



Reflections

Faculty Engagement in Teaching Development: Part 2

BY DEBRA DAWSON, DIRECTOR, AND GAYLE MCINTYRE, RESEARCH ASSISTANT, TEACHING SUPPORT CENTRE

In the Fall 2009 issue of Reflections, we reported on the Teaching Support Centre's involvement in a multi-university research project on faculty engagement in teaching development activities, funded by the Higher Education Quality Council of Ontario (HEQCO). Part 1 involved focus groups of teaching award winners. Part 2 of the project—a survey of 876 faculty at six universities—is now complete, and a report of the results will be available on the HEQCO website (www.heqco.ca) later this spring. In this report, we will focus exclusively on highlighting some of the Western results.

Overview and Summary of the Results

The results of the focus groups with Western teaching award winners indicated that most faculty learned to teach “by doing.” In surveying our faculty at Western we found that although many faculty did learn to teach by experience, newer faculty were more likely to have taken courses on teaching or had a formal introduction to teaching prior to their first appointment. Similar to the focus group research, the survey data found that consulting with colleagues and mentoring were both important in how faculty currently learn about teaching. The survey data demonstrated that the scholarship of teaching has emerged as a new area of research interest. One-third of our faculty reported that they are engaged in research on teaching. Finally, again the survey data supported what was found in the focus groups, which was that faculty felt there was a strong emphasis on research to the detriment at times of teaching within the university. Suggestions were offered as to how this situation might be improved.

The Survey

The questions that appeared in the on-line survey

were developed based on results from the focus groups, a review of the literature, and current faculty development theory. Faculty members were asked to respond to questions about their teaching methods and the faculty development activities in which they are engaged. Western had 256 participants indicating a response rate of 20% of full-time faculty.

There were responses from across all faculties, with fairly equal distribution amongst the three ranks of Assistant (30.6%), Associate (33.0%), Full Professors (26.3%), and 10% “Other” (such as Associate Dean). 33% of respondents had been teaching at Western for five years or less, 35.2% had been teaching six to 15 years, and 31.5% had been at Western 16 or more years.

Results

How Faculty Learn to Teach

- **How did you learn about teaching prior to your first academic appointment? (top responses — faculty could check off as many items as applied)**
 - Gained “hands on” experience as a graduate teaching assistant (67.3%)

- Had informal discussions with peers on teaching (46.6%)
- Other (27.4%) Three primary themes emerged in the written comments for this item: first, several respondents had previous teaching experience in another type of institution such as a high school, college, community centre or they had performed one-on-one tutoring; second, many had completed some type of formal education in teaching as part of an M.Ed., a PhD degree or a Diploma in Adult Education; the third more varied theme was that individuals had learned how to teach from more informal sources such as observing expert teachers, discussions with supervisors or had received feedback on research presentations.
- Attended graduate teaching assistant orientation(s) (20.7%)
- **14% had no teaching knowledge prior to their academic appointment**

To explore whether the type of methods faculty used to learn about teaching had changed over

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time, we also examined the responses to this question by length of time at the institution (0-5 years, 6-15 years, or longer). Table 1 clearly indicates that our newer faculty are far more likely to bring with them some experience or knowledge of teaching prior to their first appointment than did our more seasoned faculty members.

What teaching activities did you engage in at the beginning of your career? (top responses — faculty could check off as many items as applied)

- Learned by doing (teaching) (94.8%)
- Had informal discussions with peers about teaching (72.2%)
- Attended workshop(s) on teaching (56.6%)
- Attended new faculty orientation(s) (55.7%)
- Had a teaching mentor(s) (24.5%)
- Attended course(s) on teaching (23.1%)

How do you currently learn about teaching (top responses — faculty could check off as many items as applied)

- By doing (teaching) (97.2%)
- Consulting with colleagues about teaching (75.0%)
- Mentoring (46.2%)
- Attending workshops and seminars on teaching (41.5%)
- Consulting/reading/reviewing discipline-specific teaching(s) journal (32.1%)
- Consulting/reading/reviewing general teaching journal(s) for information (31.6%)

What do you find useful in determining how to become a more effective teacher?

- Informal feedback from students: 90.0%
- Formal feedback through university-required evaluations: 73.2%
- Evaluation by peers: 39.2%

Do you practice self-assessment of your teaching?

- Yes: 86.3%
- No: 13.7%

How many times in the past year have you used the information/services/resources of the Teaching Support Centre to help with your teaching?

- One to four times: 48.6%
- Five to eight times: 10.4%
- 9% had not used the centre's services

Of respondents who had used the TSC in the past year, 38% were "very satisfied" and 46% were "satisfied" with the information/services/resources.

TABLE 1:

How did you learn about teaching prior to your academic appointment?

