to link examples, facts, theories, etc. that are not necessarily part of the assigned materials, but could enrich the discussion of the topic. Connective questions are especially useful in interdisciplinary courses. Such questions can also draw upon students' personal experiences, linking their background to the theories and research findings. Often, this fosters students to have an experiential or emotive connection to the material, making it more memorable.

    - **Critical** – These questions require that students use their critical thinking skills when analyzing an argument, research claim, or interpretation. They encourage students to do careful, active reading to prepare for class. If a student vocalizes an answer, you may also consider asking another student to evaluate that

response. If you do this periodically, students should not only come prepared for class, but also be attentive during class.

- **Encourage students to answer the "how" of a problem**. Long-term memory of key concepts often occurs when students are encouraged to explain (in their own words) how something functions. This includes, but is not limited to, math problems, scientific experiments, or even analyzing the plot of a literary work or the strength of an argument.

- **Avoid questions that require one or two-word responses and phrase your questions in a manner that requires multi-sentence answers from students.** It is okay to have quick answers that are knowledge-based as a warm-up to discussion or a way of quickly testing students' basic knowledge of the material. Your main questions, however, should provoke more analytical answers from students or should provide them with opportunities to apply what they have learned.

- **Explain why discussions are important.** While some of your students will excel in discussion, others may not understand the significance of such exercises. They might be more interested in the "practical" aspects of the class: the information from lectures, the graded homework, and the graded exams. You should explain to your students why participation is important—mainly to assess their fluency in key concepts from class and to reinforce the reflecting and application components of the learning process.

- **Organize students' ideas to underscore concepts from the course.** You may consider a brainstorming activity, during which you write students' responses to questions you posed on the board. This activity will acknowledge that students' ideas are significant and will expose all students to material their peers understand. This exercise will also provide a visual component to class discussion.

- **Allow time to review the outcome of the discussion**. Instructors often do not save enough time to reflect on the material covered in class. You should allow for sufficient time to reflect on the key ideas mentioned during discussion.

- **Assess students' understanding throughout the semester.** The tendency in some college courses is to provide an immense body of information, then test students on that material midway through the course and again at the end. Yet deep learning of material is more cyclical, and requires ongoing assessment of students' understanding. This type of formative assessment could include written homework and quizzes, but should also involve classroom discussion of key concepts from the lesson.

- **Offer students actual roles to try out during discussions.** Brookfield (2006) recommends a number of participant roles that students can be asked to assume during

classroom discussions. These roles should rotate often so that the more quiet students will be prompted by a particular role to be more assertive:

- *Problem, Dilemma, or Theme Poser.* This participant has the task of introducing the topic of conversation.

- *Reflective Analyst.* This member keeps a record of the conversation's development" [and periodically] gives a summary that focuses on shared concerns, issues skirted, and emerging common themes."

- *Scrounger.* This student listens for helpful resources, suggestions, and tips that participants have voiced as they discuss how to work through a problem or situation [and keeps track of these resources for an end-of-class summary.]

- *Devil's Advocate.* This participant listens carefully for any emerging consensus. [When consensus has been achieved, this person] formulates and expresses a contrary view [in order to prompt the group to] explore a range of alternative interpretations.

- *Detective.* The detective listens carefully for unacknowledged biases that seem to be emerging in the conversation [and brings these biases] to the group's attention…. [This student] listens for cultural blindness, gender insensitivity, and comments that ignore variables of power and class.

Facilitating Laboratory Sessions

Student laboratory classes are an important setting for hands-on learning. This classroom environment allows students to apply broad principles to specific processes and inquiries. Introductory labs will require students to learn basic procedures and fundamental experiments; more advanced labs will give them the opportunity to investigate important questions and test their hypotheses.

The laboratory instructor is an important part of this learning process. You are the one who helps students master specific techniques and carry an investigation to its conclusion. You also ensure that safety procedures are understood and observed and that all materials necessary for the lab are available. You may even help students as they understand important concepts through the practical application of what they have learned in lecture.

The following suggestions will help you as you plan your laboratory teaching:

- **Know the experiment before the lab session, including the theoretical basis and historical background.** If you haven't carried out this particular experiment before, practice to become familiar with it. Learn the possible pitfalls of the experiment and

even dangers. You should also be able to recognize the most common errors students are likely to make and plan strategies to help them get themselves back on track.

