



## 4. TEACHING TOOLS

### How to Make Your Students More Active Learners

Maier (1992) feels that the way to make students active learners is to make your teaching active. The best way to do this is to ask yourself what you like most about teaching and what would make students enjoy learning more. Here are some of the enjoyable experiences that Maier mentions.

Move around the classroom, using gestures and communicating information through non-verbal behaviour. Students themselves can benefit from moving around in the classroom, which may be difficult if you have a large class but happen to be in a small room. Moving around does not have to be physically active, however. Maier provides the example of having students “vote with the feet” by having students stand beneath signs of strongly agree, agree, disagree and strongly disagree. Discussion in the standing position is inevitably more passionate, plus shy students can become involved with their feet if nothing else. Try to think of ways your students can become physically active in your seminar or lab.

“**Working on a large scale**” is the next recommendation Maier makes. Involvement of students through writing on the blackboard, posters and large worksheets keeps students on track mentally. If you have shy students, you could recommend

#### **MOTIVATING STUDENTS TO LEARN**

*These teaching tips were provided by Prof. Danny Rosenberg,  
Department of Sports Management*

- **learn student's interests**, experiences, hobbies and career goals so that you can know where students are coming from
- **be generous** with your use of examples, anecdotes, illustrations and stories
- be generous with **humour**
- use appropriate self-disclosure so that students realize that you are a “**real person**”
- **admit your mistakes** and lack of knowledge
- **talk less** than your students do
- **encourage your students** to interact with each other and always try something new
- **LISTEN**
- **give feedback** that is positive in the form of verbal praise and non-verbal eye contact, nods and smiles
- make sure that the **level of your teaching** meets your students' backgrounds, abilities and experiences
- make sure that students understand the **relevance** of what you are doing
- make sure you use a **variety of methods and materials**
- if possible, **change environments** such as sitting outside on nice days
- **be clear** about what is going to happen by using an agenda
- allow students to make their own decisions about their learning - **give them choices** and implement their suggestions
- if possible, let students have a say about how they will be **evaluated**
- **get feedback** from students about how to make sessions more interesting

that it is their job to record in small groups so that they can contribute to the group and learn the material in the process.

Also, **meeting students** and learning their names should be a priority for many TAs and lab instructors. It may give other students the same sense of pride and connection if they can call each other by name. Tell your students that you want them to call each other by name (and have them learn each other's names). Maier recommends that a student who has just finished speaking call on the next student to speak: this not only gets the students more involved, but it gives the students more control over the seminar.

## **Methods of Small Group Teaching**

In the book *Effective Teaching in Higher Education*, Brown and Atkins (1988) refer to a number of styles of teaching. For the TA or lab instructor who is just starting out, consider which style you have most enjoyed in your own university career. Ask yourself, "in which situation did I learn the most?" You may have restrictions, however, depending on the type of course you are teaching. Adopting a variety of teaching styles will ensure you reach the needs of all students in your class.

### **Mini Lecturing**

When there is specific material that must get covered or when students are fairly silent, the TA or lab instructor sometimes becomes a lecturer by default. The problem with lecturing is, however, that students may tune out, get bored, stop trying and are less mentally active. For these reasons, TAs and lab instructors should spend minimal amounts of time in the classroom lecturing. If you must deliver information try alternating discussion and mini lectures. According to Brown and Atkins, it is better to lecture after a discussion rather than before in order to reduce passivity of the group. As long as lecturing is not the only form of communication and is delivered at the right time in the seminar or lab, lecturing can serve a very valuable and important function.

### **The Post-Lecture Tutorial**

This style of teaching requires that the topics of lecture coincide with topics in seminar. Students are encouraged to ask questions for the class and the seminar leader facilitates discussion. This style requires that you attend lectures and that you understand the material. Students may be encouraged to bring their lecture notes and textbooks to class to compare. A student may present key points from lecture as an opportunity for review. Students may then generate discussion questions for the group as a whole or for subgroups. T.A.s can use activities, questions or problems to assist with understanding the material.

#### **TEACHER TIP:**

It is better to have a student or students write information on the board rather than you doing it. Try not to turn your back on your students. If you have to draw diagrams on the board, try to have students draw them, have another student make corrections and continue this process until the group is largely in agreement. Involving students in the teaching helps cement learning.

