Brock *Teaching*

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

Brock Professor wins new OPAS technology award

Any teacher of calculus can identify with the challenge of getting students enthused about learning difficult mathematics concepts. Brock Professor Bill Ralph, who teaches first-year calculus, has a solution to the problem. Ralph is the creator of *Journey Through Calculus*, an interactive CD which uses the dynamics of new technology to let students have fun, explore, and learn the complex world of calculus.

With outstanding visual animation, the CD combines games with problem-solving activities and tutorials. It's a powerful combination for today's classrooms that are filled with a generation of computer-literate students.

"It is truly remarkable the interest students have in *Journey Through Calculus*," says Ralph. "I use the CD as part of my lecture and it's difficult to get students to stop working on the CD activities when I want to go on to something else.

"The top layer of the program is purely fun and that sets up the hook for students so that they will go on and continue with the next level of questions and learning."

In October, Ralph was recognized by The Office for Partnerships of Advanced Skills (OPAS) for *Journey Through Calculus* as an innovative use of technology in the classroom. He was one of the first two recipients of the newly established 2002 OPAS Awards for Excellence in Teaching with Technology.

"Dr. Bill Ralph has distinguished himself at Brock University through his utilization of technology in his teaching," says Dr. Terry Boak, Vice-President, Academic and Provost. "Bill's teaching has earned him praise from both his students and colleagues. Brock is extremely fortunate to have a person with his expertise on faculty."

Ralph was commissioned by the California-based Thomson-Brooks/Cole Publishing in 1996 to develop the CD as a companion to the world's best-selling Calculus textbook, *Calculus: Early Transcendentals,* by James Stewart. He took a leave of absence

USER'S GUIDE FOR JOURNEY THROUGH™ Calculus

BILL RALPH in conjunction with James Stewart

WINDOWS CD-ROM
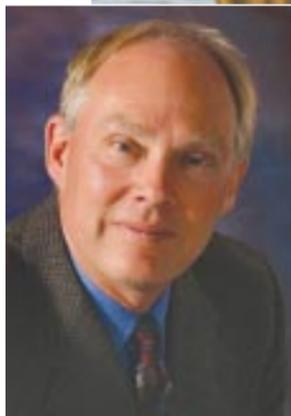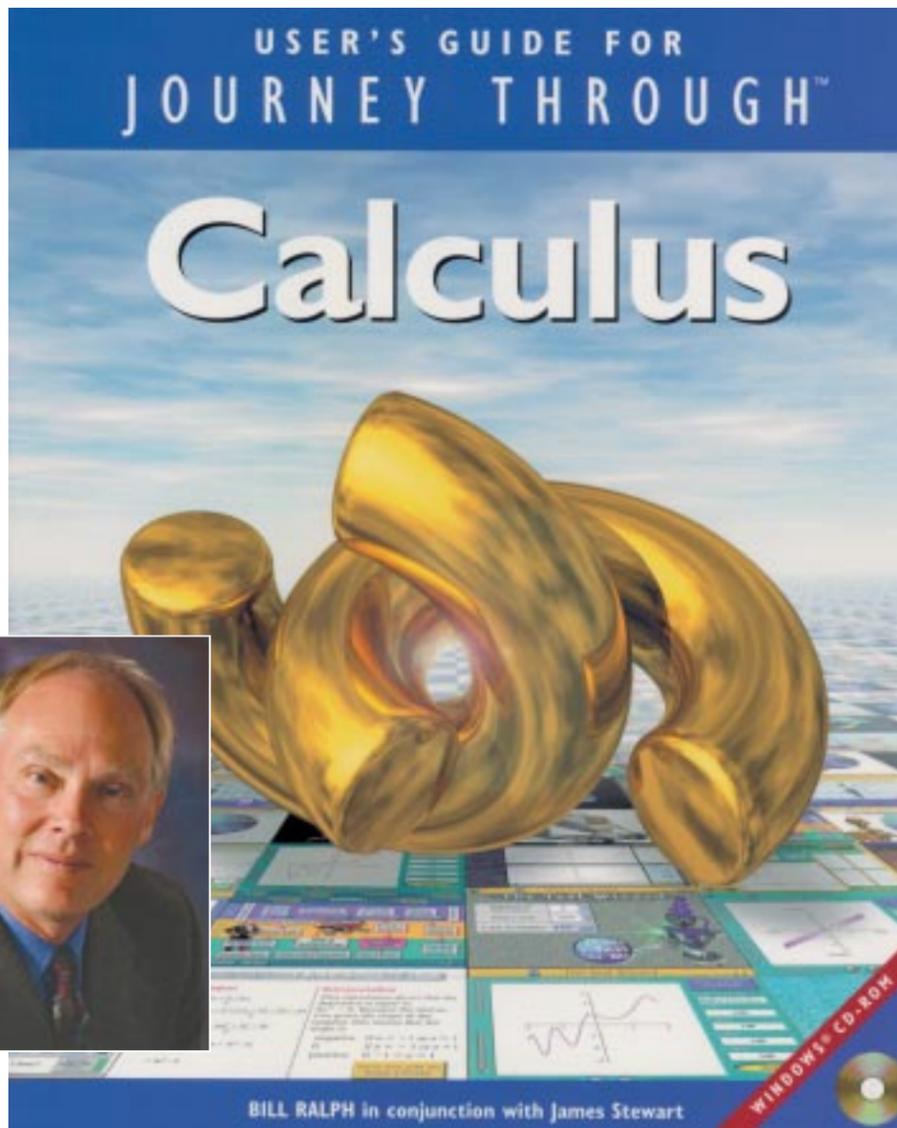
Professor Bill Ralph (inset) and the cover of the User's Guide for his interactive CD **Journey Through Calculus**