(% of the total respondents who checked "yes" crossed with years of experience)

	0-5 years	6-15 years	16 years+
Gained "hands on" experience as a graduate teaching assistant	78.9%	64.0%	53.7%
Had informal discussions with peers on teaching	60.6%	42.7%	32.8%
Other - please specify [see below]	29.6%	30.7%	19.4%
Attended graduate teaching assistant orientation(s)	32.4%	22.7%	4.5%
Attended graduate teaching assistant workshop(s)	32.4%	21.3%	6.0%
Took graduate student course(s) in teaching and learning	21.1%	16.0%	3.0%
I had no teaching knowledge/experience prior to my academic appointment	5.6%	8.0%	26.9%
Had informal discussions with staff in centres for teaching and learning	18.3%	6.7%	6.0%
Acquired teaching certificate(s)/certification(s)	9.9%	6.7%	1.5%
Received K-12 teacher education training	5.6%	5.3%	4.5%
Kept a journal on teaching and learning	8.5%	2.7%	3.0%

The Scholarship of Teaching and Learning (SoTL)

- Scholarly teaching has been described as the practice of engaging in reflection on teaching and consulting the literature about what works in order to find ways to improve one's own teaching. 27.1% of faculty reported that they engage in the practice of scholarly teaching "very often" or "often;" and 39.0% "sometimes" engage.
- The Scholarship of Teaching and Learning (SoTL) has been described as development of scholarly knowledge [about teaching] through reflection, conducting research, and sharing expertise; not only in order to improve practice within one's own classroom but also beyond, to the institution and the field. 24.2% of faculty reported that they engage in SoTL "very often" or "often;" while 30.0% "sometimes" engage.
- 62.2% rated it "important" or "very important" that the TSC offer support for research on teaching
- Learn about teaching through conducting research on teaching: 10.2% at the beginning of their academic career; 16.4% currently
- 18.3% read general literature on teaching "very often" or "often;" 38.0% "sometimes;" 29.6% "rarely;" 14.6% "never"
- 18.9% read discipline-specific literature on teaching "very often" or "often;" 40.6% "sometimes;" 25.9% "rarely;" 14.6% "never"

- Top 3 answers for "How have you shared your reflections on teaching?"
 - Presenting to students in class
 - Presenting at departmental/faculty meetings
 - Presenting at a conference within own discipline
- 73.0% of respondents DO NOT conduct classroom research
- Top answers for "How do you use the results of your classroom research?"
 - Modify own teaching
 - Share results with colleagues

Teaching versus Research

- 77% of respondents believe teaching is "very important" to overall professional practice
- For "How important do you believe teaching is to your institution in judging your accomplishments?" – 33.3% "very important;" 31.5% "important;" 25.4% "somewhat important;" 8.0% "not very important;" 1.4 % "not at all important"
- 55.5% believe the university "strongly supports" or "supports" their growth as a teacher
- 45.7% believe the faculty/department/school "strongly supports" or "supports" their growth as a teacher
- 73.3% "strongly agree" or "agree" that "Research, not teaching, pays off in enhanced reputation, respect of peers and access to funds"

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Conclusions

How Faculty Learn How to Teach

The survey research supported many of the findings of the previous focus groups. Faculty again commented that they learned about teaching at the beginning of their career by doing and by informal conversations with peers. One individual commented:

Many of the extra supports that exist today simply did not exist when I started. You were expected to know how to teach by how you were taught and how your supervisors taught (I learned from the good and bad examples).

In fact, Table 1 would indicate that those who had more than 16 years experience were far more likely to say they had no teaching knowledge or experience prior to their first academic appointment (27%) versus those who are relatively new to the academy (in the 0-5 years category only 6% indicated no knowledge or experience). One other dramatic shift is in the percentage of faculty who participated in graduate teaching assistant workshops. Again only 6% of the group with 16+ years of experience had such experience, whereas 32% of the group with 0-5 years of experience had participated in teaching assistant training. There appears to be a growing trend towards increased preparation prior to the first faculty appointment.

Although many faculty get peers to give them feedback on their teaching, this practice is certainly not universal. Those who do invite peers to give feedback often talked about how this practice was very constructive for improving their teaching: *"Two heads are better than one. They may have a different approach that I could try,"* whereas those who never did this seemed to feel that this would not be a very beneficial experience. *"I'm not sure who would be appropriate to ask and who I would be comfortable asking."*

Most faculty did practice self-assessment of their teaching and when asked why, commented:

I do [get] involve[d] in rather obsessive self-assessment because I think teaching is critical to enhancing student involvement & learning.

Teaching is a critical part of the educational experience. If I just wanted to do research I could have stayed in the community and made more money than I am making now :)

It is necessary to disrupt our own beliefs and assumptions to serve our learners.

Although many faculty do make use of the resources offered by the TSC, there are still those who never do. It may be that time conflicts preclude attendance at events. As one person said, *"[There are] many opportunities to attend workshops and seminars, but often conflict with other duties."* Others indicated a desire for discipline-specific knowledge that they believe is more likely to come from colleagues. Time pressures to work on teaching issues were frequently commented on in the survey.

In a large institution, it may be challenging to meet the individual needs of such diverse faculty. One idea that we have been discussing with colleagues is the idea of Teaching Chairs within faculties who might work on discipline specific issues. Teaching Chairs who worked collaboratively with the TSC might be a powerful tool to meet the teaching and learning needs of our faculty. When faculty did make use of the resources offered by the TSC, they were largely very satisfied with the service they received and several very positive comments were received such as:

The website, publications and resource personnel are very helpful with answering questions.

The Teaching Support Centre is excellent and all faculty associated with the Centre are extremely gifted teachers. More faculty should take advantage of this amazing resource.

Scholarship of Teaching and Learning (SoTL)

Although only about a third of faculty engaged in the scholarship of teaching and learning this appears to be an emerging area

of interest for many of our faculty. Most read the literature on teaching at least occasionally. Those who do conduct classroom research seem to do it primarily to improve their own classroom practice. As over 60% believe that it is important or very important that the TSC have workshops in this area, we will continue to plan more workshops focused on research on teaching.

