



Brock Teaching

News from the Centre for Teaching, Learning and Educational Technologies, Brock University

Inside this edition

- IFAT first you don't succeed
- Web modules – 'Critical Tools' page 2
- Spring Institute
- TAs page 3
- On Learning page 4

Volume 1, Issue 2, Fall/Winter 2001. Published twice a year

Meaningful teaching baskets in Lathrop's limelight

Most of us are familiar with the famous quote by American pop culture icon Andy Warhol — "In the future everyone will be famous for 15 minutes."

Brock Professor Anna Lathrop has experienced those 15 minutes and much more this past year. It all began last October when she received the Brock University Award for Distinguished Teaching. In the spring, she received back-to-back provincial and national honours — first, the Ontario Confederation of University Faculty Associations (OCUFA) teaching award followed by a prestigious national 3M Teaching Fellowship for teaching excellence and outstanding educational leadership.

Lathrop shares her achievements with colleagues and students, as well as crediting this success to her relationship with Brock dating back to her student days. Lathrop graduated from Brock with a Physical Education degree in 1978 and went on to complete a master's degree and doctorate in education, which was granted in 1997. She has taught full time at Brock since 1989 and was named Chair of the Department of Physical Education in July 2000.

"I had a wonderful undergraduate experience at Brock and I am indebted to the founders of this institution who created a teaching environment that I could model," she says.

As for those 15 minutes, Lathrop regards the attention as an opportunity to talk about the importance of meaningful teaching and the issues facing teachers. One of the big challenges for teachers, says Lathrop, is to balance the role of classroom practitioner with their role as a researcher.

"Research and teaching cycle into one another," she says. "They aren't separate or artificially divided, they are one."

It's a juggling act, adds Lathrop, based on the formula established as evaluation criteria for merit, promotion and tenure — 40 per cent teaching excellence, 40 per cent research excellence with the other 20 per cent devoted to service to the University.

The operative word in this is "excellence" says Lathrop.

Research excellence at Brock, says Lathrop, has been clearly defined by a set of criteria that includes successful grant applications, publications, refereed conference presentations and service as editors and reviewers of academic journals.

On the other hand, teaching excellence lacks similar established guidelines. That leaves teachers grappling with how to best spend their time.

"To be successfully lived out, there must be clear indicators for excellence in all three areas of professional lives —



Professor Anna Lathrop.

teaching, research and service," she says. "The infrastructure that supports research is visible and carries an extremely high level of academic importance. We must also see an equal commitment to the infrastructure that supports the scholarship and practice of teaching."

The Department of Physical Education has attempted to work toward the development of merit criteria that more clearly defines excellence in the three areas with regard to teaching excellence. This criteria includes recognition of factors such as the size and year of classes, TA facilitation, mentoring, professional development, faculty awards, graduate and undergraduate supervision, and course development in both the virtual and non-virtual environment. Lathrop encourages all faculty, at the departmental level, to be proactive and more clearly define these indicators of excellence.

"It is in our best interests as good teachers to be involved in defining this criteria," she says.

To ensure the balance between teaching and research, Lathrop also believes that the University must match teaching initiatives with research initiatives. As a result of the University's recent Planning and Priorities exercise, Brock has made this very clear and taken visible strides towards research excellence. We now must see an equally visible commitment to teaching.

A step in that direction, she says, would be the appointment of a Vice-President, Teaching, with a mandate to champion and coordinate the various sectors of the University that involve teaching scholarship and practice.

"If Brock University aspires to be a truly comprehensive university, then both faculty and administration must work collaboratively to ensure that the twin pillars of teaching and research are equally visible and valued," she says.

Watch for 'the wave'

Universities are preparing themselves for the "big wave."

That's how Professor Anna Lathrop describes the double cohort year, 2003-2004, when Ontario's last Grade 13 students enter university along with the first graduates of the new four-year high school program.

Brock University will be welcoming more first-year students than at any other time in its history.

"The big wave is well on its way. I for one, do not wish to be broadsided," says Lathrop who has taught first-year classes throughout her 12-year career.