from Brock, moved to San Francisco and spent three years on the project. Storyboards and working programs designed by Ralph were produced by HRS Media in New York City.

The CD, release in 1999, is being used at universities around the world. It is designed to be "extremely" user-friendly, says Ralph. *Journey Through Calculus* features a powerful computer algebra system and includes seven learning modules which provide comprehensive coverage of a full range of calculus topics.

Each module begins with an activity which engages students and then leads them deeper into the program's more challenging aspects of studying calculus.

"I was careful in designing this so that students are constantly confronted with interesting situations that require them to apply and sharpen their math skills," says Ralph.

"It is important in teaching these difficult concepts of calculus to make the learning concrete by using real data. With that in mind, the CD assignments are based on individual models which students have to create on their own."

The greatest reward for Ralph comes from seeing the enthusiastic response to *Journey Through Calculus* from his first-year students.

"I believe the enthusiasm *Journey Through Calculus* creates will lead to better mathematics students," he says.

Dr. Barry Joe named to Centre for Digital Humanities

After more than four years of providing exceptional leadership for teaching at Brock, Dr. Barry Joe has left his position as Director of the Centre for Teaching, Learning and Educational Technologies.

Barry W. K. Joe

Joe was recently named Director of Brock's Centre for Digital Humanities, a new unit that will encompass the services of the Language Learning Centre as well as provide support for humanities teaching and research using the new technologies. A curriculum of digital humanities is currently under development.

"Dr. Barry Joe, as Director of the Centre for Teaching, Learning and Educational Technologies has made a tremendous contribution to teaching and learning at Brock University," says Dr. Terry Boak, Vice-President, Academic and Provost.

"Barry is a dedicated teacher who has improved the quality of education for our students. He will continue to make important contributions as he embarks on another challenge as Director of the Centre for Digital Humanities."

Joe was appointed Director of the Centre for Teaching and Learning for a three-year term in January 1998. His position was renewed in July 2000. At that time, the Centre was given added responsibilities for Educational Technologies.

Joe and Jill Grose, Associate Director of the Centre, have offered workshops to faculty, organized and run conferences on learning, advanced the use of educational technology across the University and organized faculty orientation workshops and TA seminars.