Research versus Teaching

Many respondents commented at the end of the survey that they were glad to see research being performed in this area and held strong views about the importance of having quality teaching at the university level. For instance:

I believe that this study is extremely important. Obviously, a university must be research driven, but teaching needs to be given equal weight in terms of priority. Undergraduate students turned off by poor teaching are not going to be inspired or passionate in their field of study. I believe that the university should ensure that each department has a balance of faculty members some of which are expert researchers and others who are expert teachers.

It was clear from the responses that most faculty members place a strong emphasis on the importance of teaching in their professional practice (some literally said "I love teaching!"). Yet many were concerned that within the university, research was valued far more highly than teaching:

Teaching is undervalued in the context of most universities. Research is more highly regarded, regardless of the significance

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STLHE SAPES

Society for Teaching and Learning in Higher Education
La société pour l'avancement de la pédagogie dans l'enseignement supérieur

2010 STLHE Conference

The **STLHE 2010 Annual Conference** will take place from June 23 to 26, 2010 in Toronto. The conference will be co-hosted by Ryerson University and the Ontario College of Art and Design (OCAD).

The theme of the 30th Conference will be Creative Teaching and Learning: Exploring, Shaping, Knowing.

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Note: Western has an institutional membership with STLHE. This allows the Western community to join the Society at a reduced rate. For membership information, go to: www.stlhe.ca

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of that research. Teaching workloads are minimal, which is reflective of the degree of importance placed on teaching.

The impact of teaching not being valued led them to believe the tenure system was more rigorous for research than teaching and was also one reason why individuals could be hired to teach who had no formal training in this area.

The university promotion system does consider teaching, but not in a sufficiently rigorous way. Research gets priority because it is assessed by external reviewers. Often these reviewers do not know how much teaching was done by the candidate. A

similar assessment should be made of teaching, in terms of what the expectations were and the performance of the candidate (not just student letters).

Yet others commented that the onus on improving this system rests on faculty members themselves.

Teaching needs to be valued more highly than it is at most universities in Canada, and part of that valuing needs to come from faculty members themselves, so anything that we can do to improve the culture of teaching in a holistic way (integrated with research and service, integrated with curriculum planning and program requirements) will help.

We would like to sincerely thank all the faculty who responded to our survey. It will help to shape our work here in the TSC and hopefully promote conversations on teaching throughout the university. The results of the six university study will be published on the HEQCO web site. In addition, we will be submitting several articles for publication based on the results of the research and the underlying theoretical research.

Coming Events in TSC

May 6, 2010

Mentoring Matters

(a day of workshops on mentoring)

May 19, 2010

Spring Perspectives on Teaching Conference

May 25 – 27, 2010

Summer Teaching with Technology Institute

July 26, 27 & 29, 2010

Instructional Skills Workshop for Faculty

August 11, 2010

New Faculty Orientation — Teaching at Western

August 16 – 20, 2010

Course on Teaching at the University Level

August 24, 2010

Teaching with Technology for New Faculty

September 1, 2010

(tentative date)

Fall Perspectives on Teaching Conference

For more information, visit the TSC website:

www.uwo.ca/tsc

Spring Perspectives on Teaching

Wednesday, May 19, 2010

University Community Centre, Room 146

OPENING REMARKS & ANNOUNCEMENT OF

2010 FELLOWSHIP IN TEACHING INNOVATION AWARD: 9:00 – 9:15 A.M.

John Doerksen, Vice-Provost (Academic Programs & Students)

KEYNOTE SESSION: 9:15 – 10:30 A.M.

The Entitlement Generation — Implications for the Classroom

Jeanette McDonald, Wilfrid Laurier University

PLENARY SESSION: 10:45 – 12:00 P.M.

Panel Session on Generation Me: Student Voices

Facilitator: Mike Atkinson, Teaching Support Centre
Panel of Undergraduate Students



Jeanette McDonald
Wilfrid Laurier University

CONCURRENT SESSIONS:

A Patient's Voice: An Innovative Approach towards Teaching Ethics and Professionalism

Barry Schwartz (Dentistry), Richard Bohay (Dentistry), Judy McCormick (Clinical Skills)

Writing to Learn: Using Exploratory Writing in the Undergraduate Classroom

Lee-Anna Sangster (Philosophy)

Reflection in Teaching: A Tool for Learning

Jennifer Boman (King's University College)

Embedded Information Literacy: An Arts & Humanities Model

Fran Gray, Marni Harrington and Christy Sich (Western Libraries)

To view program details and register, visit the TSC website at:
www.uwo.ca/tsc

Social Learning Spaces in Western Libraries

BY TOM ADAM, INFORMATION LITERACY LIBRARIAN, WESTERN LIBRARIES

It used to be that working and studying in an academic library was characteristically isolating. The expectation was that students quietly worked alone and the space libraries provided for work and study corresponded accordingly. Reference Halls and library study areas typically contained a single type of student work space, the study carrel; a cubbyhole of space separated from its neighbor, if there were several in an area, by barrier walls that restricted inhabitants to the confines of the desktop. The space itself did not facilitate interaction among learners nor did it accommodate or even address working collaboratively in groups.

The need for a different kind of space, a social learning space is a relatively new phenomenon. If you google "social learning space," you'll retrieve references to many universities responding to this need by providing areas and in some instances whole building additions designed to foster and aid collaboration among students, while affording a more inviting and relaxed atmosphere in which to work, some complete with high-end learning support equipment installed in the space. As buildings are renovated and new construction happens on campus providing a physical environment that encourages social interaction and community learning is becoming increasingly important. Western Libraries has begun to respond to this need

by creating study and work areas containing a variety of social learning spaces at all libraries across campus. A new study area adjacent to the recently constructed Office of the University Librarian on the second floor of The D.B. Weldon Library is one example.