As part of the University's preparations for 2003-2004, Lathrop would like to see the introduction of a new university-wide first-year academic credit course that combines critical thinking skills and life skills.

"A course such as this would offer us a way to attract and keep good students at Brock," says Lathrop. "First year is a very critical time for many students. This course would provide them with a foundation for academic inquiry and critical thinking skills that play a big part in their studies. As well, it includes very important life-skill learning that contributes to their success as students."

The course would be developed with the involvement of all faculties as well as the expertise and resources from other areas of the University, such as Student Services, the Student Development Centre, the Library, and the Centre for Teaching, Learning and Educational Technologies. As well, she believes it is critical that a linkage be made with the secondary schools.

"For students coming out of high school, university can be a major culture shock," says Lathrop. "We need information from high schools so that we know the needs of these new students."



Brock University

Careers begin here!

IFAT – if at first you don't succeed... try, try again

By Professor David DiBattista
Department of Psychology

Although I have often used multiple-choice questions in my courses, it has always been a source of great concern to me that most students never take the time to review the multiple-choice items after they have received their graded exams. As a consequence, they never obtain confirmation that their correct answers were indeed correct, nor do they learn the correct answers for the items that they got wrong on the exam.

Recently however, I have introduced into my courses a new technique for multiple-choice testing that has some tremendous advantages. The Immediate Feedback Assessment Technique (IFAT) was developed by Professor Michael Epstein, of Rider University, in New Jersey.

The IFAT form is similar to the more well-known Scantron form that is used in multiple-choice testing. However, on the IFAT form, each of the four alternatives is covered by a waxy opaque coating similar to the coating that is used on scratch-and-win lottery tickets. For each question, the student selects the answer believed to be correct and scratches off the coating. If the choice is correct, a star appears in the box and the student goes on to the next item. If the student's choice is incorrect, a blank space appears. The student then reconsiders the options that remain and continues scratching boxes until the star is found. The

student's final choice is always the correct answer.

Students earn full marks for answering correctly on the first attempt, and progressively fewer marks for answering correctly on later attempts.

From a pedagogical perspective, the IFAT has several advantages over standard multiple-choice testing procedures. First, it provides immediate rather than delayed feedback for the test items. Second, this feedback is corrective, allowing students to learn the correct answer to every item before they leave the test situation. Third, because students can still earn marks even if their first attempt is not correct, they are rewarded for their proximate knowledge of the correct answer. Fourth, because students can determine their own test mark, they receive immediate feedback on their overall performance before leaving the test situation.

To determine whether students like the IFAT, Professor John Mitterer and I had students complete a brief questionnaire after using the IFAT on an examination. We found that the students strongly prefer the IFAT to the more commonly used Scantron form, with 83 per cent saying that they would like to be able to use the IFAT in all of their courses.

Students' responses indicate that they like IFAT for a variety of reasons, including the following: it is easy to use; it makes the multiple-choice portion of the test feel a bit like a game; it lets



Professors David DiBattista, left, and John Mitterer explain IFAT.

them know the right answer to every question; it allows them to learn more than the Scantron form; it allows them to get part marks on multiple-choice questions; and it lets them figure out their marks on the multiple-choice portion of the test.

Mike Epstein has recently

demonstrated that students do actually learn more when they use the IFAT instead of the Scantron on their multiple-choice tests. So students not only prefer the IFAT, but they also learn more when they use it — a winning combination!

Web modules serve as 'Critical Tools'

By Barry W. K. Joe, Director (CTLET)

The Centre for Teaching, Learning and Educational Technologies (CTLET) is pleased to make available *Critical Tools*, a new suite of highly interactive web-based tools developed at the University of Texas at Austin. The six tools in this modular set may be implemented individually as required, or *en suite* to complement each other. Each module is extremely user-friendly. Both students and instructor interact merely by filling in the on-screen prompts.

Critical Tools comprises the following modules:

- *Addlink* allows instructors and students to create pages that serve as "archives" of links to other sites on the Internet.
- *Discussion Forum* is an asynchronous, threaded discussion board such as one finds in WebCT.
- *ClassContact* builds a hyperlinked



list of student e-mail addresses that can be used by other students to communicate with their colleagues or to e-mail the entire list.