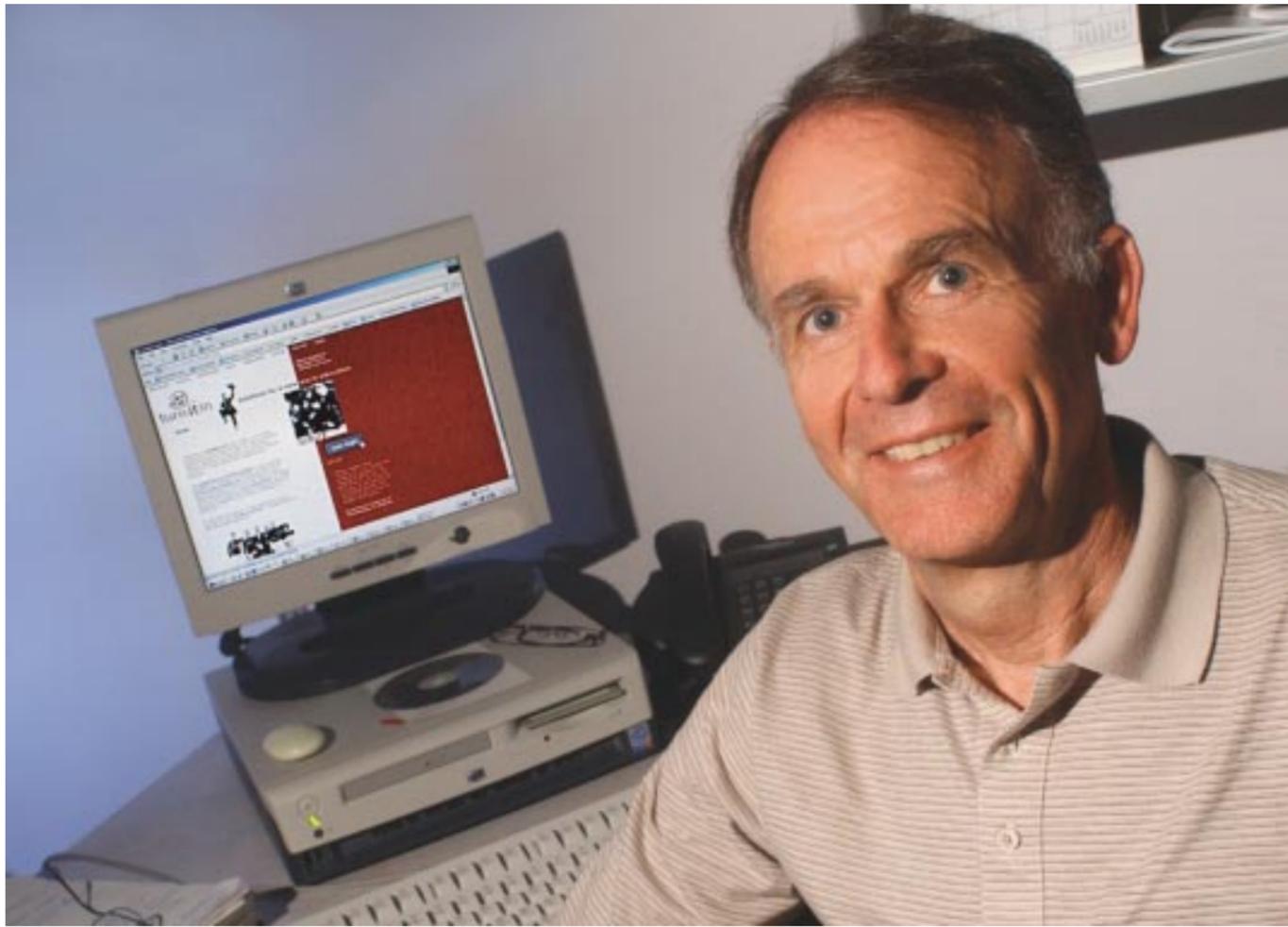"This has been an incredibly enriching experience for me," says

Brock University

Careers begin here!