Dubbed "The Booths," the area holds seven work spaces that do in fact resemble restaurant booth seating with a fixed work space surrounded by horseshoe shaped banquette seating. In addition, four small half-walled "rooms," two at each end of the area, contain a round table and moveable chairs. Each work area, available on a first-come basis, has ample direct lighting focused in the space and there is readily available electricity for plugging in laptops, either in the wall or built into the construction of the work table. Of course wireless access to the Internet is available throughout Weldon, so students now have an area to work collaboratively, using the host of full text electronic resources readily at hand through the Library website and available on their laptop. They can research the project, write it collaboratively, and wirelessly send their document to one of the library print workstations — and re-charge a dead computer battery — all from within this space.

Since it officially opened at the beginning of this academic year, it has proven to be the work space of choice for many students. Library staff



"The Booths," a new study area in The D.B. Weldon Library

working in the area note there is rarely a time when the study space is totally deserted, and in fact seating is often at a premium. Interestingly, the librarians indicate that excessive noise does not seem to be a problem. With the potential of eleven groups working on different collaborative projects, noise in the area could be an issue; however, the students seem to be respectful and are self-policing of the area's designation as a quiet zone.

Designing and creating spaces that align with the way teaching has evolved over the last decade and are in tune with student preferences and accommodate how students want to work is an important concern for Western Libraries. Providing areas like this for students is one way we can continue to enhance the learning experience for our Western community.

Mentoring at Western

BY MADELINE LENNON, COORDINATOR, FACULTY MENTOR PROGRAM, TEACHING SUPPORT CENTRE

Mentoring programs are growing in universities across North America, supporting faculty in developing positive, productive careers in a collegial atmosphere. Today the reality for faculty members is an increasingly complex and demanding academic environment. In response to this reality, a number of different approaches to mentoring have emerged, from the traditional pairing of a senior with a more junior colleague, to a broader network system.

A major voice in the changing view of mentoring is Mary Deane Sorcinelli, Associate Provost for Faculty Development and Professor of Educational Policy, Research, and Administration, at the University of Massachusetts Amherst. Recipient of a number of national and international awards for her work in faculty development, Dr. Sorcinelli has numerous publications in the field, including contributions such as *Heeding New Voices: Academic Careers for a New Generation* (2000) and *Creating the Future of Faculty Development* (2006). Under her

leadership, the Center for Teaching at UMass Amherst was cited as one of the top four Model Faculty Development Programs in the US and Canada in 2006. Dr. Sorcinelli has directed a number of grant projects and is currently co-principal investigator of a grant from the Andrew W. Mellon Foundation to support the campus-wide Mutual Mentoring initiative.

We are fortunate to have Mary Deane Sorcinelli visiting Western on **Thursday, May 6**, to share her knowledge and experience with us for a day of workshops on mentoring.

On our own campus, Dr. Carol Herbert, the internationally recognized Dean of the Schulich School of Medicine and Dentistry and Professor of Family Medicine, is a strong supporter and practitioner of mentoring. Dr. Herbert will provide a focus for us in her address on May 6th, *Mentorship: Valuing the Success of Others*.

If you are interested in attending either of these workshops, please register at: www.uwo.ca/tsc

Mentoring Matters

Thursday, May 6, 2010

Weldon Library – Room 258

Register online: www.uwo.ca/tsc

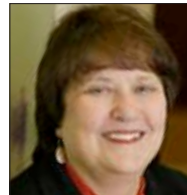
presented by

The Teaching Support Centre and
the Office of the Vice-Provost
(Academic Planning, Policy and Faculty)



Mary Deane Sorcinelli

Associate Provost for Faculty Development
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Carol Herbert

Dean, Schulich School of Medicine & Dentistry
Professor of Family Medicine
The University of Western Ontario

9:00 – 11:30 am – Building a Mentoring Program and Culture - Mary Deane Sorcinelli *A Workshop for Academic Leaders*

Mentoring has long been viewed as a powerful means of enhancing the professional success of faculty members. The most common form of mentoring has been a “traditional model” – an experienced faculty member guiding the development of an early career colleague. Recent literature indicates the emergence of new, more flexible approaches to mentoring in which faculty build a network of “multiple mentors” who can address a variety of career competencies.

In this interactive session, identify potential roadblocks to success in an academic career; explore both traditional and emerging models of mentoring, focusing on the innovative model and practices of “Mutual Mentoring”; “map” potential mentoring networks in your own department/faculty; and discuss best practices in mentoring.

1:00 – 2:00 pm – Mentorship: Valuing the Success of Others - Carol Herbert *A Session for Academic Leaders, Faculty, Graduate Students and Postdoctoral Fellows*

Dr. Herbert is the recipient of numerous awards for her work in family medicine and patient-centered collaborative practice. She has been a leader in promoting mentoring in medicine.

2:00 – 4:30 pm – Building an Effective Mentoring Network - Mary Deane Sorcinelli *A Workshop for Faculty, Graduate Students and Postdoctoral Fellows*

Do academics need mentors? Research reflects what matters most to faculty: the kind of climate, culture and collegiality they encounter. In this workshop we consider how mentors and mentoring networks help establish a positive climate for professional development. You will identify areas to develop in your own career; consider different types of mentoring including ‘mutual mentoring’; work out maps for your own mentoring networks; and discover how to be your own best mentor.