- *Interactive Archives* allows you and your students to create, organize, and interlink documents in an online archive. It is an "archive" because it stores and organizes information; it is interactive because the documents that are posted to it can be linked to other

documents already posted.

- *Annotator* provides the electronic equivalent of a shared hard copy of a text, where all members of the class can contribute extensive marginalia, read each other's comments, and comment on others' comments.
- *BiblioFile* creates a frames-based module of Web pages that allow the students in a course (or members of any

group) to enter bibliographic citations in MLA format to a common Works Cited (or, as we say, BiblioFile) page. By completing the prompts on the page, students submit bibliographic information that is then automatically formatted in MLA style and posted to the *BiblioFile* page. A nice feature of this tool is that students may also include descriptive or evaluative comments about the sources they cite.

Critical Tools may be used as an alternative to an integrated virtual learning environment such as WebCT, or they may be used as supplementary tools within WebCT.

Contact the CTLET, at ext. 3933 or 4707, to request a *Critical Tools* account. A directory will be created for you and you will then be able to set up the modules you wish to use.

Complete details of each module may be found at the *Critical Tools* Web site at the University of Texas at Austin: www.cwrl.utexas.edu/~criticaltools

Did you know ... The CTLET sponsors two TA teaching awards?

The CTLET Teaching Assistant Award was established in 1998 to recognize the superior contributions to the University by teaching assistants, seminar leaders and lab demonstrators. Two TA awards are available:

SENIOR TA AWARD (\$500)

Presented to an individual TA in recognition of an outstanding contribution to teaching and learning at Brock. Eligible teaching assistants must have a minimum of three years of experience as TAs.

TA AWARD (\$300)

Those eligible to receive the award are novice teaching assistants who have less than three years of experience as TAs but who have demonstrated a commitment to assisting others in reaching their educational goals.

Watch for the call for nominations in early February. For those who might want to think about the kind of supporting documentation required for a TA Award, drop by the CTLET (F313) to pick up a set of guidelines.

Spring Institute: Reflections on Teaching and Learning

By Jill Grose
Associate Director, CTLET

In late June, 20 members of the Brock teaching community gathered at the Oban Inn in Niagara-on-the-Lake to discuss good teaching. The annual retreat is hosted by the Centre for Teaching, Learning and Educational Technologies (CTLET) to offer faculty and teaching staff the opportunity to explore pedagogical issues in a relaxing and collegial atmosphere.

Hosting the event in Niagara-on-the-Lake offered a wonderful opportunity to take a break from the institution, to network with Brock colleagues, and to establish connections across disciplines.

The two-day event focused on a number of activities designed to stimulate dialogue about teaching and learning. Don Ursino, recently retired from Brock University, led a discussion on learning objectives that develop knowledge, skills and values. Participants discussed ways in which teaching can be seen as

Photo: Deborah Mindorff



Participants at the CTLET's Spring Institute on Teaching and Learning.

scholarship and why we need to document professional growth and excellence in teaching. The group also engaged in a pedagogical potluck, swapping tried and true instructional strategies tested in real Brock classrooms.

Of particular importance was the fact that all six faculties were represented at the retreat, allowing for some interesting cross-disciplinary dialogue. It is precisely this multitude of perspectives that allows the opportunity to reflect on one's own

teaching and to frame it so that it is understandable by others. Having to explain our own philosophy of teaching crystallizes why we do what we do.

The retreat ended with a fun afternoon facilitated by Professor Glenys McQueen-Fuentes of the Department of Fine Arts. McQueen-Fuentes helped participants explore teaching as performance and the notion that we use our voices, our bodies, and our expressions to convey information about our subject areas. What prompts our self-talk as we enter the classroom and engage our students with the course content? As McQueen-Fuentes points out, if the medium is the message, what message are we sending?