Integrating Academic Integrity in the Academy

Professor Jon Radue

deterrent, and would prefer not to see any students caught for plagiarism. To this end, various proactive plagiarism prevention strategies are being investigated. Obviously, education of the student is the principal strategy. If a student understands what is meant by paraphrasing, by summarizing, by the use of other's ideas, and by proper citing, then perhaps many cases of inadvertent plagiarism could be prevented. But the education of the professoriate is of equal concern. If the topic for an assigned essay is easily "plagiarizable" then the professor should expect to see some students doing precisely that! What is needed is active exploration of techniques to set "plagiarism-proof" assignments, leading perhaps to new and better ways to grade a student's learning. After all, what are we trying to grade: a student's ability to package knowledge in the form of an essay or the student's understanding of concepts and ideas brought forward in an active, co-operative learning environment?

Plagiarism: Prevention Precedes Policing

By Professor Jon Radue, COSC/ Faculty Associate, CTLET

Although Brock has recently signed a licence agreement with Turnitin.com, a plagiarism detection service, the University is committed to preventing plagiarism rather than policing it; that is to say, it is Brock's goal to foster a climate in which academic integrity thrives as the norm, and in which plagiarism is the aberrant behaviour. We are currently working to create suitable material for educating both students and faculty about plagiarism — what it is, how to prevent it, and how to create "plagiarism-proof" assignments.

Brock faculty members now have complete access to the services of Turnitin.com (see www.cosc.brocku.ca/ plagiarism/turnitin/) as a tool to help detect plagiarism. Both faculty and students are encouraged to visit the site to learn more about the service. It is Brock's intent to use Turnitin.com as a springboard to discussing broader academic ethical questions, and to ensure that students understand the concept of plagiarism, the correct methods of citation, paraphrasing, and summarizing, as well as the phenomenon of inadvertent plagiarism or cryptamnesia.

The media has been eagerly reporting many cases of students caught plagiarizing, with the Internet being branded as the evil tool that lures students into copy-and-paste plagiarizing (for media samples, see the links at www.turnitin.com/press.html).

Studies by Donald McCabe of Rutgers have given the following broad indications:

• About 70 per cent of college students in the U.S. admit to some form of plagiarism, with 5 to 10 per cent admitting that they have downloaded papers from the Internet (and a quarter of them don't think it is serious cheating), while 10 to 20 per cent have copied and pasted material into a paper without citing the source (and half of them do not think that it is serious cheating).

• 90 per cent of the students using the Internet to plagiarize have also plagiarized from written sources. (It appears that the Web has "created" few new cheaters — 6 per cent of all students.) (From: Academic Integrity-A Research Update, D. McCabe, October 20, 2001, Center for Academic Integrity Conference at Texas A&M).

Many students at Brock will soon be asked to submit their essays and assignments to Turnitin.com, that will in turn check a submission for its "degree of originality" (see www.cosc.brocku.ca/ plagiarism/turnitin/). A colour-coded report is produced, which highlights areas of concern. It is then up to the professor to check the student submission thoroughly to see if plagiarism has indeed occurred.

The Centre for Teaching, Learning and Educational Technologies (CTLET) views this service as a CTLET will also be actively promoting the concept of academic integrity, with details of specific events being released as they are finalized. In particular, a survey of students, TAs and faculty, designed by Dr. Don McCabe from the Centre for Academic Integrity at Duke University, is being planned for next semester. Brock will be joining several other Canadian universities with similar ideas. The University of Guelph has in fact already conducted this survey, with generally pleasing results and surprising ideas from students on how work is, and should be, evaluated.

For more information on turnitin.com or Brock initiatives related to academic integrity, please contact Professor Jon Radue at: jradue@brocku.ca

Author of *Plagiarism Handbook* addresses Brock faculty

By Jill Grose, CTLET

The subject of academic integrity was the focus of the President's Lecture Series on Teaching and Learning last May when Robert Harris, author of the *Plagiarism Handbook*, facilitated an address and a follow-up workshop on plagiarism prevention strategies.

Harris shared a number of tips on how to design assignments so that originality is required and plagiarism becomes more work than it's worth. For example, when students are required to write on a very specific and narrow topic, using only recent sources and where the assignment is broken down into pieces with multiple due dates, the temptation to cheat is significantly reduced. Similarly, having students prepare oral reports on their topics and soliciting — and providing evidence of — peer feedback also facilitates meaningful learning while reducing the opportunity to hand in someone else's work at the last minute.