The University of Western Ontario



Questions as Tools of the Trade

BY NADINE LE GROS, LANGUAGE & COMMUNICATION INSTRUCTOR, TEACHING SUPPORT CENTRE

Many times when we prepare for a class, we concentrate our efforts on the delivery of information, and we consider issues of content, sequencing, and building connections, all elements of teaching. But Socrates is reported to have said "I cannot teach anybody anything, I can only make them think." And he made his pupils think by teaching through questioning. For many, employing many questions while teaching creates anxiety. We fear student silence, and sometimes interpret it as apathy, which can thwart our good intentions to make our classes more interactive. But silence can be many things. Silence can be students being intimidated to speak in front of their peers, or not understanding the question, or not knowing the 'right' answer. Let's consider some how's and why's of good questioning techniques focusing on the types of questions asked and overcoming student silence.

Traditional instructor questioning patterns frequently feature a three-step approach: instructor poses questions; student responds; instructor evaluates responses (Minstrell & van Zee, 2003). Some of the reasons we pose questions are to assess student knowledge, to create an active learning environment, and to develop our students' abilities to think critically about complex issues. The way that we pose questions and the way that we evaluate the responses will affect each of these goals.

Larkin & Pines (2010) reported that over 50% of students in their introductory course disliked being called upon and suggest three strategies to encourage voluntary participation: creating a safe learning environment; making participation the norm; and using safe questions as ice breakers. I suggest the following tips to implement these strategies:

- 1) Make your pedagogy transparent: If you haven't historically employed many questioning techniques, students might not realize that rules of engagement have changed. If students understand that the role of your questions is to help them develop how they think in their disciplines, they will be more likely to respond than if they view questions as opportunities to embarrass themselves in front of their peers. Let the students know that you *welcome* errors, as they are excellent opportunities for students to wrestle with content and for you to address misconceptions.
- 2) Ensure clarity in the learning environment: Being confused while trying to learn is a recipe for non-participation. One way to avoid student confusion is to formulate the questions you intend to pose *before* class. It

is frequently the *wording* of a question that confounds students, because they don't know exactly what the instructor is looking for, and they may believe that only one answer is correct. Pre-planned questions will also spare you from situations where you ask a question and rephrase it on the spot, which is also confusing for students. Also, make sure that your students realize when you are asking them a question to which you expect a response and are not just asking it rhetorically. To do this, don't just drop your question into your speech – set it up: 'So, a question that I would like to ask you is' If nobody responds, backtrack and remind the students of what information they need to consider while responding. Make sure your students see the questions as a dialogue in which they can negotiate meaning – if they do not understand you, get them to help you by letting you know where the communication has broken down. Lastly, another strategy to employ to assess the clarity of your questions is to record your classes and listen to them afterwards with a view to examining your questions.

- 3) Acknowledge student contributions in a positive manner: Even if the answer is wrong, thanking the student for the contribution, giving a verbal response such as 'good try, but not quite' or a non-verbal response such as a nod contributes to students feeling validated for their efforts. Build on misunderstandings as opportunities to clarify distinctions. A wrong answer might be indicative of erroneous thinking.
- 4) Give students time to transition from the outside world into your classroom: This is especially important for undergraduates who need to make rapid changes from subject to subject. In the early stages of a class, before posing more difficult questions, it's always good to use easier questions to warm up a class. These questions can be of a more superficial nature that might serve to refresh the memory of students about what they learned from the last class or from their readings. Responses can include a show of hands, a 30-second check-in with a neighbour, or even a note sketched on paper that they can keep and show nobody.
- 5) Don't answer your own questions too quickly: doing so communicates that the students do not need to respond. Moreover, some research has correlated quality of response with length of wait time, suggesting a minimum wait time of three seconds (Wink, 1993). Larkin & Pines (2010) suggest five seconds.

Many instructors find posing questions to large audiences to be problematic; however, the size of class need not be an impediment. You can use a *think – pair – share* strategy even in classes of hundreds of students.

This involves posing a question, giving the students a minute to think about the response, two minutes to discuss their ideas with a neighbour, and then asking for volunteers to share their responses. Such an activity involves the whole class and creates a safe situation for students to rehearse their responses before they volunteer answers.

Another tool to incorporate into questioning techniques are Socratic questions, which avoid focusing on 'right answers' and emphasize the development of thought processes (Overholser, 1992). Socratic questions:

- ✓ are not intended to evoke factual responses
- ✓ are not designed to have a single correct answer
- ✓ are intended to help students reason
- ✓ should be explorative to get students to discover what they think and why
- ✓ develop larger problem-solving skills
- ✓ promote critical thinking
- ✓ help students develop meta-cognitive skills – the skills required to think about their thinking

For examples of Socratic questions, go to: <http://www.engin.umich.edu/~CRE/probsolv/strategy/cthinking.htm>

Posing questions not only teaches students how to think. The communication engendered between instructors and students during the questions and responses teaches us an enormous amount about how to teach.