The Spring Institute on Teaching and Learning has now become an annual professional development opportunity sponsored by the CTLET. Space is limited each year so that participants can get to know each other and begin to establish a sense of community outside of their home department. Too often we teach in isolation, learning what works best for our students through trial and error. Sharing the pedagogical wealth enriches all of us. We hope you will plan to join us in the spring of 2002.

Brock University's TA Certificate Program 2001-2002

TAs benefit from their workshop experiences

The Centre for Teaching Learning and Educational Technologies (CTLET) hosts a variety of teaching related workshops throughout the year geared specifically to Brock TAs, seminar leaders and lab demonstrators. Although TAs are welcome to attend any individual workshop of interest, they are encouraged to enrol in the certificate program in order to gain recognition for their professional development.

This year, 16 workshops will be offered to the TAs: participation in eight of the 16 sessions earns a *Basic Certificate in Teaching and Learning in Higher Education*. For TAs who have completed the Basic Certificate and are returning for another year of teaching, participation in a further

eight workshops and a statement of teaching philosophy earns an Advanced Certificate. Last year, over 120 TAs attended various workshop sessions and, of these, 68 TAs completed the requirements for either the Basic or Advanced certificate. Credits can also be earned by attending the annual Orientation Day in September and can be carried forward from year to year.

Benefits of Certification Program

TAs who participate in the certification program:

- gain practical hands-on strategies for dealing with various problems and situations in seminars and labs;
- share ideas with other TAs from other disciplines;
- demonstrate a commitment to

professional development — great for résumé building, on job application forms or for application to graduate school or a faculty of education;

- demonstrate their commitment to the job within their department, which may, in turn, be used to advantage if requesting a letter of reference;

- receive support/recognition from the Brock community through a departmental letter advising chairs of which TAs have participated, publication in the Brock press, an invitation to a year-end reception, hosted by the Vice-President, Academic in conjunction with the CTLET;

- receive a complimentary copy of the *TA Handbook: A Guide to Teaching and Learning at Brock*.

Workshops are held on Saturday

mornings from 9 a.m. to noon and consist of two workshops per Saturday. Upcoming dates for the 2001-2002 academic year are:

Saturday, October 13
Saturday, October 27
Saturday, November 10
Saturday, January 19
Saturday, February 9
Saturday, March 9

Some Upcoming Topics in the 2001-2002 Workshop Series

- Managing Conflict, Anger and Emotion in the Classroom
- Time Management for TAs
- Helping Your Students Prepare for Exams
- Active Learning Techniques
- Intellectual Property and Dealing with Plagiarism
- Fair Marking Practices

TA Orientation Day

The 3 Rs for TAs — rights, responsibilities and resources

This year's TA Orientation Day, held on Saturday, September 15, was attended by TAs, seminar leaders and lab demonstrators from a variety of departments who came out to learn about their rights and responsibilities, the resources available to them at Brock and to gain tips and strategies on how to lead an effective seminar. TAs at Brock are often in the front lines, acting as liaisons between the students and the professor. Establishing effective communication between the professor and the TA is essential to the success of a course. Here are a few guidelines for ensuring a productive working relationship:

Faculty should:

- clearly outline expectations to TAs at the beginning of the course;
- clarify what can and cannot be changed about the course (assignments, late penalties, syllabi, discussion questions, readings etc);
- understand that TAs need to know both the CONTENT and how to TEACH that content effectively: assistance with both is often needed and appreciated;
- meet regularly with TAs (as a group) to answer questions and provide support;

- give feedback to TAs on their performance, both formative and summative;
- encourage and promote TA professional development (i.e. participation in CTLET workshops);
- ensure consistency amongst classes: know that TAs will consult with each other for guidance as will students in separate classes or labs;
- provide guidelines/rubrics for grading; have grading meetings to discuss expectations and procedures; consider group grading.

TAs should:

- ask for clarification of any policies or procedures that are unclear;
- attend regular meetings with the professor; ask for meetings if they are not scheduled;
- know that discussing problems or difficulties is not a sign of incompetence — communication is essential to effective teaching;
- ask for feedback from both students and the professor;
- take advantage of opportunities to meet with other TAs, including those from other disciplines — sharing ideas and resources can be extremely helpful.