According to Harris, most plagiarism happens as a result of ignorance: students assume that if the original author is acknowledged, it is okay to copy large amounts of text in a cut and paste pastiche. Students who are under stress also give in to the temptation to plagiarize: they may feel their writing is not good enough or they simply have poor planning and time management skills.

Of course, there are those students who simply don't believe that their papers are read by their professors in any depth – Harris shared an anecdote in which a student planted a personal message a few pages into a paper which read "Prof XX , if you have read this far, I owe you lunch……." In *Life on the Mississippi*, Mark Twain described an "esophagus" in a tree in one of his lengthy descriptions because he did not believe his editor really read his work. The esophagus is still there. It is with this same kind of thinking, coupled with a conviction that education is about getting a degree simply to get a job, that students decide to take chances.
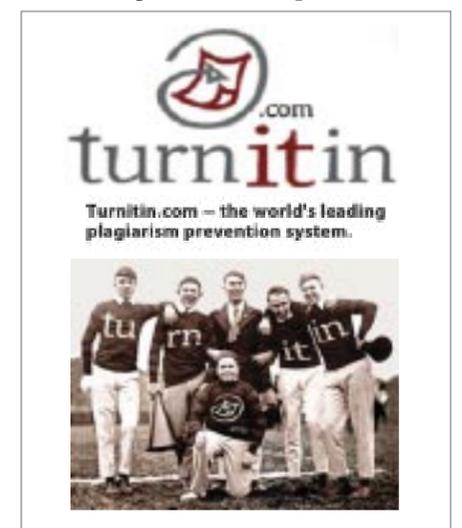
Designing assignments to reduce the temptation to cheat and educating students and ourselves about the causes of plagiarism is an important first step in embracing and celebrating a climate of academic integrity.

Copies of the *Plagiarism Handbook* by Robert Harris can be purchased at CTLET.

"Pair Pressure" helps learning, hinders cheating

Brock's Computer Science Department is using "pair programming" in its first-year Introduction to Computer Science course, starting this year. In the publication, *In Support of Student Pair Programming*, researchers Laurie Williams and Richard Upchurch have indicated that students, working at a computer in pairs, "complete their assignments faster and with higher quality," they "appear to learn faster" and they "are happier and less frustrated." Educators also experience a less onerous workload.

A significant additional perk, however, is that "the temptation to cheat is greatly reduced."

Why is cheating reduced?

Williams and Upchurch report: "We believe that pair-programming cuts down on cheating because pair-pressure causes the students to start working on projects earlier and to budget their time more wisely. Additionally, the students have a peer to turn to for help, and therefore, do not feel as helpless." (http://www.pairprogramming.com/ WilliamsUpchurch.pdf)

PHOTO SUPPLIED

Sharing best practices

The Instructional Skills Workshop (ISW) brought together 12 members of the Brock community and two ISW facilitators from British Columbia to participate in an intensive professional development opportunity over three days last June.

Attending the workshops were: seated from left, Deborah Mindorff, Education; Jill Grose, Centre for Teaching, Learning, and Educational Technologies (CTLET); Russell Day, Simon Fraser University; Alice Cassidy, University of British Columbia; Barry Joe, Centre for Digital Humanities; David DiBattista, Psychology. Standing from left, Leigh Pritchard, Intensive English Language Program; Julie Stevens, Sport Management; Nancy Murray, Physical Education; Frances Tuer, Business; Michelle Stairs, History/Geography; Jean Bridge, Fine Arts; Rick Welland, Department of Applied Language Studies; Cheri Bradish, Sport Management.

The ISW promotes peer mentoring in instructional development and feedback. Participants engage in a series of videotaped mini-teaching cycles and both give and receive commentary from the mentoring group. Such a format allows colleagues from a number of disciplines to share best practices in an informal and supportive environment. Many of the participants reported feeling energized by the experience — as a result of their recommendations, CTLET plans to hold another ISW this spring.

For more information about the next ISW, please contact Jill Grose, at ext. 4392.

TA Certificate Program 2002-2003

Record number of TAs participate in orientation day

TA Orientation was held on Saturday, September 14 and attracted a record number of TAs who came out to learn about roles, responsibilities and resources for undertaking their teaching duties at Brock.