- **Use the same terminology for lab procedures and equipment that your course professor uses so that students are not confused.** Doing so will show that you and your professor are on the same page.

- **Be certain that you assess students' work for lab safety.** Walk around the laboratory often to ensure that experimental materials are being used appropriately.

- **Match capable students with those who are struggling.** Peers can often explain problems in ways their classmates can understand better. Peers can effectively help you teach the rest of the class.

- **Interact with everyone in the room during the lab period**. Not all students who are struggling will ask for help or even realize they are having trouble. Make sure you visit all stations and give everyone equal opportunities for help. As you interact with students, check on the quality of their written work, drawings, and techniques of data collection. Make suggestions for improvements before the work is handed in for the grade.

- **Lead students to answers rather than telling them answers.** Guide them along with questions that force them to do the steps, such as "and that means?" or "and why do we know that?" Demonstrate techniques or practices; then require them to do the task themselves to arrive at an answer.

- **Encourage students to divide work equally with their partners.** Some students will be willing to shoulder extra work, feeling that if they do it themselves, they can make certain it is completed correctly. However, you should remind them that other students are responsible for working and learning as well.

- **Keep the session running on time and the lab and its equipment organized.** Make note of the condition and quantity of equipment and supplies before and after class, so you can replenish or repair them well in advance of the next session.

- **Help the students stay organized**; remind them occasionally of how much time is left and what aspects of the assignment they absolutely must complete. They should follow all established safety guidelines and rules for cleanup.

Discussion-Oriented Courses and Recitation Sections

In a **discussion-oriented course,** discussion is used to accomplish the overall educational goals of the class. This approach can be particularly appropriate for courses where analysis, problem-solving, and critical thinking need to be taught and practiced. Having students discuss a reading analytically fosters their own critical reading skills much more effectively than a lecture in which you point out the key points, tensions, and implications.

In a **recitation section,** discussion is still the business of the class, but the session topics must be integrated with the goals and content of a larger lecture course. Recitation sections provide supplementary instruction for the larger lecture course. For this approach, students gather in smaller groups to practice working through problems or clarifying key concepts. In many courses, the recitation section is also used to provide review and preparation for upcoming exams. You must carefully plan recitation sections to ensure you are meeting the course's academic goals.

Both types of discussion-based classes must be flexible enough to respond to students' immediate needs, but a clear focus helps ensure students learn what you intend to teach. The following suggestions should help you plan and conduct a successful discussion-based class.

Begin on a good note

Create a physical environment that is conducive to discussion. Arrange the chairs in a circle, or ask students help you do it at the beginning of class. If your class is small enough, you may be able to have everyone sit around a table. Start discussion on the first day, even if it is only to have students introduce themselves to the rest of the class. You will break the ice and establish an expectation of active discussion.

Forecast the purpose of discussion. Students may consider discussion a waste of time if they are unaware of the larger purpose. Explain both the purpose of discussion, in general, and the goals of the discussion-based class or recitation section. This approach will help maintain students' focus and interest.

Avoid beginning your discussion with a tough question. Students are not warmed up and may have trouble getting started. Instead, start with activities or easier exercises designed to warm up the class and get students' brains working so discussion can be productive. Give homework assignments that provide a basis for opening comments and questions in the next class session.

Some instructors ask their students to post reactions to the assigned readings on Blackboard before class. You can provide specific questions for your students to consider, or you can take a less direct approach by asking students to offer their reactions to the reading or lecture material. This approach allows everyone to see what the class thinks about the readings. Some faculty

ask students to respond to their reading assignments writing about an insight, curiosity, or connection that they have made with the material. This open-ended approach offers more freedom of expression than specific questions and is perhaps a more natural way of responding to reading material.

Start class with a review of the last discussion to refresh students' memories and lay the groundwork for the current class session. Students could also tackle an introductory problem in small groups and then report back to the larger class, leading into a more substantial discussion of the problem. When students begin by working well with a smaller group, they will likely continue working productively for the rest of class.