Photo: Jill Grose



Melissa St. Germaine-Small, TA for Sociology 1F90, looks over the TA Handbook distributed at the annual TA Day, on September 15.

Learning objectives are the building blocks for teaching

This article is the first of a two-part series based upon presentations made by Professor Donald Ursino at Brock University. The first presentation, "If the Learner Hasn't Learned, the Teacher Hasn't Taught", was delivered June 15, 2000, as a keynote address at the Annual Conference of the Society for Teaching and Learning in Higher Education (STHLE). The second presentation, "Meaningful Learning and the Scholarship of Teaching" was given Jan. 30, 2001, as the Inaugural Lecture in the President's Lecture Series on Teaching and Learning. The second part, "On Teaching", will appear in the next issue of Brock Teaching.



Professor Donald Ursino

'On Learning'

By Dr. Don Ursino

Teaching is a purposeful activity aimed at achieving learning. In fact, if the learner hasn't learned, has the teacher taught? Given that teaching is goal-oriented, then every teacher should initially be asking one very important question: What do I want the students in my course to learn? The next question, of course, is: Why have I established these particular learning objectives?

Students learn – more or less – in all courses, even in those where learning objectives have not been seriously considered by the instructors. By not establishing learning objectives, however, there is the risk that the teaching will be less purposeful and hence less focused, that less attention will be given to course structure and teaching strategies, and that student assessment may be little more than a test of the student's capacity for rote memorization. The bigger risk however, is the danger that information transfer will be overemphasized at the expense of achieving more significant learning outcomes.

When establishing learning objectives, one often asks, "what do I want my students to **know**? what **skills** do I want my students to learn or better develop? and what do I want my students to **value**?" Of these three categories it is often the knowledge

objectives that are the easiest to identify, to teach, and to test. While an important component of most courses, knowledge objectives should be more than an end in themselves. They should be the resource needed to attain the more meaningful learning objectives that are especially valued in the university. Among these are the higher-order thinking skills such as the ability to analyze and problem-solve, to apply learning to new situations, to synthesize and integrate information and ideas, to construct significant relationships, to evaluate and critique, and to reason.

It is these learning outcomes, among others, that are lasting and which truly enrich and empower our students. Teaching is not simply the "dissemination of knowledge", and those who proclaim one of the missions of a university to be the "dissemination of knowledge" trivialize the processes of teaching and learning. They ignore or do not understand the more meaningful learning objectives we seek to achieve.

It is not an easy task for the novice instructor to identify learning objectives but after a course has been taught for the first time, and each time thereafter, one better realizes what is truly important about the course, and one can more clearly identify the learning objectives that can and should be addressed. Although the selection of learning objectives will be influenced by many factors such as the subject content, grade level and size of the course, and the background, maturity and perceived needs of the students, one significant factor will be the instructor's perceptions of teaching and learning, and these are likely to change with his or her professional development as a teacher.

Learning constitutes a response to sensory inputs (stimuli) and in our role as teachers, we determine and orchestrate the inputs. We provide verbal inputs in lecture, often accompanied by visual aids, we organize small group learning situations, and we choose the out-of-class assignments. In challenging the students to respond, we seek to modify or transform the student's knowledge, skills or values. Despite its complexity, I have found three components of the learning process to have particularly informed my teaching.

(1) **Receptiveness:** Since learning constitutes a response, the student must first be receptive and attentive to our inputs, and we are more likely to engage our students if we teach with enthusiasm, if not passion, embellished on occasion with humour. In the early 1970s, Professor Mary Dow, of the University of Windsor, presented a workshop at Brock on "teaching as acting" in which she focused on some of the techniques important to acting, such as voice and expression, gesturing and movement, and eye contact. She

showed that these techniques are equally relevant to the classroom; that teaching is a performing art.

We also engage our students by making our subject content interesting and by connecting it to the student in a meaningful way. We interact with students and promote participation, and we develop group activities to further support interaction and collaboration. We also provide incentives and we motivate, especially the students who are not yet internally motivated to be active learners.