Despite the beautiful weather outdoors, over 120 undergraduate and graduate TAs attended the day-long event which also featured outstanding concurrent workshops facilitated by Professor Maureen Connolly on "Evaluation and Assessment Practices" and Professor Lorne Adams on "Empowering the Learner."

The Centre for Teaching, Learning and Educational Technologies (CTLET) would also like to thank all those who gave up a portion of their time on Saturday morning to participate: Vice-President, Academic and Provost Terry Boak; Human Resources Director Harold Leece; CUPE Executive Michelle Stairs; Carolyn Brendon, Sexual Harassment Advisor; Les McCurdy-Myers, Student Development Centre; and Candace Dahl from the James A. Gibson Library.

CTLET also sponsors a series of workshops throughout the year on TA issues. This year, 16 workshops will again be offered to TAs: participation in eight workshops earns a Basic Certificate in Teaching and Learning in Higher Education. TAs who have completed the Basic certificate may enrol in the Advanced program which requires participation in an additional eight workshops and preparation of a statement of teaching philosophy. TAs in the Advanced program may attend faculty workshops on teaching and can also earn credit for professional development workshops they have taken through their home departments.

TA Workshops are generally held on Saturday mornings, from 9 a.m. to noon, throughout the year.

Upcoming dates for remaining workshops in the Fall 2002 series are as follows:

• Saturday, November 2 — "TA Forum: Sharing Best Practices" and "Demystifying the Library: Helping Your Students with Research"

• Saturday, November 16 — "Everything You Want to Know About International Students" and "Inclusive Practices in the Classroom"

• Saturday, November 30 — "Are We Having Fun Yet? Teaching & Learning Styles" and "Dealing with Disruptive Students"

Upcoming workshops in the Educational Technologies Series:

• Tuesday, November 5, 2 to 3 p.m. — "WebCT: Using the Discussion Tool to Enrich Class Participation"

• Tuesday, November 26, 2 to 3 p.m. — "Web CT: The Evaluation Tools"

For more information on the TA workshops, call CTLET, at ext. 3933.

Award for Distinguished Teaching 2002-2003

Maureen Connolly recognized for educational leadership

Professor Maureen Connolly has been named the recipient of the 2002 Brock University Award for Distinguished Teaching.

Connolly holds a Bachelor and Master's degree from Memorial University and received her PhD in Education from the University of Alberta. At Brock, she has served as a Professor in the Department of Physical Education and Kinesiology, as the Interim Director of the Instructional Development Office (now the Centre for Teaching, Learning and Educational Technologies), and as the Director of the Women's Studies Program. She is a fellow of the International Communicology Institute and is currently the Chair of the Department of Sport Management.

Professor Maureen Connolly

Connolly's commitment to teaching and learning is evident in her educational leadership within the institution, her publications in teaching and, above all, in her commitment to her students. She has supervised over 60 undergraduate and graduate theses, has taught and coached thousands of students in a diverse number of disciplines and has been active as a workshop presenter on teaching and learning issues.

Connolly is also a recipient of the Rosalind Blauer Award, which is presented by the Centre for Women's Studies in recognition of contributions and efforts on behalf of women at Brock and the community at large, and the Making a Difference Award, which is presented to a member of the Brock community who has made a significant contribution to the successful academic life of a student or students with a disability.

The Brock University Award for Distinguished Teaching was presented at convocation on Saturday, October 19.

The 2003 spring issue of Brock Teaching will feature a story on Connolly and her philosophy of teaching.

Faculty Teaching Awards

The University recognized the contributions of Brock faculty by presenting Faculty Awards for Excellence in Teaching at the 2002 Spring Convocation ceremonies. The award recipients were:

• Dr. Kris Kirkwood, Education
• Dr. Linda Stillabower, Business
• Dr. Nancy Murray, Applied Health Sciences
• Dr. Richard Welland, Humanities
• Dr. William Ralph, Mathematics and Science
• Dr. Joseph Kushner, Social Sciences

WebCT use continues to grow across Campus

WebCT (Web Course Tools) is a LMS (Learning Management System) that allows simple management of online course materials and offers a number of interactive tools to facilitate learning. Course sites provide a secure learning environment and are password protected. Because WebCT is browser-based, students can log on anywhere, anytime. The flexibility of the course design tools means that instructors can select the tool or tools that best suit the learning objectives of the course.