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Faculty of Science Learning Development Update

BY TOM HAFFIE, FACULTY ASSOCIATE, TEACHING SUPPORT CENTRE AND LEARNING DEVELOPMENT COORDINATOR, FACULTY OF SCIENCE

Ongoing:

1. **PRESSWestern:** Over 2,000 students in astronomy, economics, political science, engineering, nursing, psychology, statistics, physics, biochemistry, and biology are using clickers on campus. Instructors in the Clicker Users' Group meet to share ideas for classroom use and thoughts on published research related to this technology <http://presswestern.uwo.ca>.
2. **BioLiteracy Project:** This HEQCO-funded research supported the introduction of a writing-to-learn curriculum into first-year Biology tutorials as an "intervention" designed to improve student engagement. Although no changes in overall engagement between pre- and post-intervention classes were detected by the National Survey of Student Engagement (NSSE), measures of discipline-specific information literacy have revealed significant improvement.
3. **Science Discovery Café:** In collaboration with the Student Success Centre, the Faculty of Science is enhancing the experience of academic community for first-year Science students

by arranging ongoing meetings with seven small groups, each co-facilitated by a faculty member and an undergraduate peer mentor. Although groups are free to follow their own interests, the main outcomes for the Café include: i) expansion of supportive academic relationships; ii) improved understanding of the process of research and the nature of knowledge that it produces; and iii) greater awareness of the structure of the University and the range of academic careers that it provides.

4. **Science Talks** is an ongoing suite of end-of-term professional development programming for faculty, grad students, and post-docs. (This project is a collaboration with the Assistant Dean Diversity and Outreach.) On the fall term Study Day, the keynote address was given by Dr. Lionel Laroche P. Eng. speaking on intercultural communication in academe. Additional sessions were offered on such topics as effective grant writing, budgeting, and encouraging innovative teaching. For the winter term, there will be a presentation in April about research ethics and Dr. Laroche will return to extend the work on intercultural communication.

New:

1. **Teaching Squares:** This program puts faculty into small groups who invite one another to visit each other's classes. The classroom visits are not to elicit feedback or critique but, rather, to provide an opportunity for the observers to self-reflect on their own practice. After all the visits are complete, the group meets over lunch to debrief and share what they have learned.
2. **Faculty of Science Undergraduate Fellowship in Learning Development:** This Fellowship provides academic development opportunities for undergraduates to collaborate with faculty and staff in various aspects of the development and implementation of effective educational resources and/or environments in Science. Projects will include some experience of critically reading the relevant scientific, education and technical literature; discipline-specific learning; developing and/or testing educational tools; resources, technical writing and record-keeping, etc. The first Fellows will begin in the summer term.

OCUFA Teaching and Academic Librarianship Awards

Call for Submissions

Each year the Ontario Confederation of University Faculty Associations (OCUFA) recognizes outstanding teachers and academic librarians in Ontario universities through its Teaching and Academic Librarianship Awards. Approximately seven awards are presented.

Awards are open to all individuals currently teaching at a university in Ontario, regardless of discipline, level or term of appointment.

The deadline for nominations for 2009-10 OCUFA Awards is May 7, 2010. For nomination guidelines and information on this year's award, please visit: <http://www.ocufa.on.ca>

OCUFA

Ontario Confederation of University Faculty Associations
Union des Associations des Professeurs des Universités de l'Ontario

Excerpt from TSC Blog

BY GAYLE MCINTYRE, RESEARCH ASSISTANT, TEACHING SUPPORT CENTRE

How I read widely AND avoid information overload

Part of my job at the Teaching Support Centre is to keep up with journal articles and news about higher education and discover new resources that might be useful for program development or conducting research. To that end, I've put a lot of thought into how to ensure that I can read from a wide variety of sources, but avoid being completely overwhelmed by the amount of information.

To give you an idea of the volume I read, I subscribe to three high-volume listservs, around 35 higher education blogs, a few magazines/newspapers, and 25+ research journals. However, I only spend maybe 10-15 minutes a day going through it all. How?

My main criteria for selecting and using online tools to keep up with information are:

- Can I peruse at my own pace? (I don't like alerts or reminders, and sometimes I don't have time to keep up daily), and
- Is it easily searchable? Can I go back weeks, months or even years later and find the information I need?

To accomplish this, I primarily use three tools:

- Netvibes:** I use this site to keep with journal articles and news headlines (Chronicle, University Affairs, etc.). Because all the content I have selected is on one webpage, I can see at a quick glance which journals have updated content, and whether there are any interesting news headlines. If something tweaks my interest, I can read the summary or abstract immediately or go to the source site to read the full document. If it's a journal article I know will be useful, I save it with my other research



references in **Zotero** (it's like an online (free!) Endnote).

- Google Reader:** I use Reader to subscribe to interesting blogs that I usually read. Also, all content that comes through Google Reader is searchable, so if I vaguely remember something I've read a few months ago I can do a quick keyword search and find the source.
- Email Filters:** I strive to keep a (mostly) empty inbox, so I can't have dozens of daily listserv messages coming through all the time. Each listserv has its own filter and is automatically transferred to a folder. I keep the messages sorted by subject thread, so if there's a thread I'm not interested in, I can delete all the messages quickly. Also, I've bookmarked the online archives for each listserv so that I can quickly search for something I remember reading.

The key? I don't worry about "missing" anything. If it's something really important, it will be referenced on one of the blogs I read, or on the twitter feeds of other professionals in the field. If I don't have time to read everything, I can catch up when I do. Or if I fall really far behind, I could always select "Mark as read" (although I seldom resort to this). And because I have a system in place, I'm not afraid of adding new sources of news and information quickly and easily to the appropriate tool.