## Mini-Presentation

With this method, a student presents ideas in relation to the topic through audio-visual aids, discussion questions, or a mini lecture. You can instruct other group members to ask questions, summarize key points, play devil's advocate or evaluate the material and the presenter. By assigning roles, more gets accomplished in a seminar and students are more involved. If students have a specific task, they will be more likely to come to class because they feel they have a duty to their classmates.

If you are considering implementing this method, be sure to properly explain what is expected of the students in each role.

## Springboard Seminar

This method requires that the seminar leader or lab instructor provide the stimulus for discussion. Materials such as video, audio or computer media may be used or you could give a brief lecture and demonstration. You provide the students with a framework for thinking about what they are about to witness and then after, you discuss what they may have learned.

### WHAT CAN STUDENTS DO IN GROUPS?

(From David Jaques's book, *Learning in Groups*)

- argue with the instructor/students
- discuss the presentation as well as misunderstandings about it
- focus on similarities and differences
- list items from experience to apply to course material
- record observations of the group and the readings
- read over each other's essays
- discuss marking criteria for essays
- brainstorm and generate ideas and categories
- define a problem, attempt to solve it and then evaluate it
- enact and react
- critically discuss a topic or reading
- diagnose and dissect
- debate relevant merits
- confide anxieties and fears with each other
- share ideas about essays
- offer methods and tips for students
- watch videos and listen to tapes
- evaluate text and seminar or lab readings
- summarize and report back about previous sessions

## Problem-Solving

This method will work well in many lab situations and in seminars that take an applied focus. Keep in mind that with this method, you must be sure you understand the material *thoroughly* before you enter the classroom. Secondly, you must make sure students understand the problem and any rules that are required to solve it.

This method can take a number of forms. One is that you can give students a problem *before* the seminar or lab or at the *beginning* of class and they can either work in groups during seminar to solve it or teach how to solve it to other members. Near the end of seminar, one student or small groups can present how they solved the problem.

For more ideas about teaching methods, see Brown and Atkin's book (pages 62-68). If you have a specific problem or a very specialized group, you may find other alternatives and suggestions.

### GOALS OF SMALL GROUP TEACHING

(from *Effective Teaching in Higher Education* by Brown and Atkins, 1988)

- 1) development of communication skills
- 2) development of intellectual and professional competencies
- 3) personal growth of students and hopefully the teacher too!

### SKILLS OF THE SMALL GROUP TEACHER

- 1) explaining
- 2) questions and questioning
- 3) classifying questions

## ASKING THE RIGHT KINDS OF QUESTIONS

Asking the right kinds of questions is important. Wilen and Clegg (1994) took five research reviews and came up with 11 practices that were positively correlated with student achievement. All but one were applicable to the university setting. Here is what they found.

The most effective teachers clearly phrase their questions where only one question is represented at one time. They are also primarily academic questions rather than questions that are procedural, affective or personal. Teachers should also attempt to ask questions at both a high and low cognitive

### EXAMPLES OF PROBING QUESTIONS

(from *Effective Teaching in Higher Education* by Brown and Atkins, p.73)

- does that always apply?
- how is that relevant?
- can you give me an example?
- is there an alternative viewpoint?
- how reliable is the evidence?
- how accurate is your description?
- you say it is x, which particular kind of x?
- what is the underlying principle then?

### Common Errors in Questioning

(Brown and Atkins, 1988, p.73)

- asking too many questions at once
- asking a question and answering it yourself
- asking questions only of the brightest and most likeable students
- asking a difficult question too early
- asking irrelevant questions
- always asking the same types of questions
- asking questions in a threatening way
- not indicating a change in the type of question
- not using probing questions
- not giving time to think
- not correcting wrong answers
- ignoring answers
- failing to see the implications of answers
- failing to build on answers

level. Effective teachers want students to respond to every question in some way, and the object is not to get the “right” answer. They try to balance volunteered and non-volunteered responses which keeps students alert but gives them the opportunity to answer. Probing students to clarify or support their responses is also important because it stimulates thinking. Lastly, the effective teacher acknowledges correct responses with praise; for praise to be effective, it must be genuine, used sparingly and should be specific.