When the Centre for Teaching, Learning and Educational Technologies (CTLET) first introduced WebCT to the Brock community in 1998-99, 33 course accounts were established in the first year, many of which were "test" courses. Since that time, more and more instructors have either moved course material online or used WebCT to engage students collaboratively in discussion. As of May 2002, CTLET had created 249 courses, with 18,000 student "seats" (one student might have three WebCT courses, counting as three student seats).

As a result of this exponential growth, Brock University decided to adopt Campus edition, Version 3.8. During the summer, Information Technology Services (ITS) assumed management of the software and began to integrate WebCT with other computer accounts at Brock.

As of September 19, ITS had set up 166 active courses on WebCT, with approximately 8,000 students having one or more WebCT courses in their accounts. More courses will be set up for January, no doubt surpassing previous records. Some of the biggest changes to the system is that ITS can now create seminar or lab components for each WebCT course, allowing instructors to add TAs to separate "secondaries" in order to manage a seminar database or facilitate an online discussion.

Why the growth in WebCT? Many instructors have reported that their decision to move parts of the course online was in response to student requests. Students like to be able to get an overview of the notes or a copy of an essential table or graph. Knowing that key information is available after class reduces the stress of trying to copy information from an overhead during a lecture, allowing students to put down their pens from time to time and truly listen to the instructor.

If you would like more information about WebCT, contact CTLET, at ext. 3933.

Need a learning object?

CTLET, in partnership with Information Technology Services, employs a team of learning technology students to both create content specific learning objects and/or to provide faculty support in WebCT course development. A learning object is "any digital resource that can be reused to mediate learning" (Wiley, David). Learning objects can be used alone or within WebCT. This service is free to all Brock faculty and instructors. Want to know more? Call CTLET, at ext. 3933.

The Undervaluation of Teaching

By Professor Don Ursino

In March of 1990, the Board of Directors of the Association of Universities and Colleges of Canada (AUCC) established an independent Commission of Inquiry on Canadian University Education to assess how well the universities of Canada were carrying out their educational mandate. Dr. Stuart Smith, a former Professor of Psychiatry at McMaster University and Chairman of the Science Council of Canada, was named Commissioner of the study. In the final Commission Report published in 1991, Smith concluded that "teaching was seriously undervalued in Canadian universities and nothing less than a total recommitment to it was required." He also challenged the opinion often held in the university community that "research technique takes years to learn but teaching simply comes naturally."

Not much has changed in 11 years. Teaching remains undervalued in universities and will continue to be as long as it is perceived by too many within the university as merely the "dissemination of information," whether by lecture, text or online. This naïve view of teaching ignores the complexities and creativity in teaching, and it fails to recognize the important higher-order learning outcomes that superior teaching seeks to achieve.

In his report, Smith stated that the university's narrow perspective of scholarship, which has come to mean little more than research publications, fails to recognize the many hours of intense scholarly activity required for superior teaching; activity associated with enquiry, reflection, evaluation and innovation. Until the university community acknowledges the existence of a scholarship of teaching that is as creative as the scholarship that advances knowledge, superior teaching will remain undervalued. In his 1992 publication, *Scholarship Revisited: Priorities of the Professorate*, Ernest Boyer recognized the difficulties that faculty members would have in excelling in both the scholarship of teaching and the scholarship of research, and therefore he questioned whether it was realistic for universities to expect this to occur. He suggested the more satisfying goal for universities would be to have great teachers and great researchers side by side.

It is assumed that one must be engaged in the scholarship of research to be an effective teacher. Too often one hears such cliches as, "research enhances teaching," "research and teaching are intimately linked," and "university teachers who don't do research give their students a second-rate education." These cliches assume there is a unique set of intellectual skills and experiences associated with "doing research" which are necessary to inform teaching. While the link between one's research and the offering of graduate and senior undergraduate courses in the same and often narrow knowledge area cannot be denied, I challenge the assumption that engagement in the scholarship that advances knowledge (research) is a necessary co-requisite for engaging in the scholarship of teaching. All scholarly activity, whether focused on teaching and learning, or on the advancement, integration or application of knowledge, depends upon the same intellectual abilities and habits of the mind.