Some favourite sources:

ProfHacker blog **www.profhacker.com**: "tips, tutorials, and commentary on pedagogy, productivity, and technology in higher education"

Teaching Professor blog: **http://www.teachingprofessor.com/blog**

The Ticker: **http://chronicle.com/blog/The-Ticker/1** from *The Chronicle of Higher Education*

TSC Blog

The Teaching Support Centre launched a blog in the fall of 2009. Our goal is to communicate ideas and issues pertaining to teaching and other issues that are of interest to The University of Western Ontario teaching community. While the *Reflections* newsletter presents articles and updates, it only publishes two issues per year. The TSC blog will be updated twice a week on topics such as:

- teaching;
- student engagement;
- instructional technology;
- the scholarship of teaching and learning (SoTL); and
- graduate student/teaching assistant development.

The blog posts will reflect the interests and activities of the diverse staff and faculty at the Teaching Support Centre. Visit the blog at **http://uwotsc.wordpress.com**, leave a comment, and let us know what you think!



TED Talks

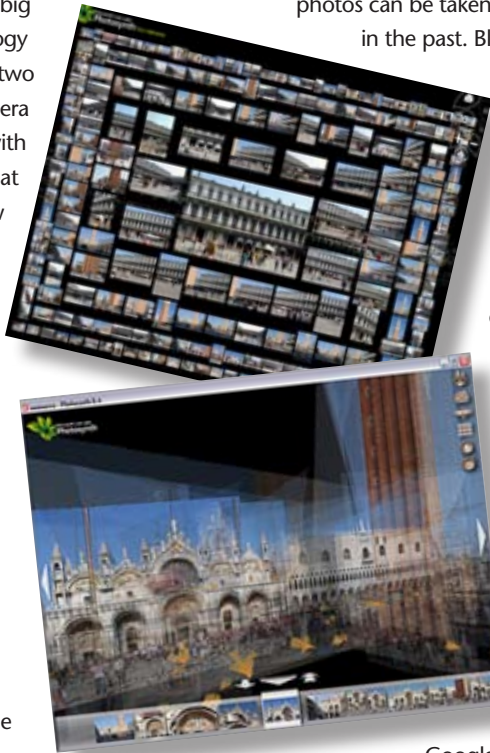
BY KIM HOLLAND, INSTRUCTIONAL DESIGNER
TEACHING SUPPORT CENTRE

In the last issue of *Reflections* (Fall 2009), we told you about one of the most engaging sites on the web at <http://www.ted.com>. TED stands for Technology, Entertainment and Design and is devoted to the concept of spreading big ideas. In this issue of *Reflections*, I want to acquaint you with one of those big ideas – a new technology called Photosynth. In two TED videos, Blaise Agueray Arcas, a researcher with Microsoft, explains what Photosynth is and how it can be used (TED, 2007, 2010).

Watching these videos, one has a sense of true amazement at what can be done to bring static images to life. Photosynth creates new experiences with nothing more than photos of a particular place. Once a 'synth' is created, you have the detail of the real world with the cinematic quality of a movie, and the control of a video game. The Photosynth technology constructs from many photos of the same scene or object and stitches them all together into one large interactive 3D viewing experience that can be shared with anyone on the web.

Photosynth relies on techniques from the field of computer vision, where it examines images for similarities and uses that

information to estimate the shape of the subject and the vantage point from where each photo was taken. Using this information, the program recreates the 3D space and uses it as a canvas to display and navigate through the photos. What I found even more surprising is that photos can be taken by anyone at any time in the past. Blaise demonstrates this by



constructing a 3D image of the Notre Dame Cathedral from images on Flickr — the online photo management and sharing application. As Blaise says, "This is taking data from everybody, the entire collective memory of what the Earth looks like and linking all of that together."

As a geographer, I was very impressed with the second of the videos on augmented reality maps using the Photosynth technology. If you have seen and used

Google Maps or Google Earth, the augmented reality maps that Blaise demonstrates are much higher on the WOW factor scale.

Do spend a few minutes watching (both videos are under eight minutes each). I think you will be amazed. After watching these videos, how might you incorporate these technologies in your teaching? If you have any ideas please tell me, and I will share them in a future issue of *Reflections*. Enjoy.

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BY MIKE ATKINSON, FACULTY ASSOCIATE
TEACHING SUPPORT CENTRE

Have you ever wondered how you could interact with your computer without using an input device like a mouse or keyboard? How about turning your Wii controller into an interactive whiteboard or building a steadycam support for \$14? Johnny Lee can show you how to do all of this. Dr. Lee obtained his Ph.D. from the Human-Computer Interaction Institute at Carnegie Mellon and has devoted his career to providing the general public with high-tech devices at an astonishingly low price. In the talk listed below (TED, 2008), Lee shows us how to "hack" into a Wii controller and use the infrared camera to create a whiteboard for about \$40. Basically, all you need to do is purchase an LED pen and download the software (for free) from Lee's website (<http://www.johnnylee.net/>). He also demonstrates how to use the controller to create an interactive 3D display with an LED headcam. The real magic in this video is realizing that you can create very elaborate



digital devices even if you do not have access to large amounts of funding. True, the \$40 whiteboard is not as elegant as one straight from the factory, but it is about 80% as good at only 2% of the cost.

So, if you have Wii, check out this video. If not, you can buy the controller itself for about \$50.