(2) **Initial Processing:** Since the initial processing of stimuli requires the student to integrate the new information or experience with prior knowledge and experiences, it is important for us to know that our students have the necessary prior knowledge, and that the knowledge is valid. Students, however, often hold misconceptions that create a conflict with the new inputs, thus threatening the capacity of the student to integrate in a meaningful and lasting way. Misconceptions are not easy to change, but they must be addressed if some of the learning objectives are to be achieved.

We can facilitate the processing and integration of new information if we first focus on the relevant prior knowledge. One way of achieving this is to begin each class with a review of major "points" from the previous class(es). We also facilitate integration by repeating important points and difficult ideas, and by giving multiple examples. It is also important that we use vocabulary the students understand or explain the new vocabulary we introduce. I suspect most of us have experienced a situation where we didn't understand what was being taught to us. We couldn't establish the connections because of our lack of background (prior knowledge), or unfamiliarity with the vocabulary, or perhaps because the teacher just went "too fast" for us to make the connections.

(3) **Long-term memory:** We strive to facilitate long-term memory retention, as opposed to short-term rote memorization, because it is the knowledge and skills in the long-term memory that are the resources for the development of higher-level thinking skills. Since long-term memory retention is promoted through frequent retrieval, utilization, and re-storage of information, we understand the need for repetition, reinforcement, and for assignments that require students to recall and review and to apply their learning to new situations. Furthermore, we recognize the value of frequent questioning and prompt feedback, and of providing our students with comprehensive exam questions well in advance of the final exam, so they have sufficient time to engage in the higher-order thinking skills we seek to develop.

In summary, learning is a complex process facilitated by a dynamic interplay between the learner and the teacher. I have occasionally heard the comment that it is not the role of a university instructor to "spoon-feed" students. And I don't normally indulge in "spoon-feeding" either. However, I'm sure we have all experienced an occasion when the intake of food or medicine by this means was quite necessary, and comforting. And there may be occasions in our courses when "spoon-feeding" is also a necessary and justifiable means of facilitating learning. So we do it.

The word, "education", has two Latin roots. One is "educere" meaning to elicit or evoke reactions, which we strive for as we orchestrate the inputs (stimuli) to achieve learning responses. The other root is "educare" which means to bring up or to nurture. I'm sure this would even include "spoon-feeding" on occasion.

Door opens on a new initiative

By Barry W. K. Joe

Director, CTLET

At the New Faculty Orientation on September 5, the Centre for Teaching, Learning and Educational Technologies (CTLET) launched its new initiative intended to provide the Brock community with the opportunity to observe models of good teaching. The program is called **Open Doors**. It is based on a pilot project run at Iowa State University and subsequently adapted successfully by the University of Saskatchewan and York University.

The CTLET approached a number of outstanding teachers and invited them to participate in the project. The enthusiastic response resulted in a strong roster of participants.

The concept is really quite simple. Teachers, who are willing to open their classrooms to their colleagues, are asked to provide information about their courses, times, and class resources, such as Web sites. Visitors may then attend any of the classes that these colleagues have designated. Some of the colleagues have asked that visiting participants call or e-mail ahead of time; others are content to have visitors simply drop in. It must be emphasized that the visitors do not attend in order to evaluate their colleague's teaching, but rather to observe successful teaching strategies.

The CTLET hopes that this initiative will help revitalize the much-needed dialogue about teaching among colleagues. Please call us at ext. 3933 if you would like more information about the **Open Doors** program.

Centre for
Teaching, Learning and
Educational Technologies,
Brock University Web site:
www.brocku.ca/ctl

Brock Teaching is published twice
per year by:

Centre for Teaching, Learning and Educational
Technologies, F313A
Brock University
St. Catharines, Ontario, L2S 3A1

Tel: 905-688-5550, ext. 3933

Barry W. K. Joe, Director
bjoe@spartan.ac.brocku.ca

Jill Grose, Associate Director
jgrose@spartan.ac.brocku.ca

Brock Teaching is produced by the Office of
External Relations, Brock University.

Photography: Divino Mucciante