Time is precious and limited for university instructors and as long as this resource must be partitioned between teaching and research, research will be favoured. For most professors, research provides the more familiar, less threatening, and more personally satisfying pursuit. And, of course, the incentives and rewards are much greater. However, the reality for universities today is very large undergraduate classes with students representing a diversity of backgrounds and aptitudes. Such courses are especially challenging and demanding to teach, and they deserve creative and dedicated instructors who are passionate about teaching.

Universities are learning institutions. It is about time that the scholarship of teaching became more widely accepted, and superior teaching more highly valued and encouraged.

❦

Joe. "It is an opportunity that I would have otherwise never had. It has opened so many doors for me in regards to my personal growth as a teacher. I've learnt so much more about the scholarship of teaching. I've met junior and senior colleagues who have inspired my teaching practices."

Joe has been recognized several times for his commitment to teaching. In 2000-2001, he was awarded the prestigious 3M Teaching Fellowship and he is also a past recipient of the Brock University Distinguished Teaching Award.

Joe is pleased that through his work with CTLET, he has been able to help raise the profile of teaching and the respect for teaching at the University. He gives equal credit for CTLET's progress to contributions made by Associate Director Jill Grose.

"As a team, we have made teaching and talking about teaching appealing at Brock," he adds 'We have taken it out of the dark corners and made it OK to talk about in public."

He says the STLHE 2000 conference hosted by Brock was an important accomplishment for the Centre while he was Director.

"There was an enormous fallout for Brock as a result of hosting the STLHE 2000 conference," he says. "People got a sense that Brock was on the radar for teaching and learning and that we have marvelous practitioners at our campus."

Joe also is proud of his role in introducing WebCT, Brock's learning management system for online course material, to the Brock community.

"WebCT is hugely important to the University," he says. "We started off with one course of 30 students — this past year, we had over 250 courses and over 18,000 student seats. WebCT has allowed us to practice any pace, any place learning to meet the changing nature of our student body.

"WebCT also has provided us with a tool to talk to faculty about pedagogy, what they are doing and their classroom practice — it has added another opportunity for us to share teaching experiences."

Joe is looking forward to his new challenges in the area of digital humanities.

"The courses offered in the Centre for Digital Humanities will examine how technology is changing our understanding of humanities. They involve the core values that we have always discussed but from a different perspective," he explains.

"Brock is getting in on the initial wave of a discipline that responds to the new sociology of students coming to the University, students who have different expectations. We are speaking of the traditional values of the academy to students in a language that they will understand."

Call for Contributions

Positive Pedagogy is an online journal, developed by the Ontario 3M Teaching Fellows, and devoted to the recognition and development of excellence in teaching.

Positive Pedagogy documents innovative, successful and otherwise noteworthy practices in Canadian post-secondary education. Descriptions and discussions of innovative applications, extensions, or refinements of practices in general use are also welcome.

Positive Pedagogy accepts two types of submissions: Articles and Commentaries. Generally speaking, articles describe a single practice and its context. Commentaries review a practice across a variety of settings or comment on a set of practices as found, for example, in a course or program. Authors of both articles and commentaries are encouraged to take advantage of the electronic format of the journal by providing links to relevant course materials and to appropriate Web sites.

Submissions may be made directly to any Editor, though authors are encouraged, where possible, to submit through a 3M Fellow at their institution in order to elicit preliminary feedback and enhance local discussion and collaboration with respect to teaching/learning issues.

The three current editors are:

- Alan Slavin, Department of Physics, Trent University. E-mail: aslavin@trentu.ca

- Ron Sheese, Department of Psychology, York University. E-mail: rsheese@yorku.ca

- Barry Joe, Centre for Digital Humanities, Brock University. E-mail: bjoe@brocku.ca

For detailed submission information, please refer to the Web site at: www.mcmaster.ca/learning/posped/submit_info.html