### **The Highly Effective Teacher**

In the book *Improving Student Learning in College Classrooms*, Guskey discusses what makes a teacher “highly effective” based on information derived from clinical interviews. Four major categories were found; (1) planning, organization, and cues, (2) positive regard for students, (3) student participation, and (4) feedback, correctives, and reinforcement. The first two areas are discussed below. (See also the section on Evaluation).

#### **PLANNING, ORGANIZATION, AND CUES**

Highly effective teachers spend a lot of time before their first class planning and organizing. For the TA or lab instructor, this includes getting your attendance book in order, meeting with the professor about the course outline, understanding what projects are due that semester and what material to cover in the first couple of classes. It is also important to know about things such as transferring to different sections, what resource materials students should buy (such as APA/MLA manuals, special dictionaries, department manuals and study tip books), what workshops are available and when your office hours will be. It is important to make sure students understand course descriptions, the course objectives and how they will be evaluated. You must make it clear what you expect from your students and what the rules of the seminar or lab are. The best seminar leader or lab instructor will make sure the student has an outline of the topics, assigned readings and assignments for each class.

Good teachers always continue to plan and organize activities so that each seminar or lab has a clear format and structure: an introduction when class starts, a summary at the end and a clear development in between will be very helpful to students. There should be, however, flexibility during class in order to allow discussions and activities that appeal to your students’ interests. Try to be realistic when planning your seminars or labs so that you will have time to do what you say you are going to do.

#### **want more?**

- University of Guelph, “Promoting Active Learning Through Group Work”  
<http://www.tss.uoguelph.ca/id/ta/tahb/tah4g.html>

## Teaching With Technology

Brock University is fortunate to have the use of WebCT as an important teaching tool in seminars and labs. Here are some answers to frequently asked questions about WebCT:

### **1. What is WebCT?**

WebCT is the institutional choice for a learning management system at Brock. It was developed at UBC by academics for academics and is now developed by a commercial U.S. firm. Brock University is currently using version 4.1 in conjunction with our own management and automation system.

WebCT is an extremely rich web-based environment that offers a secure learning environment that permits scalable interactive communication. Because it is browser-based, and platform independent, students can log on ***anywhere anytime***. The flexibility of the course design tools available to faculty makes this environment appealing to the technical novice and to the experienced developer of online courses.



### **2. What exactly does that mean?**

WebCT permits authenticated access only, i.e. it is User ID and Password protected through Brock University's common computer accounts password system. Tools can be added for common tasks required to mount web material for information dissemination and it also provides tools for synchronous and asynchronous communication among students and the instructor (threaded discussion, course only mail, calendar and time management tools, and other collaboration tools).

### **3. How else can WebCT enhance my seminar?**

Many students are not comfortable speaking in a seminar in front of their colleagues. This is frequently true for students whose mother language is not English. The asynchronous threaded discussion area provides a forum for students who prefer to prepare a more reflective response to questions. The discussion forum celebrates *l'esprit d'escalier* – students now have the opportunity to contribute that good idea that only occurred to them after the class was over. Experience has shown that providing this access to class discussion convinces students that learning transcends a timetable slot and a classroom location.

In addition to presentation of web materials, WebCT also offers instruments for formative and summative evaluation. Multiple choice, true/false, and short answer testing may be set for auto-correction, with students receiving their grades within seconds of submitting their answers. Testing may be set to record the first grade, the last grade, the highest grade, or an average of all scores for that test, depending on the learning outcome the instructor wishes to achieve.

Good teaching is often impeded by the need for good course management. Course management can be enhanced through creative use of WebCT's tools: Documents can be made available to students at all times. Glossaries, FAQs (Frequently Asked Questions) and collections of web resources can easily be shared. Simple tools like 'Mail' become considerably more powerful when a decision is made to limit all course communications to WebCT and a reasonable response time is agreed upon. Strategies like this allow instructors to reserve their @BrockU.ca address for other purposes and contain course communications to WebCT. The best attribute of most WebCT tools is their reliability, community, and familiarity when compared to other options like conventional E-Mail, public discussion boards and web pages.