Decide how much structure the class needs

Determine ahead of time how structured or open-ended a given discussion should be. Are there specific questions which students must address during the class? Do you want to elicit a wide variety of responses on that week's topic? If you want to keep fairly close control of discussion, prepare questions which have a narrow focus and range of appropriate answers. You may need to assure students who raise interesting but tangential points that these areas will be addressed in another class session or outside of class. If you want a more open-ended session, prepare questions that elicit a wide variety of responses. In either case, decide where you want the discussion to arrive by the end of class and what you will need to do to guide it along toward that goal.

Provide closure to class discussion. Although it may seem obvious to you, students sometimes lose sight of what the discussion has accomplished, particularly if it was fairly unstructured.

Do not hurry to fill the silence

It can be agonizing to ask a question that you were sure would get a lively response, only to be greeted with silence. Learn to wait through that silence. After all, a good question should require a thoughtful answer. Allow students the time they need to think through that answer before raising their hands. If you ask a question and nobody answers, wait for at least 30 seconds to a minute before rephrasing or redirecting. If you constantly jump in when nobody responds, students will learn that they do not have to answer.

Encourage everyone to participate

Get to know your students as individuals. Learn their names, and call them by name. If you show that you are interested in knowing your students, you will find the classroom environment friendlier and discussion livelier. Your positive response will encourage other students to ask and respond to questions.

Recognize that different people have different conversational styles. Some students may prefer an adversarial approach to discussion, such as a debate in which one speaker must try to

persuade others. Other students may prefer a more inclusive and supporting approach, in which many equally valid ideas are discussed. Vary your approaches to accommodate everyone. For example, you can plan formats so that debating takes place one day, brainstorming and idea generation another day.

Do not rely solely on volunteers for discussion; you will soon find that you are holding discussion with a small core of students while everyone else watches in silence. Many students who have correct answers or thought-provoking ideas will gladly share them if asked but would never volunteer. Do not embarrass students on whom you call; consider giving them the opportunity to pass on the question if they are uncertain how to respond.

Understand that some students are uncomfortable speaking up in class. They may lack confidence, or they may come from cultures where volunteering is seen as too aggressive or conceited. You may want to talk to particularly shy students outside of class on a one-to-one basis to encourage them to participate in class discussion. Alternatively, you can find ways for students to participate other than full-class discussion; dividing the class into small groups or supplementing class discussion with an electronic roundtable can provide less threatening forums for students to share their thoughts. Ask questions—especially to those more reluctant students—that do not require a specific and correct answer. For instance, asking for students' response to a reading gives them a chance to contribute to class without worrying about the right answer. (*Note: On their syllabi, some instrcutors encourage students with social anxiety to make an office appointment to discuss how to gain participation points other than speaking in class.*)

Welcome inadequate or incorrect answers; respond positively by using them to help students move in the right direction. This approach is especially important if the purpose of your discussion is to review and discover where students are having problems.

If a student asks a question about the course material, you may want to ask the student a few clarifying questions before you launch an answer. Otherwise, you may begin with either too basic or too complicated of an answer. Instead of immediately answering, ask a few question such as "what do you understand?"

Make certain everyone heard

In a large classroom, it may be difficult for everyone to hear. Encourage students to speak up if they talk quietly; mumbling or muttering may be a way of masking some sense of insecurity. Try paraphrasing a student's question in a tone that everyone can hear before answering it or encouraging students to answer.

Be honest

If you do not know an answer, admit it. Students do not expect you to be infallible, but they do expect you to be honest, and they will be able to detect bluffing easily. If students pose a

tricky question, you should admit that you do not know or to what extent you are unsure of a hunch. Then offer to find out before the next class. Be sure to follow up with this promise.

Help students articulate what they have learned from discussion

Many students believe they do not learn from discussion. To help students realize the value of discussion-based learning, spend the last five to ten minutes of class asking students to summarize the main points covered during class. Ask them to point out any issues that need to be covered in the next class.

Create small groups

One way to engage your students in the material is to divide the class into small groups to work on tasks. Some small groups work together for only a class period. These might be short-term tasks, such as when students form groups to solve a problem and report back to the class, or when they review one another's essays and make comments. Small groups may also work on long-term projects, requiring students to work together inside and outside of class to do research, plan a presentation, or write a report. By working together, students use the course information collectively rather than individually.

Small groups require planning. Students should understand the purpose of dividing into groups. Take the time to explain very clearly what you expect them to do and how you expect them to do it, as well as why working as a group is more useful than working individually. If groups are working on a long-term project, you can require them to report back periodically during the project to keep you informed of their progress and to help resolve any problems with the task or with group interaction.