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Bringing the Scholarship of Teaching and Learning to Your Department Through 4th-Year Thesis Projects

BY NATASHA PATRITO HANNON, EDUCATIONAL DEVELOPER, TEACHING SUPPORT CENTRE

With its theoretical roots in Ernest Boyer's *Scholarship Reconsidered* (1990), the scholarship of teaching and learning (SoTL) invites educators to engage in a systematic study of teaching and learning and to make the results of this research public through presentations, performances, or publications (McKinney, 2006). A number of studies have highlighted the individual and institutional benefits that can be derived from SoTL engagement. Surveys of faculty members engaged in SoTL research suggest that these academics experience greater excitement in their teaching and become more interested in broader teaching and learning issues (Ciccone & Meyers, 2006; Huber & Hutchings, 2005). Most made changes to course designs and learning assessments in response to their research results, highlighting the integration between SoTL research and classroom instruction (Huber & Hutchings, 2005). O'Meara (2005) found that institutions that promoted SoTL in addition to traditional disciplinary scholarship reported a heightened campus focus on the quality of undergraduate learning and greater gains in the value associated with teaching in the tenure and promotion process.

While the documented benefits of SoTL engagement are numerous, many faculty members and departments find the initiation of SoTL projects daunting because they require awareness of a new body of literature, experimentation using potentially unfamiliar methodologies and analysis of unusual forms of data. This was certainly true of Western's Chemistry department, traditionally more comfortable researching the inner workings of inanimate chemical systems than assessing the attitudes and experiences of living, breathing students. It did not, however, discourage Chemistry professors Ron Martin and Felix Lee from developing and presenting a SoTL-based proposal to 4th-year students embarking on their thesis projects. Student, Steffi Boyce, accepted the challenge and their collaboration has emerged as a hugely successful example of a cost-effective, low-risk and high-reward strategy for introducing SoTL into departments across campus.

Over the course of eight months, Steffi developed and administered a survey to assess first-year students' attitudes towards and feelings of self-efficacy in relationship to the discipline of Chemistry. She subsequently correlated these results to the academic

performance of the over 1,500 students enrolled in Chemistry 1050 to determine whether specific attitudes or self-efficacy indicators could be used as predictors of academic success in the course. The results of Steffi's study, which were made public at the Chemistry Department Thesis Presentation Day on March 27th, will form an important component of the Chemistry 1050 curriculum review and revision process. Most importantly, the findings of Steffi's project have already spawned new research questions, and have resulted in the initiation of a second project seeking to assess the key chemical concepts and skills identified as crucial by faculty members requiring Chemistry 1050 as a prerequisite for their courses.

When asked about the success of this 4th-year foray into SoTL research, both professors Martin and Lee highlighted the unquestioning support that they received from their department for the development of such a project. Another key to their success was their collaboration with the Teaching Support Centre, where I met frequently with the researchers, pointing them to relevant literature and facilitating the crafting of their ethics proposal. When Steffi was asked what personal benefits were gained through her participation in this thesis project, she responded, "I have volunteered as a mentor for first-year science students for the past three

years and have watched them struggle with Chemistry...the opportunity to work towards making a difference in the curriculum was so valuable. Through this project I have certainly learned not to be afraid of research that might at first seem daunting. By taking things one step at a time with the support of such enthusiastic supervisors, everything fell into place. I have gained many technical skills concerning statistics and data-analysis, I've practiced my organizational and management skills, and I have learned more than I had every anticipated about human ethics and the complexities of gaining ethics approval in an academic setting."

This SoTL project has brought significant benefits to all parties involved – the Chemistry department, individual faculty supervisors and 4th-year student, Steffi Boyce – with minimal monetary investment. By capitalizing on the enthusiasm and commitment of an undergraduate thesis student and collaborating effectively with supporting units like the Teaching Support Centre, departments on campus can follow the lead of their colleagues in Chemistry and use 4th-year thesis projects as opportunities to initiate SoTL work in their disciplines.

For more information about how this specific Chemistry proposal was developed, advertised to graduate students or coordinated by the research supervisors, please contact Dr. Felix Lee at flee32@uwo.ca.

For consultation about SoTL, the ethics review process or survey instrument design, please contact Educational Researcher, Dr. Ken Meadows at kmeadow2@uwo.ca.

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Summer Teaching with Technology Institute

May 25 – 27, 2010

The Teaching Support Centre (TSC) and the Instructional Technology Resource Centre (ITRC) invite you to participate in the Summer Teaching with Technology Institute, May 25 - 27, 2010, 9:00 a.m. - 4:00 p.m.

This three-day institute will be an interactive and engaging experience, open to all faculty and course developers at The University of Western Ontario. This three-day workshop will be of particular interest to:

- those interested in learning more about integrating technology in their instruction;
- those currently developing or teaching online courses using WebCT OWL; and
- those interested in discovering what other faculty have found successful or not so successful with teaching technologies.

The focus of this institute is to highlight the essential knowledge and skills required for the integration of technology into either your face-to-face or distance courses. Participants do not need to have any experience with instructional technologies to attend; they need only to have an interest in exploring how technology can enhance their curricula.

Sample content will be provided for you to work with, but please feel free to bring any of your course materials that you would like to use during this institute. Participants will have the opportunity to transform this content to engaging online instructional materials. Participants who complete the institute will have the foundational skills for selecting appropriate teaching technology to build, teach, and manage their courses.

REGISTRATION:

See Upcoming Events at: <http://www.uwo.ca/tsc>

Limited Enrolment: Enrolment is limited to 18, so please register early.

The University of Western Ontario

TEACHING SUPPORT CENTRE

TSC



3M National Teaching Fellowships



3M National Teaching Fellowships Nomination Deadlines

(Note early deadline dates)

Internal: August 17, 2010

External: August 31, 2010

Details regarding nomination process, award eligibility, etc. can be found at:
<http://www.uwo.ca/tsc/awards.html>