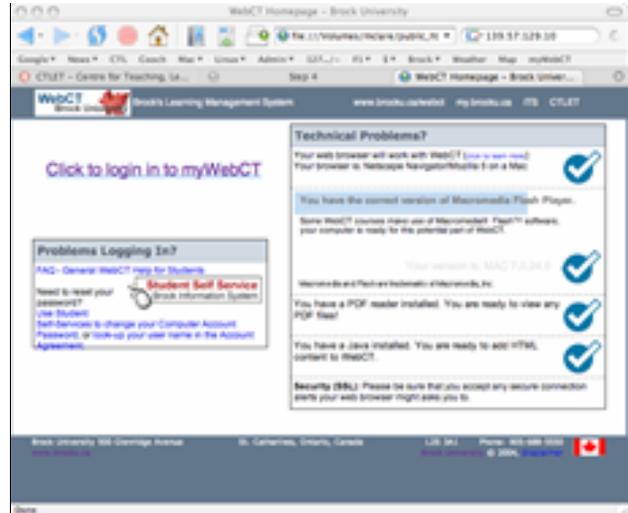
WebCT features tools for monitoring and tracking student progress, as well as tools for gathering summary statistics on access and pages read, frequency of posting to the discussion forum, among others.

#### 4. How do I access WebCT?

WebCT is located at <https://webct.brocku.ca> or under the Web Services tab on the Brock main page.

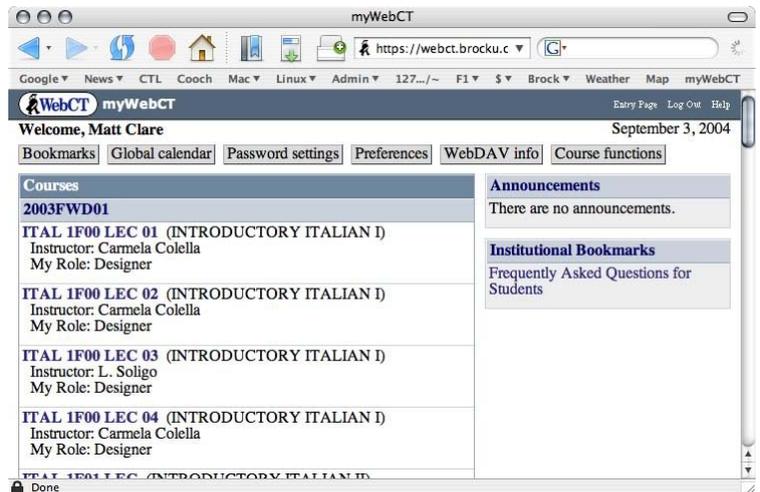
#### 5. How can I be a TA on WebCT?

If the faculty member you are working with has a WebCT course, you may be asked to monitor or facilitate discussion on WebCT. The instructor can add you as a TA to the WebCT course. This allows you to add marks and participate in and manage discussion topics. You cannot add or change online course content.



You need a WebCT account to be added to a WebCT Course. Everyone with a badger ID has a matching WebCT account. If you have another Brock e-Mail account you can log into the WebCT Management Facility at [www.brocku.ca/webct](http://www.brocku.ca/webct) and Create WebCT Account. Finally, if you do not have a Brock E-Mail account you will need to fill out an Account Request form (from ITS or your departmental administrator), get an e-mail address, then log into the WebCT Management Facility at [www.brocku.ca/webct](http://www.brocku.ca/webct) and Create WebCT Account.

**The Primary Designer** of the course can add TAs to their course by going to the Control Panel > Manage Course > “Add or Import TAs” and entering the TA’s WebCT ID (login).



#### 6. How can I get training in WebCT?

If you are working in a course that uses WebCT, you may want to attend a workshop offered through the Educational Technologies Workshop Series, sponsored by the CTLET. If you are working as a co-designer of an online course consult with the CTLET for both pedagogical and technical assistance.

For the latest information on WebCT at Brock University visit <http://www.brocku.ca/ctlet/webct>

#### 7. Tech. Support

Technical support for students’ passwords and user setting can be found by contacting the ITS helpdesk or a lab advisor.