Utilize peer teaching

Peer teaching is based on the idea that teaching can be an effective learning strategy. Thus if you structure activities which require students to teach material to their fellow students, they will learn it better themselves. Of course, you must first provide an activity that helps students become acquainted. Also, always provide written directions for how classmates may provide feedback and well as you expectations for how the peer teaching should be accomplished. Peer teaching opportunities should not pose a threat to the more bashful or intimated students.

Integrate case studies (adapted from *Teaching at Carolina*)

Case studies are appropriate for learning information analysis, decision-making, or problem solving. The method, made famous by the Harvard Business School, requires the development of a set of case studies that reflect problems or issues in the course material. For example, in an anthropology course, a case study might describe the artifacts discovered in a real or hypothetical excavation. The students would be expected to infer information about the life

and culture of the people who lived at the site, based on knowledge and techniques they learned from the course. You can divide your class into small groups to work on the case study, and you may circulate among the groups to facilitate the process. Over the semester, you can make case studies more complex and challenging, as students become more knowledgeable with the course content.

The development of case studies for an entire course requires research into the method to master its subtleties. Case studies must provide enough information to elicit analytical thought, but not so much that solutions are obvious. The process of developing effective case studies can be very time-consuming; but once the case studies are written, they may only need a few revisions to run successfully semester after semester. Remember that students need to master a common knowledge base before they will be ready to tackle a case study, and they need to understand the steps in the analytical process they will use. Finally, managing the discussion of case studies requires techniques that differ from generalized discussion methods, and it would be helpful to observe a teacher experienced in the method before trying it yourself.

Simulations provide students with decision-making practice. Since simulations are based on real-life situations, they present students with choices and constraints that reflect real-world problems. For example, a class in political science might simulate a city council meeting to decide on the location of a halfway house for juvenile offenders. Students are given particular roles to play: members of the police department, representatives of neighborhood associations, social workers trying to reintegrate juvenile offenders into society, and others with conflicting concerns. The task facing the class is to come to agreement about the placement of the halfway house. The instructional objectives are to practice negotiation skills, problem solving, and techniques for reaching compromise.

Games and simulations are closely related. For our purposes, games will be defined as activities in which there are winners and losers, definite sets of rules for "moves," and, often, where props or other paraphernalia are required. Although it is possible to devise games yourself, many instructional games and simulations have been published by organizations involved in education and training (adapted from *Teaching at Case Western Reserve*).

For more information about instructional games, contact: The University Center for Innovation in Teaching and Education (UCITE) at 368-1224; their website is **h**ttp://www.case.edu/provost/UCITE/**.**

Assign short essays

Short essays are particularly good for supplementing large lecture-oriented courses where it is difficult or impossible to get the entire class to participate in discussion. You can write a question on the board and give students five minutes to write about it. You can also announce a question at the end of class and ask students to bring a one-page response to the next class.

Facilitate debates

Debates are useful for dealing with issues where there are different plausible solutions to a problem. Students are put into teams and choose to argue for or against a given proposition; they must then prepare effective arguments to make a case for their own sides and anticipate counter-arguments from their opponents. The class as a whole can vote for the side which was most persuasive, but it may be especially valuable to point out that there is not necessarily a right or wrong side to the argument. Debating requires oral communication skills, which may need to be taught, particularly in introductory classes.

Arrange demonstrations or presentations

When students deliver a speech or demonstrate a procedure in front of the class, they learn not only the subject of their talk, but also the skills required to make such a presentation. This process is excellent preparation for professional careers, where presentations in departmental or company meetings or to the public are frequently required. Presentations can also give students the opportunity to study a wide range of specific topics related to the central theme of the course. You may need to teach oral communication skills, such as preparing a talk which stays within a predetermined time limit, as well as to arrange practice sessions leading up to the main presentation.

Allow students to work at the board

In classes where problem solving is a key component, students may be required to work assigned problems at the board. The teacher or student then reviews each problem as a whole, pointing out strengths as well as errors at every step and asking the class to explain the consequences of each step. Working problems in front of the class complements a lecture that explains the principles of the solution. By actually walking through the process during class, students encounter difficulties and ask for help in a way they may not if working alone on homework.

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Additional Resources

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